

Physics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	SI units of time period is	A. second B. hertz C. revolution D. vibration/sec
2	the current is pass through the straight wire. The magnetic field established around it has its lines of force:	A. <p>class="MsoNormal" style="text-align:justify"> Circular and endless</p> B. <p>class="MsoNormal" style="text-align:justify"> Oval in shape and endless</p> C. <p>class="MsoNormal" style="text-align:justify"> Straight</p> D. <p>class="MsoNormal" style="text-align:justify"> Parabolic</p> E. All are true
3	The value for systolic blood pressure for a normal healthy person is	A. 140 torr B. 80 torr C. 90 torr D. 120 torr
4	In a soft iron, domains are	A. easily oriented along external field and do not return to original random positions B. easily oriented along external field and readily returns to originally random position C. do no oriented along external field and also do not returns to originally random position D. none of them
5	When a suitable small resistance is put in parallel with the galvanometer coil, it is converted into	A. Voltmeter B. Avometer C. Ammeter D. None of these
6	Which one of the following can act approximately as a source of monochromatic light;	A. Neon lamp B. Fluorescent tube C. Sodium lamp D. None of these
7	A body moves a distance of 10 m along a straight line under the action of a force of 5 N and work done is 25J. The angle which the force makes with the direction of motion will be	A. 60° B. 90° C. 30° D. 0°
8	One joule is equal to	A. 1.6×10^{19} eV B. 6.25×10^{18} eV C. 1.6×10^{18} eV D. 6.25×10^{19} eV
9	Significant figures in 0.2020 are:	A. Two B. Three C. Four D. Five
10	The force acting on a charge moving in a magnetic field	A. is perpendicular to the both magnetic field and direction of motion B. is proportional to the magnetic of charges C. vanishes when the motion is directly opposite to the direction of field D. all of the above
11	We cannot utilize the heat contents of oceans and atmosphere because	A. there is no reservoir at the same temperature B. there is no reservoir at the temperature lower than any one of two

		C. there is no reservoir at the temperature higher than any one of two D. none of them
12	The ultimate source of money sources of energy is:	A. Sun B. Air C. Water D. Petroleum
13	Which one of the following is an example of resonance	A. swing B. tuning a radio C. microwave oven D. all of them
14	For transmission of both transverse and longitudinal waves, we can use:	A. Solid B. Gas C. Plasma D. None of these
15	Frequency of red colour as compared to that of violet colour is	A. Equal B. Smaller C. Greater D. None of these
16	Deep water almost runs still when surface water flow in rivers. What does it explains	A. Magnus effect B. Equation of continuity C. Surface energy D. Bernoulli's equation
17	The restoring force is _____ amd opposite to the applied force within _____:	A. Equal, elastic limit B. Different, the walls of the laboratory C. Different, elastic limit D. None of these
18	Astrophysics is a branch of physics, which deals with:	A. Sub-atomic particles B. Stars and galaxies C. Light and sound D. Music
19	Tick the correct answer:	A. Torque is a vector quantity B. Torque is the turning effect of a force C. Torque is called moment of a force D. All of above
20	Thermistors are prepared under	A. High pressure and low temperature B. High pressure and high temperature C. Low pressure and low temperature D. Low pressure and high temprature E. None of these
21	If the focal length of the convex lens is 5 cm, then to get the real and inverted image of the same size as that of object, the object should be placed at:	A. 15 cm B. 10 cm C. 20 cm D. 5 cm
22	Aerodynamics is a branch of	A. Hydrodynamics B. Thermodynamics C. Both of them D. Statics
23	The velocity of falling raindrops attains limited value because of	A. Up thrust of air B. Air currents of the earth atmosphere C. Surface tension effect D. Viscous force exerted by air
24	A fuse wire is having 5 ampere current rating. What is the peak value of current it can have?	A. 0.7074 A B. 7.07 A C. 0.0707 A D. 7.707 A
25	If a car rest acceleration uniformly to a speed of 144 km/h in 20 s it covers a distance of	A. 20 m B. 400 m C. 1440 m D. 2880 m
26	A flowing liquid possess	A. K.E B. P.E C. Pressure Energy D. All
27	Which of the following substances has got positive temperature coefficient of resistance?	A. Carbon B. Germanium C. Silicon D. Aluminium E. None of these
28	Which type of wave can be set up in solids	A. longitudinal waves B. transverse waves C. both of them

		<p>C. both of them</p> <p>D. none of them</p>
29	Motional emf is called motional:	<p>A. Electromagnetic force and is measured in newtons</p> <p>B. Electromotive force and is measured in volt</p> <p>C. Electromotive force and is measured in newtons</p> <p>D. Electromagnetic force and is measured in volts</p> <p>E. None of these</p>
30	As the light shines on the metal surface, the electrons are ejected	<p>A. slowly</p> <p>B. instantaneously</p> <p>C. either of these</p> <p>D. none of these</p>
31	Mass of proton is of order of	<p>A. 10^{-31} gm</p> <p>B. 10^{-27} kg</p> <p>C. 10^{-24} gm</p> <p>D. 10^{+27} kg</p>
32	Resistor is a device which convert electric energy to	<p>A. Heat energy</p> <p>B. Chemical energy</p> <p>C. Elastic energy</p> <p>D. All of the above</p>
33	CT scanning is the abbreviated name of	<p>A. Computed Technology</p> <p>B. Computed Technique</p> <p>C. Computed Technology</p> <p>D. Computerized Technique</p>
34	Rate of decay is actually described by.	<p>A. Half line</p> <p>B. Decay constant</p> <p>C. Mean life</p> <p>D. Total life</p> <p>E. None of these</p>
35	The consumption source if energy is:	<p>A. Energy from biomass</p> <p>B. Hydroelectric energy</p> <p>C. Geothermal energy</p> <p>D. None of these</p>
36	A tube is tapered from 20 cm diameter to 2 cm diameter, the velocity at the first cross-section is 50 cm/s, then the velocity at the second cross-section is	<p>A. 50 m/s</p> <p>B. 20 m/s</p> <p>C. 40 cm/s</p> <p>D. 5 cm/s</p>
37	Silicon can be obtained from:	<p>A. Lead</p> <p>B. Uranium</p> <p>C. An isotope of oxygen</p> <p>D. Sand</p>
38	Viscosity of water is _____ that of air but ____ that of plasma.	<p>A. More, more</p> <p>B. Less, more</p> <p>C. Less, less</p> <p>D. More, less</p>
39	Unit of viscosity is:	<p>A. $\text{Kg m}^{-1}\text{sec}^{-1}$</p> <p>B. N s m^{-2}</p> <p>C. J s m^{-3}</p> <p>D. All of these</p>
40	A capacitor acts as an infinite resistance for	<p>A. AC</p> <p>B. DC</p> <p>C. Both AC and DC</p> <p>D. Neither AC nor DC</p>
41	The unit of decay constant is	<p>A. sex</p> <p>B. sec^2</p> <p>C. sec^{-1}</p> <p>D. sec^{-2}</p>
42	Peak value of alternative current is:	<p>A. one of its instantaneous value</p> <p>B. Equal to its RMS value</p> <p>C. The same as its peak-to-peak value</p> <p>D. Both (B) and (C)</p> <p>E. None of these</p>
43	Which quantity has the same units as impulse	<p>A. force</p> <p>B. work</p> <p>C. linear momentum</p> <p>D. acceleration</p>
44	The value of threshold frequency for different metals is	<p>A. different</p> <p>B. same</p> <p>C. may be different or may be same</p> <p>D. none of these</p>
45	A piece of wire along which charges are made to accelerate is known as	<p>A. transmitting antenna</p> <p>B. receiving antenna</p> <p>C. modulator</p>

		D. nor of these
46	Selenium is:	<p>A. An insulator</p> <p>B. A conductor</p> <p>C. Insulator in the dark and becomes conductor when exposed to light</p> <p>D. Conductor in the dark only</p> <p>E. None of these</p>
47	The velocity of sound is greatest in	<p>A. Water</p> <p>B. Air</p> <p>C. Vacuum</p> <p>D. Metal</p>
48	Liquids and gasses have	<p>A. zero viscosity</p> <p>B. non-zero viscosity</p> <p>C. very large viscosity</p> <p>D. very small viscosity</p>
49	Maximum height of a bullet when fired at 30° with horizontal is 11 m. Then height when it is fired at 60° is	<p>A. 22 m</p> <p>B. 6 m</p> <p>C. 33 m</p> <p>D. 7.8 m</p>
50	The special theory of relativity treats the problems involving:	<p>A. Inertial frames of reference</p> <p>B. Non-inertial frames</p> <p>C. Non-accelerated frame</p> <p>D. Both (A) and (C)</p> <p>E. Both (B) and (C)</p>
51	The waves which propagate out in space due to oscillation of electric and magnetic fields are known as	<p>A. e.m. waves</p> <p>B. mechanical waves</p> <p>C. sound waves</p> <p>D. water waves</p>
52	The velocity of a body at any instant of its motion is known as	<p>A. average velocity</p> <p>B. instantaneous velocity</p> <p>C. uniform velocity</p> <p>D. none of them</p>
53	A change in position of a body from its initial position to its final position is known as	<p>A. relative motion</p> <p>B. displacement</p> <p>C. distance</p> <p>D. acceleration</p>
54	The value of the Stephen's constant for black body radiations is given by	<p>A. $5.6 \times 10^{-8} \text{ Wm}^{-2} \text{ K}^{-4}$</p> <p>B. $5.67 \times 10^{-8} \text{ Wm}^{-2} \text{ K}^{-4}$</p> <p>C. $2.9 \times 10^{-3} \text{ mK}$</p> <p>D. $2.9 \times 10^{-3} \text{ mK}$</p>
55	Centripetal force for electron is given by	<p>A. $\frac{mv^2}{r}$</p> <p>B. $\frac{mv}{r^2}$</p> <p>C. $\frac{mv^2}{r}$</p> <p>D. $\frac{mr^2}{v}$</p>
56	When a constant potential difference is applied across the conductor, the drift velocity of electrons:	<p>A. Increases</p> <p>B. Decreases</p> <p>C. Remains the constant</p> <p>D. </p>

		<p> Either of these </p> <p> None of these </p>
57	In a resonance situation the amplitude of the motion may become extra ordinarily large, if	<p> A. the driving force is large B. the driving force is zero C. the driving force may be feeble D. all of them </p>
58	When a body is vibrating, the displacement from mean position	<p> A. Increases with time B. Decreases with time C. Changes with time D. None of these </p>
59	Which of the following can become a good permanent magnet	<p> A. iron B. steel C. both of them D. none of them </p>
60	When body moves with increasing acceleration, its velocity time graph is a	<p> A. straight line B. horizontal straight line C. vertical straight line D. curve </p>
61	At low speeds, the drag force is	<p> A. proportional to speed B. inversely proportional to speed C. not simply proportional to speed D. none of them </p>
62	For normal operation of transistor, the batteries	<p> A. V_{CC} is of much lower value than V_{BB} B. V_{CC} is of much higher value than V_{BB} C. V_{CC} is equal to V_{BB} D. none of these </p>
63	The surface density of charge is defined as:	<p> A. Charge per volume B. Mass per volume C. Charge per area D. Mass per area E. Both (B) and (C) </p>
64	The cohesive forces between atoms, molecules or ions in crystalline solids maintain the strict	<p> A. short range order B. long range order C. both of them D. none of them </p>
65	If force and displacement are in opposite direction, the work done is taken as:	<p> A. Positive work B. Negative work C. Zero work D. Infinite work </p>
66	Polymers are the chemical combination of carbon with:	<p> A. Nitrogen B. Oxygen C. Hydrogen D. All of these E. None of these </p>

67	The CRO deflects the beam of electrons, when they passes through uniform	<p>A. electric field</p> <p>B. gravitational field</p> <p>C. magnetic flax</p> <p>D. magnetic field</p>
68	From the theory of relativity, momentum p of the photon is related to energy as	<p>A. $p = hfc$</p> <p>B. $p = hf/c$</p> <p>C. $p = f(hc, f)$</p> <p>D. $p = cf/h$</p>
69	A hollow insulated conduction sphere is given a positive charge of $10\mu\text{C}$. What will be the electric field at the centre of the sphere if its radius is 2 meters?	<p>A. Zero</p> <p>B. $5\mu\text{C}/4\pi\epsilon_0 r^2$</p> <p>C. $20\mu\text{C}/4\pi\epsilon_0 r^2$</p> <p>D. $8\mu\text{C}/4\pi\epsilon_0 r^2$</p>
70	Crystal of germanium or silicon in its pure form at absolute zero acts as:	<p>A. A conductor</p> <p>B. A semiconductor</p> <p>C. an insulator</p> <p>D. Both (A) and (C)</p> <p>E. Both (A) and (B)</p>
71	The number of vibration in two seconds can be expressed as _____ of frequency of vibration is f:	<p>A. f</p> <p>B. 2 f</p> <p>C. 3 f</p> <p>D. 1/2 f</p>
72	The area under line velocity-time graph is numerically equal to the	<p>A. speed of the body</p> <p>B. acceleration of the body</p> <p>C. distance covered by the body</p> <p>D. none of them</p>
73	The volume of given mass of a gas will be doubled at atmosphere pressure if the temperature of the gas is changed from 150°C to	<p>A. 300°C</p> <p>B. 573°C</p> <p>C. 600°C</p> <p>D. 743°C</p>
74	Instead of moving the coil towards a magnet, the magnet is moved towards the coil with the same speed. The galvanometer shows current:	<p>A. Of same magnitude in the same direction</p> <p>B. Of different magnitude in the same direction</p> <p>C. Of same magnitude but in opposite direction</p> <p>D. Of different magnitude in the opposite direction</p> <p>E. None of these</p>
75	The branch of physics which deals with the properties of fundamental particles is called:	<p>A. High energy physics</p> <p>B. Molecular physics</p> <p>C. Astrophysics</p> <p>D. Space physics</p>
76	Pressure exerted by a gas is	<p>A. Independent of density of the gas</p> <p>B. Inversely proportional to the density of the gas</p> <p>C. Directly proportional to the square of the density of the gas</p> <p>D. Directly proportional to the density of the gas</p>
77	A p-n junction is formed when a crystal of silicon is growth in such a way that its one half is doped with trivalent impurity and the other half with a impurity from	<p>A. 2nd group</p> <p>B. fourth group</p> <p>C. fifth group</p> <p>D. sixth group</p>
78	Which of the following has a great concentration of impurity	<p>A. base</p> <p>B. emitter</p> <p>C. collector</p> <p>D. none of these</p>
79	transverse wave motion is possible in:	<p>A. Air</p> <p>B. A mixture of NH_3 and O_2</p> <p>C. Strings</p> <p>D. All of these</p>
80	Which of the following is not mechanical wave?	<p>A. Sound wave</p> <p>B. Light wave</p> <p>C. wave produced in spring</p> <p>D. None of them</p>
81	Which of the following does not obey ohm's law?	<p>A. Copper</p> <p>B. Al</p> <p>C. Diode</p>

		<p>C. None</p> <p>D. None</p>
82	When a conductor is moved across a magnetic field, the redistribution of charge sets up:	<p>A. Magnetic field</p> <p>B. Electrostatic field</p> <p>C. Electromagnetic field</p> <p>D. All of these</p> <p>E. None of these</p>
83	When a person jumps off the ground, the reaction force of the ground is	<p>A. greater than the weight of the person</p> <p>B. smaller than the weight of the person</p> <p>C. equal to the weight of the person</p> <p>D. zero</p>
84	A body starting from rest covers a distance of 0.45 Km and acquires a velocity of 300 Km h^{-1} . its acceleration will be	<p>A. 7.71 m s^{-2}</p> <p>B. 0.5 m s^{-2}</p> <p>C. 0.15 m s^{-2}</p> <p>D. 0.092 m s^{-2}</p>
85	Ammeter is used to measure	<p>A. voltage</p> <p>B. resistance</p> <p>C. voltage and current</p> <p>D. current</p>
86	A body is thrown from a height h with speed u, it hits the ground with speed V	<p>A. The value of V is maximum if the body is thrown vertically downward</p> <p>B. The value of V is maximum if the body is thrown vertically upwards</p> <p>C. The value of V is minimum if the body is thrown horizontally</p> <p>D. The value of V does not depend on the direction of which it is thrown</p>
87	Photoelectric effect takes place with a photon of:	<p>A. Very high energy</p> <p>B. Very low energy</p> <p>C. Low energy</p> <p>D. High energy</p> <p>E. None of these</p>
88	Charge on neutron is	<p>A. $1.6 \times 10^{-19} \text{ C}$</p> <p>B. zero</p> <p>C. $-1.6 \times 10^{-19} \text{ C}$</p> <p>D. $1.2 \times 10^{-19} \text{ C}$</p>
89	Significant figures in 0.0010 are:	<p>A. Four</p> <p>B. Three</p> <p>C. Two</p> <p>D. One</p>
90	The current in LCR circuit will be maximum when ω is	<p>A. As large as possible</p> <p>B. Equal to natural frequency of LCR system</p>
91	A high concentration of red blood cells increases its viscosity from	<p>A. 3 - 5 times that of mercury</p> <p>B. 5 - 8 times that of mercury</p> <p>C. 3 - 5 times that of water</p> <p>D. 5 - 8 times that of water</p>
92	The maximum value of drag force on an object is 9.8 N . What will be the value of its mass?	<p>A. 9.8 Kg</p> <p>B. 2 kg</p> <p>C. 4 Kg</p> <p>D. 1 Kg</p>
93	If a simple pendulum is shifted from karachi to K-2 cliff, its time period	<p>A. remains the same</p> <p>B. decreases</p> <p>C. increases</p> <p>D. none of them</p>
94	The electrons in the outermost shell of an atom are called	<p>A. core electrons</p> <p>B. valence electrons</p> <p>C. high energy electrons</p> <p>D. none of them</p>
95	The magnitude of the force producing an acceleration of 10 m/sec^2 in a body of mass 500 grams is:	<p>A. 3 N</p> <p>B. 4 N</p> <p>C. 5 N</p> <p>D. 6 N</p>
96	An electric charge at rest is	<p>A. Only an electric field</p> <p>B. Only a magnetic field</p> <p>C. Both electric and magnetic fields</p> <p>D. None of the above</p>
97	A heater coil rated at (1000 W - 200 V) is connected to 110 volt line. What will be the power consumed?	<p>A. 200 W</p> <p>B. 302.5</p> <p>C. 250 W</p> <p>D. 350 W</p>
98	Which one of the following causes production of heat when current is set up	<p>A. Fall of electrons from higher orbits to lower orbits</p> <p>B. Inter-atomic collisions</p>

98	in a wire?	C. Inter-electron collisions D. Collisions of conduction electron with atoms
99	What is the current in a $2 \times 10^6 \Omega$ resistor having a potential difference of 2×10^3 volts?	A. 10^{-1} A B. 10^{-2} A C. 10^{-4} A D. 1 mA
100	The rate of change of momentum of a molecule is equal to:	A. Pressure B. Work C. Density D. Force
101	Neutron was suggested to be in the nucleus by:	A. Rutherford in 1920 B. Bohr in 1913 C. Dirac in 1928 D. Anderson in 1932 E. None of these
102	The circuit in which current and voltage are in phase, the power factor is	A. zero B. 1 C. negative D. 0.83
103	The time required to complete one vibration is called	A. frequency B. total time C. time period D. velocity
104	Laws of motion are not valid in a system which is	A. inertial B. non-inertial C. at rest D. moving with uniform velocity
105	1 amu is equal to	A. 1.66×10^{-24} kg B. 1.66×10^{-19} kg C. 1.66×10^{-34} kg D. 1.66×10^{-27} kg
106	Chock consumes externally small	A. Charge B. Current C. Power D. Potential
107	One electron volt is equal to	A. 1.6×10^{19} eV B. 6.25×10^{18} eV C. 1.6×10^{18} eV D. 6.25×10^{19} eV
108	Newton's laws are adequate for speeds that are	A. low compared with the speed of light B. equal to the speed of light C. greater than the speed of light D. all of them
109	The work done by a force, keeping an object in circular motion with constant speed is:	A. Zero J B. 1 J C. 0.1 J D. 0.01 J
110	The process which is carried out at constant temperature is known as	A. adiabatic process B. isothermal process C. isochoric process D. none of them
111	A second's pendulum is a pendulum whose time period is	A. 1 second B. 2 seconds C. 3 seconds D. 4 seconds
112	A 120 m long train is moving in a direction with speed 20 m/s. A train B moving with 30 m/s in the opposite direction and 130 m long crosses the first train in a time	A. 6 s B. 36 s C. 38 s D. None of these
113	The galvanometer constant of a moving coil galvanometer is given by	A. $K = BAN/C$ B. $K = BN/CA$ C. $K = NAC/B$ D. $K = C/BAN$
114	Calculate the amount of charge flowing in 2 minutes in a wire of resistance 10Ω when a potential difference of 20 V is applied between its ends	A. 120 C B. 240 C C. 20 C D. 4 C
115	Alternating current can be transmitted:	A. To long distance B. At very high cost C. At very low cost D. Both (A) and (C)

		E. Both (A) and (B)
116	Wave nature of particle was proposed by	A. Einstein B. Plank C. De-Broglie D. Max well
117	41 The force experience, when proton projected in a magnetic field with velocity 'v' is	A. $+e(v \times B)$ B. $-C(V \times B)$ C. $+e\sqrt{2} \times B$ D. $-e\sqrt{2} \times B$
118	If the stress increased beyond the elastic limit of the material. the deformation produced in the material will be	A. permanent B. temporary C. either of them D. none of them
119	The SI unit of current is	A. watt B. coulomb C. volt D. ampere
120	Astrophysics is a branch of physics, which deals with	A. Sub-atomic B. Stars and galaxies C. Light and sound D. Music
121	Spectrum represents the number of component colours present in certain light in terms of:	A. Wavelength B. Frequency C. Energy D. Both (A) and (B) E. All of these
122	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of these
123	The critical temperature of mercury is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
124	Phenomenon of radioactivity is due to disintegration of	A. nucleus B. neutron C. proton D. molecule
125	For the working of a heat engine, there must be	A. a source of heat at high temperature B. a sink at low temperature C. both of them D. none of them
126	Work done along a closed path in a gravitational field is:	A. Maximum B. Minimum C. Zero D. Unity
127	The internal pressure of the blood is	A. less than the external atmospheric pressure B. greater than the external atmospheric pressure C. equal to the external atmospheric pressure D. none of them
128	In case of an ideal gas, the P.E associated with its molecule is	A. maximum B. zero C. minimum D. not fixed
129	Radium was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. Rutherford E. Both (B) and (C)
130	Potentiometer is more sensitive than voltmeter, because	A. Voltmeter has a very high resistance B. Voltmeter has a very low resistance C. Potentiometer does not draw any current from a source of unknown potential difference D. Potentiometer is sensitive
131	As compared to the distance measured by an observer on Earth, the distance from Earth to a star measured by an observer in a moving spaceship would seem:	A. Smaller B. LARGER C. Same D. Much larger E. None of these
		A. Newton/ampere-meter or N/A-m B. Newton/ampere ² -meter or N/A ² -m

132	The SI unit of magnetic induction is tesla which is equal to	C. $\text{Newton/ampere}^2\text{-meter}^2$ or $\text{N/A}^2\text{-m}^2$ D. $\text{Newton/ampere}^2\text{-meter}^2$ or $\text{N/A}^2\text{-m}^2$
133	Fraction of the decaying atoms per unit time is called	A. decay atom B. decay element C. decay constant D. decay
134	In AND gate, the output is 1 if:	A. Both inputs are 0 B. Both inputs are 1 C. Only one input is 0 D. Both (A) and (B) E. Both (A) and (C)
135	The property of light which does not change with the nature of the medium is	A. Frequency B. Amplitude C. Wavelength D. None of these
136	Inertia mass and gravitational mass are	A. opposite B. identical C. identical when there is no friction D. all of them
137	Semi-conductor elements have atoms with	A. 2 valence electrons B. 3 valence electrons C. 4 valence electrons D. 5 valence electrons
138	A grating with high resolving power can distinguish _____ difference in wavelengths :	A. Smaller B. Larger C. Zero D. None of these
139	A lift is descending at a constant speed V. A passenger in the lift drops a coin. The acceleration of the coin towards the floor will be	A. Zero B. g C. -g D. V + g
140	The range of projectile is 50 m when θ is inclined with horizontal at 15° . What is the range when θ becomes 45° ?	A. 400 m B. 300 m C. 200 m D. 100 m
141	Computer chips are made from:	A. Iron B. Silicon C. Helium D. Stontium E. Aluminium
142	Selenium is:	A. An insulator B. A conductor C. Both A and B D. Excellent conductor E. None of these
143	Michael Faraday is known by his work on	A. Nuclear strong force B. Gravitational force C. Nuclear weak force D. Electric force E. None of these
144	Which one of the following wave motions is transverse:	A. Wave motion produced in water when a piece of stone is thrown into it B. Pulling of weight hanging vertically with a spiral spring C. Both of these D. None of these
145	If the formula $PV = nRT$, n denotes:	A. Number of molecules per unit volume B. Number of moles C. Number of molecules D. None of these
146	The body oscillates due to _____ accelerates and overshoots the rest position due to _____:	A. Applied force , inertia B. Restoring force, friction C. Frictional force, inertia D. Restoring force, inertia
147	The waves which propagate through the oscillations of material particles are known as:	A. Mechanical waves B. Electromagnetic waves C. Any of them D. None of them
148	If a train traveling at 72 kmph is to be brought to rest in a distance of 200	A. 20 ms^2 B. 10 ms^2

148	meters then its retardation should be	C. 2 ms^{-2} D. 1 ms^{-2}
149	A wire of radius r has resistance R. If it is stretched to a wire of r/2 radius, then the resistance becomes	A. 2R B. 4R C. 16R D. Zero
150	Radian is defined as the angle subtended at the center of a circle by an arc of:	A. Length equal to its diameter B. Length equal to its radius C. Any length D. None of these
151	Blood vessels can be stretch like rubber, therefore they are	A. rigid B. hard C. very thick D. not rigid
152	Radioactivity was discovered by	A. Rutherford B. Henri Becquerel C. Maxwell D. James Chadwick
153	The formula of Brackett series can be obtained by putting in the general formula, the value of n equal to:	A. one B. two C. three D. four E. five
154	Dimensions of velocity are	A. [L] B. [T] C. $[LT^{-1}]$ D. $[LT^{-2}]$
155	The torque per unit twist of coil is called	A. proportionality constant B. gravitational constant C. boltzman constant D. coupling constant
156	A simple pendulum consists of a	A. small light bob B. small heavy bob C. big light bob D. big heavy bob
157	Significant figures in 0.0010 are	A. Four B. Three C. Two D. One
158	Energy stored in the spring of a watch is called	A. Potential energy B. Kinetic energy C. Nuclear energy D. Elastic potential
159	Two bullets are fired simultaneously, horizontally and with different speeds from the same place. Which bullet will hit the ground first?	A. The faster one B. Depends on their mass C. The slower one D. Both will reach simultaneously
160	Electric flux is defined by the relation	A. E.A. B. $E \times A$ C. E/A D. none of these
161	When electrons in the transmitting antenna vibrate 94000 time per second, they produce radiowaves having frequency	A. 9.4 kHz B. 940 kHz C. 94 kHz D. None of these
162	A boy pulls a toy car through a distance of 5 m by applying a force of 0.5 N, Which makes an angle of 60° with the horizontal. The work done by the boy is:	A. 1.25 J B. 12.5 J C. 125 J D. None of these
163	Real gases strictly obey gas law at:	A. High pressure and low temperatures B. Low pressures and high temperatures C. High pressures and high temperatures D. None of these
164	What are the SI base units of the coefficient of viscosity	A. Kg m s^{-2} B. $\text{kgm}^2 \text{ s}^{-2}$ C. Kg m s^{-1} D. $\text{kg m}^{-1} \text{ s}^{-1}$
165	The waves in which the particles of the medium are displaced in a direction perpendicular to the direction of propagation of waves are known as	A. longitudinal waves B. transverse waves C. non-mechanical waves D. none of them

166	In case of mechanical waves, we study the motion of	A. a single particle B. collection of particle C. any one of them D. none of them
167	The property of fluids due to which they resist their own flow is called:	A. Drag force B. Surface tension C. Viscosity D. None of these
168	Work is a:	A. Scalar quantity B. Vector quantity C. Base quantity D. None of these
169	Which quantity has different dimension:	A. Work B. Pressure C. Energy D. Torque
170	Tick the series which lie/s in. the infra-red region.	A. Pfund series B. Brackett series C. Paschen series D. All of these E. None of these
171	In gases, the charge carries are:	A. <p>Electrons</p> <p>Positive ions</p> <p>Negative ions</p> <p>Both (A) and (C)</p> <p>Both (A) and (B)</p> <p>Both (A) and (B)</p>
172	If rope of lift breaks suddenly. The tension exerted by the surface of lift is (a=Acceleration of lift)	A. mg B. m (g+a) C. m (g - a) D. 0
173	A metal plate of thickness half the separation between the capacitor plates of capacitance C is inserted. The new capacitance is	A. C B. C/2 C. Zero D. 2C
174	A man fires a bullet of mass 200 g at a speed of 5 m/s. The gun is of one kg mass. By what velocity the gun rebounds backwards?	A. 0.1 m/s B. 10 m/s C. 1 m/s D. 0.01 m/s
175	If d is the displacement of the body in time t, then its average velocity will be	A. $v = \frac{d}{t}$ B. $v = \frac{t}{d}$ C. $v = \frac{d}{t}$ D. $v = \frac{d}{t}$
176	The value of E_{Coulomb} in coulomb's law is:	A. $9 \times 10^9 \text{ Nm}^2 \text{ C}^{-2}$ B. $8.85 \times 10^{-12} \text{ C}^2 \text{ N}^{-1} \text{ m}^{-2} \text{ s}^{-2}$ C. $8.85 \times 10^{-12} \text{ Nm}^2 \text{ C}^{-2}$ D. $9 \times 10^9 \text{ C}^2 \text{ N}^{-1} \text{ m}^{-2} \text{ s}^{-2}$
177	The number of "Earth stations" which transmit signals to satellites and receive signals from them are:	A. 3 B. 24 C. 126 D. 200
178	The ratio of shearing stress/shearing strain is called as	A. Modulus B. Pascal modulus

178	The ratio of shearing stress/shearing strain is called as	C. Hooker's modulus D. Shear modulus
179	If the ratio of densities of two gases is 1:4, then the ratio of their rates of diffusion into one another is	A. 2 : 1 B. 4 : 1 C. 1 : 4 D. 3 : 4
180	The product of force and time is called change in:	A. Momentum B. Impulse C. Force D. Both a and b
181	When a wall is pushed by a person very strongly, he has done:	A. Maximum work B. Zero work C. Positive work D. Negative work
182	Magnetic effect of current is used:	A. <p class="MsoNormal" style="text-align:justify">">In electric motor<o:p></o:p></p> B. <p class="MsoNormal" style="text-align:justify">">To detect current<o:p></o:p></p> C. <p class="MsoNormal" style="text-align:justify">">To measure current<o:p></o:p></p> D. <p class="MsoNormal" style="text-align:justify">">All of these<o:p></o:p></p> E. <p class="MsoNormal" style="text-align:justify">">None of these<o:p></o:p></p></p></p></p></p></p>
183	Essential characteristic of equilibrium is	A. Momentum equal to zero B. Acceleration equal to zero C. Kinetic energy equal to zero D. Velocity equal to zero
184	The rate change of area expressed is expressed in:	A. None of these B. $\text{ms}^{\sup>-1}$ C. $\text{m}^{\sup>2}$ $\text{s}^{\sup>-2}$ D. $\text{ms}^{\sup>-2}$ E. $\text{m}^{\sup>2}$ $\text{s}^{\sup>-1}$
185	If two bodies of equal masses moving in the same direction collide elastically, then their velocities.	A. Are added B. Are subtracted C. Do not change D. Are exchanged
186	Work done along a closed path in a gravitational field is:	A. Maximum B. Minimum C. Zero D. Unity
187	The unit of spring constant is	A. J-sec B. Metre C. $\text{Nm}^{\sup>-1}$ D. None of these
188	The slopes of the tangent at any point on the curve gives the value of the	A. average velocity at that point B. instantaneous velocity at that point C. average acceleration at that point D. instantaneous acceleration at that point
189	The working of galvanometer depends upon torque exerted on a current carrying coil in	A. magnetic field B. electric field C. gravitational field D. nuclear field
190	Conventionally the angular velocity is directed at an angle of	A. 90° to the axis of rotation B. 30° to the axis of rotation C. 0° to the axis of rotation D. None of the above
191	The input resistance of the OP-AMP is the resistance between the	A. (-) input and output B. (+) input and output C. (-) and (+) inputs D. between any inputs

192	Tick the one which is not polymer solid:	A. Zirconia B. Polythene C. Nylon D. Synthetic rubber E. None of these
193	When the waveform of one voltage is increasing and that of second is decreasing and vice versa, then phase difference between these voltage is	A. 90° B. 75° C. 0° D. 180° E.
194	The positron was discovered by:	A. In cosmic radiation B. In 1932 C. By Carl Anderson D. All above E. By direc
195	The application of Bernoulli's equation is	A. Torricelli's theorem B. Venture relation C. Binomial theorem D. Both a and b
196	If a material object moves with the speed of light 'C' its mass becomes	A. Equal to its rest mass B. Four times of its rest mass C. Double of its rest mass D. Infinite
197	The resonance will be sharp, if the amplitude decreases rapidly at a frequency	A. equal to the resonant frequency B. slight different from the resonant frequency C. greatly different from the resonant frequency D. any one of them
198	The time taken by light to travel from moon to earth is:	A. 80 sec B. 500 sec C. 1.802×10^4 sec D. Aerophysics
199	When a conductor is moved across a magnetic field:	A. Emf induced its similar to that of a battery B. Emf induced gives rise to induced current C. An emf is induced across its ends D. All are correct E. None of these
200	In the text book, the transistor amplifier circuit is a:	A. Common emitter circuit B. Common collector circuit C. Common base circuit D. Any of these E. None of these
201	The range of β -particle in air is greater than that of α -particle by	A. 1000 times B. 100 times C. 15 times D. 10 times
202	The length of rotating vector (on a certain scale) represents the:	A. Peak value of alternating quantity B. RMS value of alternating quantity C. Instantaneous value of alternating quantity D. Either (B) or (C) E. Either (A) or (B)
203	To display a digit of EIGHT, the number of ON LED'S are:	A. Two B. Three C. Five D. Seven E. Eight
204	Two copper balls of 1 cm and 2 cm in diameter are simultaneously dropped in the same viscous medium. The terminal velocity of bigger ball is:	A. Not affected due to its size B. Twice that of small size ball C. Four times that of small size ball D. 1/4th of that of small size ball
205	What is another name for laminar flow?	A. streamline B. unsteady flow C. turbulent flow D. both (a) and (b)
206	Decibel is unit of	A. Intensity of light B. x-ray radiation capacity C. sound loudness D. Energy of radiation
207	1 gm-cm ⁻³ is equal to	A. 10^3 kg-m ⁻³ B. 10^{-3} kg-m ⁻³ C. 1 kg-m ⁻³

		D. 10^6 kg-m^{-1}
208	The graphical representation of ohm's law is	A. hyperbola B. straight line C. ellipse D. parabola
209	Which of the following quantities remain constant in step up transformer?	A. Current B. Voltage C. Power D. Heat
210	The missing mass which is converted to energy in the formation of nucleus, is called	A. packing fraction B. mass defect C. binding energy D. none of these
211	The electrical forces between the molecules of a liquid are	A. Repulsive B. Attractive C. Both A and B D. None
212	The value of resistivity is the least for:	A. Copper B. Aluminium C. Silver D. Tungsten E. Iron
213	Conversion of A.C. into D.C. is called:	A. Rectification B. Amplification C. Electric induction D. Magnetic induction E. None of these
214	Tick the conservation force:	A. Tension in a string B. Air resistance force C. Elastic spring D. Frictional force
215	The circuit which is used to smooth the output voltage of the full-wave rectification is known as	A. transformer B. rectifier C. filter D. none of these
216	In compressional wave, the layer of medium having reduced pressure is called:	A. Compression B. Elasticity C. Node D. Rarefaction
217	Which of the following waves are more energetic	A. radio waves B. infrared waves C. ultraviolet D. γ -rays
218	Stars twinkle due to	A. The fact that they do not emit light continuously B. The refractive index of earth's atmosphere fluctuates C. The Star's atmosphere absorbs its light intermittently D. None of these
219	Centripetal force performs:	A. Maximum work B. Negative work C. Positive work D. None of these
220	Two vectors having different magnitudes:	A. Have their directions opposite B. May have their resultant zero C. Cannot have their resultant zero D. None of these
221	A rheostat can be used:	A. As variable resistor B. As potential divider C. For varying the current D. All of these E. None of these
222	The special theory of relativity is based on:	A. Four postulates B. Three postulates C. Two postulates D. One postulate E. None of these
223	The electric field, magnetic field and the direction of their propagation are mutually	A. perpendicular B. parallel C. none of these

A. Are equal

224	Parallel vectors of same magnitudes:	<p>A. Are equal</p> <p>B. Are unequal</p> <p>C. When added give the some equal to zero</p> <p>D. Give the answer equal to zero</p>
225	Hydrogen and helium of same volume V at same temperature T and same pressure P are mixed to have same volume V. The resulting pressure of the mixtures will be	<p>A. R/2</p> <p>B. P</p> <p>C. 2P</p> <p>D. Depending on the relative mass of the gases</p>
226	Electric lines of force	<p>A. Intersect each other</p> <p>B. Are always parallel</p> <p>C. Are always anti-parallel</p> <p>D. Never intersect</p> <p>E. None of these</p>
227	Two satellites are to be launched into space from the surface of eathh satellite 1 has mass 10 kg and volume 1500 cm ³ . While satellite 2 has mass 5 kg and volume 1000 m ³ . Assume the required escape velocities of satellite 1 and satellite 2 are v ₁ and v ₂ , respectively. The relation between v ₁ and v ₂ is.	<p>A. Relation depends on the launch</p> <p>B. $V_1 > V_2$</p> <p>C. $V_1 = V_2$</p> <p>D. $V_1 < V_2$</p>
228	A shunt resistance parallel to the galvanometer is used to convert it into	<p>A. avometer</p> <p>B. millimeter</p> <p>C. voltmeter</p> <p>D. none of these</p>
229	In SHM, the acceleration is _____ when velocity is _____:	<p>A. Zero, smallest</p> <p>B. Smallest, zero</p> <p>C. Zero, zero</p> <p>D. Zero, greatest</p>
230	A swing has	<p>A. one natural frequency</p> <p>B. two natural frequencies</p> <p>C. three natural frequencies</p> <p>D. four natural frequencies</p>
231	A point charge A of charge +4 μ C and another B of charge -1 μ C are placed in air at a distance 1 m apart. Then the distance of the point on the line joining the charge B, where the resultant electric field is zero, is (in m)	<p>A. 2</p> <p>B. 1</p> <p>C. 0.5</p> <p>D. 1.5</p>
232	A heat engine is that which converts	<p>A. mechanical energy into thermal energy</p> <p>B. thermal energy into mechanical energy</p> <p>C. K.E into potential energy</p> <p>D. heat energy into light energy</p>
233	In YDS experiment, fringe spacing means the distance between two consecutive _____ fringes.	<p>A. Bright</p> <p>B. Dark</p> <p>C. Any of A and B</p> <p>D. None of these</p>
234	The unit of thermodynamical scale is	<p>A. centigrade</p> <p>B. fahrenheit</p> <p>C. kelvin</p> <p>D. none of them</p>
235	Maximum work is done when force and displacement are	<p>A. Parallel</p> <p>B. Antiparallel</p> <p>C. Perpendicular</p> <p>D. Both a and b</p>
236	The bonding between the semi-conductor materials is	<p>A. covalent</p> <p>B. ionic</p> <p>C. either of them</p> <p>D. none of them</p>
237	A rotating wheel accelerates up to the value of 0.75 rev/sec ² after 2 seconds of its start. Its angular velocity becomes:	<p>A. 9.42 rad/sec</p> <p>B. 2.6 rev/sec</p> <p>C. 1.5 rev/sec</p> <p>D. Both A and C</p>
238	The volume of universal gas constant R is:	<p>A. 8.314 J/K mole K</p> <p>B. 8314 J/K mole K</p> <p>C. 8.314 J/mole K</p> <p>D. None of these</p>
239	An electric field is generated along the wire when:	<p>A. Its resistance is very high</p> <p>B. A constant potential is maintained across the wire</p> <p>C. A constant potential is maintained across the wire</p> <p>D. A constant potential is maintained across the wire</p>

		<p>Roman" and "serif" style="text-align: justify;">Net current through the wire is zero</p> <p>D. A constant potential difference is maintained across the wire</p> <p>E. Either (A) or (D)</p>
240	Direction of motion _____ in circular motion	<p>A. Changes off and on</p> <p>B. Changes continuously</p> <p>C. Does not change</p> <p>D. None of them</p>
241	A body is dropped from a tower with zero velocity, reaches ground in 4s. The height of the tower is about	<p>A. 80 m</p> <p>B. 20 m</p> <p>C. 160 m</p> <p>D. 40 m</p>
242	A disc rolls down a hill and its speed at bottom is found to be 11.4 m/sec. Height of the hill is then nearly:	<p>A. 10 m</p> <p>B. 12 m</p> <p>C. 13 m</p> <p>D. 15 m</p>
243	Glass is an example of	<p>A. crystalline solid</p> <p>B. amorphous solid</p> <p>C. polymeric solid</p> <p>D. none of them</p>
244	The direction of vector in space is specified by:	<p>A. One angle</p> <p>B. Two angles</p> <p>C. Three angles</p> <p>D. None of these</p>
245	Photons must have energy equal to	<p>A. ev</p> <p>B. En</p> <p>C. hf</p> <p>D. None of these</p>
246	A potential barrier of 0.7 V exists across p-n junction made from:	<p>A. Germanium</p> <p>B. Silicon</p> <p>C. Arsenic</p> <p>D. Gallium</p> <p>E. Indium</p>
247	When two objects come to common temperature, the body is said to be in:	<p>A. Static equilibrium</p> <p>B. Dynamic equilibrium</p> <p>C. Thermal equilibrium</p> <p>D. None of these</p>
248	The kinetic energy of one molecule of a gas at normal temperature and pressure will be ($k = 8.31 \text{ J/mole K}$) :	<p>A. $1.7 \times 10^3 \text{ J}$</p> <p>B. $10.2 \times 10^3 \text{ J}$</p> <p>C. $3.4 \times 10^3 \text{ J}$</p> <p>D. $6.8 \times 10^3 \text{ J}$</p>
249	The conventional current in a circuit is defined as " current which passes from a point at higher potential to a point at lower potential as if it represent a movement of	<p>A. negative charges</p> <p>B. positive charges</p> <p>C. protons</p> <p>D. electrons</p>
250	When spectrum of hydrogen atom is taken in magnetic field, some new lines are created. This is called.	<p>A. Resonance effect</p> <p>B. Stark effect</p> <p>C. Zeeman's effect</p> <p>D. Electric effect</p>
251	Magnetic lines of force:	<p>A. Cannot intersect at all</p> <p>B. Intersect at infinity</p> <p>C. Intersect within magnet</p> <p>D. Intersect at Neutral Point</p> <p>E. Intersect at Neutral Point</p>

252	Substances that do not flow easily have	<p>A. large coefficient of viscosity</p> <p>B. small coefficient of viscosity</p> <p>C. either of them</p> <p>D. none of them</p>
253	An oscillating body oscillates due to:	<p>A. Applied force</p> <p>B. Restoring force</p> <p>C. Frictional force</p> <p>D. None of these</p>
254	An axis of rotation	<p>A. Is a straight line</p> <p>B. Is normal to the plane of rotation</p> <p>C. Passes through pivot point O</p> <p>D. All of them</p>
255	Earth is considered to be	<p>A. a non-inertial frame</p> <p>B. an inertial frame</p> <p>C. an accelerated frame</p> <p>D. none of the above</p>
256	The total charge of any nucleus is given as	<p>A. $Ze^{2\sup{2}}$</p> <p>B. $Z^{2\sup{2}}e$</p> <p>C. Z/e</p> <p>D. Ze</p>
257	Which of the following is a characteristic of an ideal fluid?	<p>A. it is non-viscous</p> <p>B. it is incompressible</p> <p>C. it's motion is steady</p> <p>D. all of the above</p>
258	The loudness and pitch of a sound note depends on	<p>A. Intensity and velocity</p> <p>B. Frequency and velocity</p> <p>C. Intensity and frequency</p> <p>D. Frequency and number of harmonic</p>
259	Physics is one of the branches of:	<p>A. Social sciences</p> <p>B. Physical sciences</p> <p>C. Biological sciences</p> <p>D. Abstract art</p>
260	According to Einstein, with the great increase in the speed of the body, the relativistic mass of the body	<p>A. Remains constant</p> <p>B. Decreases</p> <p>C. Increases to infinity</p> <p>D. Reduced to zero</p>
261	Work is a always done on a body when	<p>A. A force acts on it</p> <p>B. It moves through certain distance</p> <p>C. None of A or B is correct</p> <p>D. Both A and B are correct</p>
262	Which of the following is the longitudinal waves?	<p>A. Sound waves</p> <p>B. Waves on plucked string</p> <p>C. Water waves</p> <p>D. Light waves</p>
263	The artillery shells travel along parabolic paths under the influence of	<p>A. magnetic field</p> <p>B. electric field</p> <p>C. electromagnetic field</p> <p>D. gravitational field</p>
264	The material in the form of wire or rod or plate which leads the current into or cut of the electrolyte is known as	<p>A. voltmeters</p> <p>B. resistance</p> <p>C. electrode</p> <p>D. current</p>
265	A line which represents the direction of travel of a wave is known as	<p>A. Spherical wavefront</p> <p>B. Locus</p> <p>C. Ray</p> <p>D. Either B or C</p>
266	The effect of applying a force on a moving body is to change	<p>A. its direction of motion only</p> <p>B. its speed of motion only</p> <p>C. both the direction and speed of motion</p> <p>D. its inertia only</p>
267	Waves transport energy	<p>A. without transport energy</p> <p>B. with matter</p> <p>C. both of them</p> <p>D. none of them</p>
268	The SI unit of flux density is	<p>A. Newton/Amp-meter</p> <p>B. Newton-m/Ampere</p> <p>C. $\text{Newton-m/Amp}^{2\sup{2}}$</p> <p>D. Newton-Amp/meter</p>
		A. 1.18 K

269	The critical temperature of tin is	<p>B. 4.2 K</p> <p>C. 3.72 K</p> <p>D. 7.2 K</p>
270	When a body is moving on a surface, the force of friction is called	<p>A. Static friction</p> <p>B. Dynamic friction</p> <p>C. Limiting friction</p> <p>D. Rolling friction</p>
271	Which of the following medium/media can transmit both transverse and longitudinal waves:	<p>A. Solids</p> <p>B. Liquids</p> <p>C. Gases</p> <p>D. All of them</p>
272	Particles have the mass smallest of following is:	<p>A. Electron</p> <p>B. Proton</p> <p>C. Neutron</p> <p>D. Quark</p>
273	The ratio of velocity of sound in air at 4 atm pressure and that at 1 atm pressure would be	<p>A. 1 : 2</p> <p>B. 4 : 1</p> <p>C. 1 : 4</p> <p>D. 2 : 1</p>
274	The analysis of the distribution of wavelengths of the radiation emitted from a hot body set the foundation of new mechanics, known as	<p>A. classical mechanics</p> <p>B. Newtonian mechanics</p> <p>C. quantum mechanics</p> <p>D. statistical mechanics</p>
275	The work done in moving a body between two points in a conservation field is independent of the:	<p>A. Direction</p> <p>B. Force applied</p> <p>C. Path followed by the body</p> <p>D. Power</p>
276	If the water falls from a dam into a turbine wheel 19.6 m below, then the velocity of water at the turbine, is (Take $g=9.8 \text{ m/s}^2$)	<p>A. 9.8 m/s</p> <p>B. 19.6 m/s</p> <p>C. 39.2 m/s</p> <p>D. 98.0 m/s</p>
277	Density is defined as:	<p>A. Mass per volume</p> <p>B. Volume per mass</p> <p>C. Mass x volume</p> <p>D. Mass per length</p>
278	A 100 Kg car is moving at the speed of 10 m/sec and comes to rest after covering a distance of 50 m. The amount of work done against the friction is:	<p>A. $+5 \times 10^1 \text{ J}$</p> <p>B. $+5 \times 10^2 \text{ J}$</p> <p>C. $+5 \times 10^3 \text{ J}$</p> <p>D. $+5 \times 10^4 \text{ J}$</p>
279	In the expression $F \times t$, the force F is	<p>A. total force</p> <p>B. instantaneous force</p> <p>C. average force</p> <p>D. all of them</p>
280	Heating effect of current utilized in:	<p>A. <p><p class="MsoNormal" style="text-align:justify">Electric motor<o:p></o:p></p></p></p> <p>B. <p><p class="MsoNormal" style="text-align:justify">Electric toaster<o:p></o:p></p></p></p> <p>C. <p><p class="MsoNormal" style="text-align:justify">Electroplating<o:p></o:p></p></p></p> <p>D. <p><p class="MsoNormal" style="text-align:justify">Electric kettle<o:p></o:p></p></p></p> <p>E. <p><p class="MsoNormal" style="text-align:justify">Both (B) and (D)<o:p></o:p></p></p></p>
281	A 100 kg car is moving at a speed of 10 m/sec and comes to rest after covering a distance of 50 m. the amount of work done against friction is:	<p>A. $+5 \times 10^1 \text{ J}$</p> <p>B. $+5 \times 10^2 \text{ J}$</p> <p>C. $+5 \times 10^3 \text{ J}$</p> <p>D. $+5 \times 10^4 \text{ J}$</p>
282	The way through which electromagnetic radiations or photons interact with matter depends upon their:	<p>A. Wavelength</p> <p>B. Frequency</p> <p>C. Energy</p> <p>D. Temperature</p>

E. All of these

283	The passage of current is accompanied by a magnetic field in the surrounding space:	<p>A. <p class="MsoNormal" style="text-align:justify">Always accompanied<o:p></o:p></p></p> <p>B. <p class="MsoNormal" style="text-align:justify">Sometimes accompanied<o:p></o:p></p></p> <p>C. <p class="MsoNormal" style="text-align:justify">Never accompanied<o:p></o:p></p></p> <p>D. Any of above<p class="MsoNormal" style="text-align:justify"><o:p></o:p></p></p> <p>E. <p class="MsoNormal" style="text-align:justify">None of these<o:p></o:p></p></p>
284	The expression of Hook's law is	<p>A. $F=ma$</p> <p>B. $F=kx$</p> <p>C. $F= -kx$</p> <p>D. $-kx=ma$</p>
285	The minimum charge on any object can not be less than	<p>A. $1.6 \times 10^{-19} \text{C}$</p> <p>B. $3.2 \times 10^{-19} \text{C}$</p> <p>C. 1.0 C</p> <p>D. $4.8 \times 10^{-19} \text{C}$</p>
286	When a body moves with a constant speed in a circle:	<p>A. No work is done on it</p> <p>B. No acceleration is produced in the body</p> <p>C. Velocity remains constant</p> <p>D. None of these</p>
287	The appearance of the colour in the soap (oil) film results from:	<p>A. Dispersion</p> <p>B. Interference</p> <p>C. Reflection</p> <p>D. Refraction</p>
288	The force acting as one meter length of the conductor placed at right angle to the magnetic field, when one A current is passing through it, defines the	<p>A. magnetic flux</p> <p>B. magnetic induction</p> <p>C. magnetic field</p> <p>D. self inductance</p>
289	Heat required to raise the temperature of one mole of a gas through 1 K at constant pressure is called	<p>A. heat capacity</p> <p>B. specific heat capacity</p> <p>C. specific heat at constant volume</p> <p>D. specific heat at constant pressure</p>
290	A galvanometer is an instrument used to	<p>A. measure voltage across a circuit</p> <p>B. detect current in a circuit</p> <p>C. measure current flowing through a circuit</p> <p>D. none of these</p>
291	Electric generators which convert mechanical energy into	<p>A. solar energy</p> <p>B. thermal energy</p> <p>C. kinetic energy</p> <p>D. electrical energy</p>
292	A truck of mass 5000 kg and a car of mass 1000 kg are both travelling at a speed of 36 km/hr. Assume the time reluires to stop the truck in 10 sec is X difference X and Y is equal to.	<p>A. 4 mega Newton</p> <p>B. 14.4 Kilo Newton</p> <p>C. 4 Kilo Newton</p> <p>D. 14,4 Newton</p>
293	At the starting point of the free fall motion of an object, its acceleration will be	<p>A. maximum</p> <p>B. minimum</p> <p>C. zero</p> <p>D. none of them</p>
294	The resistance of the given conductor can be increased by	<p>A. Increasing the area</p> <p>B. Changing resistivity</p> <p>C. Decreasing the length</p> <p>D. None of the above because change does not matter because in any case the volume remains the same</p>
295	Lead, copper and wrought iron are examples of	<p>A. brittle substances</p> <p>B. ductile substances</p> <p>C. plastic substances</p> <p>D. elastic substances</p>

		U. elastic substances
296	By CAT scans, we can detect the density difference of the order of:	A. 1% B. 20% C. 30% D. 50% E. 70%
297	The locus of all the points in the same phase of vibration is called	A. Wave pocket B. Wavefront C. Wave number D. None of these
298	The SI unit of magnetic flux is.	A. weber B. Nm^{-1} C. tesla D. gauss
299	An angle of 180° in circular motion is equivalent to _____ in SHM.	A. Half the vibration B. One vibration C. 3/4th of a vibration D. None of these
300	Which of the following types of force can do no work on the particle on which it acts	A. Frictional force B. Gravitational force C. Electric force D. Centripetal force
301	If a vector lies in second quadrant, then B_x and B_y are:	A. -, + B. +, - C. +, + D. -, -
302	A ball is dropped from a height of 4.2 meters. To what height it will rise if there is no loss of KE after rebounding?	A. 4.2 m B. 8.4 C. 12.6 D. None of these
303	If two waves of amplitude 'a' produce a resultant wave of amplitude a, then the phase difference between them will be	A. 60° B. 90° C. 120° D. 180°
304	Electromagnetic waves transmit energy equal to	A. $\frac{1}{2} mv^2$ B. $m^2 c^2$ C. hf/c D. hf
305	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to degree D. none of these
306	In reverse-biased p-n junction, the reverse current is due to flow of:	A. Minority charge carriers B. Majority charge carriers C. Free electrons from p to n-region D. Holes from n to p-region E. all are true except (B)
307	A tight wire is clamped at two points 2 m apart. It is plucked near one end. What are the three longest wavelengths produced on the vibrating wire.	A. 2 m, 1m, 0.67 m B. 4 m, 2m, 1m C. 4 m, 2m, 1.33 m D. 1m, 0.5 m, 0.33 m
308	The power dissipation in a pure inductive or capacitance circuit is	A. maximum B. positive C. zero D. none
309	When two progressive waves of nearly same frequencies superimpose and give rise to beats, then	A. Frequency of beat changes with time B. Frequency of beat changes with location of observer C. All particles of medium vibrate simple harmonically with frequency equal to the difference between frequencies of component waves D. Amplitude of vibration of particles at any point changes simple harmonically with frequency equal to difference between two component waves
310	In a cubic crystal, All solids meet at:	A. 60° B. 90° C. 109° D. 30° E. 10°

A. L and B oppose each other

311	In LCR circuit which one of the following statement is correct?	<p>A. L and R oppose each other</p> <p>B. R value increase with frequency</p> <p>C. The inductive reactance increases with frequency</p> <p>D. The capacitive reactance increases with frequency</p>
312	A constant current of 1 ampere flow in an electrical component over a period of 5 seconds. The total charge flowing through the component over this duration is.	<p>A. 5 coulombs</p> <p>B. 15 coulombs</p> <p>C. 10 coulombs</p> <p>D. 20 coulombs</p>
313	The device which can convert heat energy into electrical energy is called:	<p>A. Thermistor</p> <p>B. Thermometer</p> <p>C. Thermostat</p> <p>D. Thermocouple</p> <p>E. Both (C) and (D)</p>
314	The phase determines the	<p>A. displacement</p> <p>B. amplitude</p> <p>C. frequency</p> <p>D. state of motion of vibrating body</p>
315	The instrument used to gather information form the far side of the universe is	<p>A. Compound microscope</p> <p>B. Radio telescope</p> <p>C. Astronomical Telescope</p> <p>D. Simple microscope</p>
316	With age, least distance of distinct vision:	<p>A. Increases</p> <p>B. Decreases</p> <p>C. Is not affected</p> <p>D. None is correct</p>
317	The unit of resistance is	<p>A. volt</p> <p>B. ampere</p> <p>C. ohm</p> <p>D. coat</p>
318	Certain charge +q is placed at the center of a sphere. At each of the sphere, The directions of electric intensity and vector area are:	<p>A. Same</p> <p>B. Different</p> <p>C. Opposite to each other</p> <p>D. At 60° with each other</p> <p>E. Both (B) and (C)</p>
319	Alfa , beta and gamma rays are emitted from a radio-active substance	<p>A. spontaneously</p> <p>B. when it is heated</p> <p>C. when it is exposed to light</p> <p>D. When it interacts with the other particle</p>
320	When an electron enters in a magnetic field right angle to its motion, the magnitude of its velocity will be	<p>A. changed</p> <p>B. zero</p> <p>C. unchanged</p> <p>D. none of these</p>
321	The commercial unit of electrical energy is :	<p>A. K Watt</p> <p>B. KWH</p> <p>C. Horse power</p> <p>D. Joule</p>

322	If the distance of separation between two charges is increased, the electrical potential energy of the system will	<p>A. Increase</p> <p>B. Decrease</p> <p>C. May increase or decrease</p> <p>D. Remain the same</p>
323	Conventionally the angular velocity is directed at an angle of:	<p>A. 90° to the axis of rotation</p> <p>B. 30° to the axis of rotation</p> <p>C. 0° to the axis of rotation</p> <p>D. None of above</p>
324	The dimension of linear inertia is:	<p>A. MLT^{-2}</p> <p>B. MLT^{-1}</p> <p>C. MLT</p> <p>D. MLT^{-1}</p>
325	Which of the following is most suitable as the core of transformer	<p>A. Soft iron</p> <p>B. Alnico</p> <p>C. Steel</p> <p>D. None of these</p>
326	Which one of the following physical quantities changes with relativistic speed	<p>A. Length</p> <p>B. Mass</p> <p>C. Time</p> <p>D. All of the above</p>
327	A body falls freely from rest. It covers as much distance in the last second of its motion as covered in the first three seconds. The body has fallen for a time of	<p>A. 3 s</p> <p>B. 5 s</p> <p>C. 7 s</p> <p>D. 9 s</p>
328	In the force applied to parallel to the direction of motion, then the work done is:	<p>A. Positive</p> <p>B. Negative</p> <p>C. Zero</p> <p>D. None of these</p>
329	The unit of work in CGS system is	<p>A. Joule</p> <p>B. Erg</p> <p>C. Dyne</p> <p>D. Watt</p>
330	If we draw a graph between d (along x-axis) and F (along y-axis) and get a straight line horizontal to x-axis, then area under this straight line represents:	<p>A. Power</p> <p>B. Work</p> <p>C. Pressure</p> <p>D. None of these</p>
331	An ambulance moves around a large round-about with its sirens on. For a person standing at the center of the round about, the frequency of ambulance siren heard will be.	<p>A. Equal to the actual siren frequency</p> <p>B. Less than the actual siren frequency</p> <p>C. Greater than the actual siren frequency</p> <p>D. Changing as the ambulance moves frequency</p>

332	To design a resonant circuit of frequency 100 KHz with an inductor of inductance 5 mH, we need a capacitor of capacitance	A. 5.07 pF B. 50 pF C. 0.507 pF D. 507 pF
333	The velocity of falling raindrop attains limited value because of	A. Up thrust of air B. Viscous force exerted by air C. Surface tension effect D. Air currents atmosphere
334	The concept of field theory was put forward by	A. Franklin B. Kepler C. Oersted D. Michael Faraday
335	de-Broglies hypothesis was experimentally verified by	A. Maxwell B. Compton C. Einstein D. Davison and Germer
336	An A.C. voltmeter read 250 volts. The frequency of alternating is 50 Hz, the peak value of voltage is	A. 3525.0 volts B. 35.35 volts C. 353.5 volts D. 3.535 volts
337	If a molecule with momentum mv strikes a wall and rebound then the change in momentum will be:	A. -2 mv B. Zero C. 2 mv D. mv
338	Truth table of logic function:	A. Summarizes its output values B. Tabulates all its input conditions only C. Display all its input/output possibilities D. Is not based on logic algebra E. None of these
339	The distance covered by the wave in one second is:	A. Wave number B. Wave length C. Frequency D. Wave speed
340	Work done along a closed path in a gravitational force is:	A. maximum B. Minimum C. Zero D. Unity
341	The impedance of RLC series resonance circuit at resonant frequency is	A. Greater than R B. Equal to R C. Less than R D. None of these
342	Which one of the following is dimensionless.	A. Acceleration B. Velocity C. Density D. Angle
343	when the deformation produced in the material become permanent, this type of behaviour is called	A. proportionality B. elasticity C. plasticity D. none of them
344	A diode characteristic curve is a plot between	A. current and time B. voltage and time C. voltage and current D. forward voltage and reversed voltage
345	A fluid at a certain point has 50 J of potential energy per unit volume, 75 J of kinetic energy per unit volume, and 35 J of pressure energy per unit volume. the total energy of the fluid is	A. 125 J B. 90 J C. 160 J D. 85 J
346	The number of countries who manage the largest satellite system is:	A. 3 B. 24 C. 126 D. 200
347	Step up transformer has a transformation ratio of 3:2. What is the voltage in secondary, if voltage in primary is 30V:	A. 45 V B. 15 V C. 90 V D. 300 V
348	The mass of a body measured by a physical balance in a lift at rest is found to be m, if the lift is going up with an acceleration a, its mass will be measured as	A. $m(1 - a/g)$ B. $m(1 + a/g)$ C. m D. Zero
349	The doped semi-conductor materials are known as	A. intrinsic semi-conductor B. extrinsic semi-conductor C. ... D. ...

		C. either of them D. none of them
350	In describing functions of digital systems, a closed switch will be shown as	A. 0 B. 1 C. low D. any one of these
351	When a force is applied on a body, several effects are possible Which of the following effect could not occur?	A. the body rotates B. the body speeds up C. the mass of the body decreases D. the body changes its direction
352	In amplitude modulation, the amplitude of carrier wave changes in proportion to.	A. The amplitude of the modulating B. The frequency of the modulating C. The sign of the modulating D. All of the above
353	An inertial frame is that frame in which	A. $a > 0$ B. $a = 0$ C. $a < 0$ D. none of these
354	Glass and high carbon steel are the examples of	A. brittle substances B. ductile substances C. plastic substances D. elastic substances
355	A 60 W bulb operates on 220 V supply. The current flowing through the bulb is	A. 11/3 A B. 3 A C. 3/11 A D. 6
356	Max Planck received the Nobel Prize for his discovery of energy quants in:	A. 1718 AD B. 1918 AH C. 1818 AD D. 1918 AD E. None of these
357	Work is a	A. Scalar quantity B. Vector quantity C. Base quantity D. None of these
358	A train of 150 m length is going towards north direction at a speed of 10 ms^{-1} . A parrot flies at a speed of 5 ms^{-1} towards south direction parallel to the railway track. The time taken by the parrot to cross the train is equal to	A. 12 s B. 8 s C. 15 s D. 10 s
359	SI Unit of work is	A. $\text{Nm}^{\sup>-1</sup>}$ B. Joule C. Nms D. Both a and b
360	Laws of reflection and refraction can also be explained by:	A. Particle nature of light B. Quantum nature of light C. Wave nature of light D. Complex nature of light
361	Consider two spheres A and B of radii r_a and r_b both concentric with point charge Q. If $r_a > r_b$ then the total flux passing normally through the sphere A and B is related as	A. Flux through A is greater B. Flux through both sphere is equal C. Flux through a may be greater or less than Q depending on radius D. Flux through sphere B is greater
362	On a cold morning a metal surface will feel colder to touch than a wooden surface, because	A. Metal has high specific heat B. Metal has high thermal conductivity C. Metal has low specific heat D. Metal has low thermal conductivity
363	Field lines are closer to each other in the region where the field is:	A. <p>Stronger</p> B. <p>Weaker</p> C. <p>Much weaker</p> D. <p>Absent</p> E. <p>None of</p>

		these
364	Substances that flow easily have	<p>A. large coefficient of viscosity B. small coefficient of viscosity C. either of them D. none of them</p>
365	The Phenomenon of generation of induced emf is called	<p>A. Electrostatic induction B. Magnetic induction C. Electromagnetic induction D. Electric induction E. Both A and B</p>
366	Which branch of physics deals with the structure and properties of solids	<p>A. Atomic Physics B. Plasma Physics C. Molecular Physics D. Solid state physics</p>
367	The product of induced current and the resistance of the wire through which the current is passing is called:	<p>A. Electromagnetic induction B. induced emf C. Induced current D. Self induced E. None of these</p>
368	The intensity at a point due to a charge is inversely proportional to	<p>A. Amount of charge B. Size of the charge C. Distance between charge and the point D. Square of the distance from the charge E. None of these</p>
369	On the compression stroke of the petrol engine, the inlet valve is closed and the mixture is compressed	<p>A. adiabatically B. isothermally C. isochorically D. isobarically</p>
370	Fluid A is more viscous than fluid B. While flowing through a pipe of the same dimensions and material which fluid takes longer to travel at 25°C?	<p>A. fluid B B. fluid A C. both take the same time D. not possible to determine from given information</p>
371	The electric intensity outside the two oppositely charged parallel metal plates is	<p>A. Maximum B. Minimum C. Zero D. Infinite</p>
372	The internal energy of a system does not depend upon the	<p>A. initial state of the system B. final state of the system C. path D. none of them</p>
373	Two sources are said to be coherent if they have:	<p>A. Same amplitude B. Same wavelength C. Definite phase relation with each other D. None of them</p>
374	A meter wire carrying a current of 2A is at right angle to the uniform magnetic field of 0.5 Weber/m ² . The force on the wire is	<p>A. 5N B. 4N C. 1.5N D. 6N</p>
375	Flight of rocket in the space is an example of	<p>A. Newton's first law B. Newton's third law C. Newton's second law D. all of them</p>
376	When a large number of atoms are brought close to one another to form a solid, each energy level of an isolated atom splits into sub-levels, called	<p>A. energy bands B. energy shells C. states D. all of them</p>
377	The magnitude of induced emf depends upon the:	<p>A. Rate of decrease of magnetic field B. Rate of change of magnetic field C. Rate of increase of magnetic flux D. Constancy of magnetic field E. None of these</p>
378	Adiabatic change occurs when the gas	<p>A. expands B. compressed C. expands or compressed D. expands or compressed rapidly</p>
379	A coil of constant area is placed in a constant magnetic field. An induced current is produced in the coil when:	<p>A. The coil is destroyed B. The coil is Rotated C. The coil is neither destroyed nor rotated D. Both (A) and (B) E. None of these</p>
		A. Protium

380	Heavy water is made of one oxygen atom and two atoms of:	<p>B. Deuterium</p> <p>C. Tritium</p> <p>D. Any of these</p> <p>E. None of these</p>
381	Laser is a beam of:	<p>A. Visible light</p> <p>B. Infra red light</p> <p>C. Ultra violet light</p> <p>D. Violet light only</p> <p>E. yellow light only</p>
382	The minimum wavelength of X-rays produced of 1KV potential difference is applied across the anode and cathode of the tube is	<p>A. 1.24×10^{-10} m</p> <p>B. 7.92×10^{-20} m</p> <p>C. 2.78×10^{-14} m</p> <p>D. 3.88×10^{-11} m</p>
383	The time period of a simple pendulum is independent of its:	<p>A. Length</p> <p>B. Mass</p> <p>C. Value of g</p> <p>D. Both A and B</p>
384	When there is no internal frictional forces between the adjacent layers of fluid, then the fluid is called	<p>A. incompressible</p> <p>B. compressible</p> <p>C. viscous</p> <p>D. non viscous</p>
385	Coulomb multiplied by volt by volt gives the unit called:	<p>A. farad</p> <p>B. Ohm</p> <p>C. Second</p> <p>D. joule</p> <p>E. Watt</p>
386	The body passing a viscous medium affected by:	<p>A. One force only</p> <p>B. Two forces only</p> <p>C. Four forces</p> <p>D. None of these</p>
387	When a water droplet falling freely through air, the drag force on water droplet increases with th	<p>A. decrease in speed</p> <p>B. increase in speed</p> <p>C. pressure</p> <p>D. none of them</p>
388	Work has a dimension as that of:	<p>A. Torque</p> <p>B. Angular momentum</p> <p>C. Linear momentum</p> <p>D. Power</p>
389	The phase angle of a series RLC circuit at resonance is	<p>A. 180°</p> <p>B. 90°</p> <p>C. 0°</p> <p>D. None of the these</p>
390	The combined effect of resistance and reactance in a.c. circuit is called	<p>A. conductance</p> <p>B. resistance</p> <p>C. impedance</p> <p>D. choke</p>
391	The velocity of a projectile is maximum	<p>A. at the point of projection</p> <p>B. just before striking the ground</p> <p>C. at none of them</p> <p>D. at both of them</p>
392	Transverse waves can be set up:	<p>A. Solids</p> <p>B. Liquids</p> <p>C. Gases</p> <p>D. All of them</p>
393	When the pn-junction is connected reversed biased, its resistance is of the order of	<p>A. few ohms</p> <p>B. few kilo-ohms</p> <p>C. few mega-ohms</p> <p>D. few mili-ohms</p>
394	In Pakistan electricity is supplied for domestic use at 220 V, it is supplied at 110 V in USA. If the resistance of a 60 W bulb for use in Pakistan is R, the resistance of a 60 W bulb for use in USA will be	<p>A. 2 R</p> <p>B. $R/4$</p> <p>C. $R/2$</p> <p>D. R</p>
395	The resistance of an incandescent lamp is	<p>A. Smaller when switched on</p> <p>B. Greater when switched off</p> <p>C. The same whether it is switch off or switch on</p> <p>D. Greater when switched on</p>
396	One mole of any substance contain	<p>A. same number of molecules</p> <p>B. different number of molecules</p> <p>C. may be same or different</p> <p>D. none of them</p>

		<p>A. None of them</p>
397	When each particle of the fluid moves along a smooth path, this path is known as	<p>A. straight path B. smooth path C. haphazard path D. streamline</p>
398	The acceleration of body executing SHM is directly proportional to	<p>A. Applied force B. Amplitude C. Displacement D. Frictional force</p>
399	A motorist travels A to B at a speed of 40 km/h and returns at a speed of 60 km/h. His average speed will be	<p>A. 40 km/h B. 48 km/h C. 50 km/h D. 60 km/h</p>
400	Machine parts are jammed due to:	<p>A. Increasing in viscosity of lubricant B. Decreasing in viscosity of lubricant C. Decreasing in surface tension of lubricant D. None of these</p>
401	A condenser of capacity $50\mu\text{F}$ is charged to 10 V. The energy stored is	<p>A. $1.25 \times 10^{-3}\text{J}$ B. $3.75 \times 10^{-3}\text{J}$ C. $2.5 \times 10^{-3}\text{J}$ D. $5 \times 10^{-3}\text{J}$</p>
402	In RLC series circuit, resonance occurs when	<p>A. $X_L > X_C$ B. $X_L < X_C$ C. $X_L = X_C$ D. None of these</p>
403	The irregular and unsteady flow of the fluid is called	<p>A. turbulent flow B. steady flow C. either of them D. both of them</p>
404	The drag force acting on a spherical droplet of radius 10^{-5}m moving with a velocity of 1 cm/sec in a fluid of viscosity $5.31 \times 10^{-7}\text{m/sec}$. The units come out to be:	<p>A. 10^{-16}N B. 10^{-14}N C. 10^{-12}N D. 10^{-10}N</p>
405	Which of the following friction is self-adjusting force.	<p>A. Static B. Dynamic C. Limiting D. Sliding</p>
406	The current that flows through the coil of a motor causes	<p>A. Its shaft to revolve B. Its brushes to rotate C. Motor to move D. Its shaft to rotate E. None of these</p>
407	When you drop a ball it accelerates at 9.8 m/sec. If you instead throw it downward then it accelerates immediately after leaving your hand assuming no air resistance.	<p>A. 9.8 B. More than 9.8 C. Less than 9.8 D. Depending on throwing speed</p>
408	The open loop gain of OP-AMP is of the order of	<p>A. 10^2 B. 10^3 C. 10^4 D. 10^5</p>
409	In case of destructive interference of two waves, the amplitude of the resultant wave will be _____ either of the waves:	<p>A. Greater than B. Smaller than C. Equal to D. None of these</p>
410	Tesla is the unit of	<p>A. Magnetic induction or flux density B. Magnetic flux C. Self inductance D. None of these</p>
411	When a nucleus emits an alpha particle, its charge number decreases by	<p>A. 3 B. 2 C. 6 D. 5</p>
412	Which of the following diode is used for the detection of light	<p>A. photo diode B. light emitting diode C. photo voltaic cell D. all of them</p>
413	For maximum linear distance of travel, a projectile must be fired at an angle of	<p>A. 0° B. 45° C. 90° D. 60°</p>

414	The isotope/s of hydrogen is /are:	<p>A. Protium</p> <p>B. Deuterium</p> <p>C. Tritium</p> <p>D. Both (A) and (B)</p> <p>E. All of these</p>
415	The waveform of alternating voltage is a:	<p>A. Square</p> <p>B. Rectangular</p> <p>C. Saw-tooth</p> <p>D. Sinusoidal</p> <p>E. None of these</p>
416	The time interval during which the Voltage source changes its polarity once is known as:	<p>A. Time period T</p> <p>B. Half the time period</p> <p>C. Quarter the time period</p> <p>D. Two third of the time period</p> <p>E. None of these</p>
417	With reference of figure P-1 which of the following statements relating the average velocity for the complete path and the instantaneous velocity at point Velocity at point C is true.	<p>A. The average velocity and the instantaneous velocity of C are equal</p> <p>B. The relation depends upon the mass of the toy car</p> <p>C. The average velocity is greater than the instantaneous velocity at C equal</p> <p>D. The instantaneous velocity at C is greater than the average velocity.</p>
418	If a system undergoes a natural process it will go in the direction that causes the entropy of the system plus the environment to increase, this is another statement of	<p>A. second law thermodynamics</p> <p>B. first law of thermodynamics</p> <p>C. third law of thermodynamics</p> <p>D. none of them</p>
419	A high temperature, the proportion of shorter wavelengths radiation, emitted by the body	<p>A. decreases</p> <p>B. first increases then decreases</p> <p>C. increases</p> <p>D. any one of them</p>
420	The RMS value of alternating current is:	<p>A. 0.7 times at the peak value</p> <p>B. 0.5 times the peak value</p> <p>C. 0.7 times the Instantaneous value</p> <p>D. Equal to maximum voltage</p> <p>E. None of these</p>
421	The amplifier which us used to perform mathematical operations electronically is known as	<p>A. calculator</p> <p>B. OP-AMP</p> <p>C. computer</p> <p>D. any one of them</p>
422	When the magnitude of two component vectors are equal to that of their resultant, then the angle between the components is:	<p>A. 60°</p> <p>B. 90°</p> <p>C. 120°</p> <p>D. 150°</p>
423	A particle is moving along a circular path with uniform speed. Its projection will execute ___ along the _____ of the circle:	<p>A. Circular motion, circumference</p> <p>B. Vibratory, chord</p> <p>C. SHM, diameter</p> <p>D. SHM, circumference</p>
424	Consider a spherical shell of metal at he centre of which a positive point charge is kept	<p>A. The electric filed is zero outside the shell</p> <p>B. The electric field is zero everywhere</p> <p>C. The electric field is zero in the region inside the shell</p> <p>D. The electric field is non-zero in both regions outside and inside the shell</p>
425	The strength of magnetic field around the current conductor is	<p>A. Smaller near the conductor</p> <p>B. Greater near the conductor</p> <p>C. Greater at the large distance from the conductor</p>

		<p>C. Greater at the large distance from the conductor</p> <p>D. Constant near and away from the conductor</p>
426	Radiation detector are used to	<p>A. measure intensity of radiation</p> <p>B. measure energy of radiation</p> <p>C. difference between different types of radiation</p> <p>D. all the above</p>
427	Since the absolute scale is independent of the property of the working substance, hence, can be applied at	<p>A. very high temperature</p> <p>B. very low temperature</p> <p>C. any one of them</p> <p>D. none of them</p>
428	Momentum is a parameter associated with	<p>A. wave motion</p> <p>B. particle motion</p> <p>C. neither wave nor particle motion</p> <p>D. none of these</p>
429	Silicon can be obtained from	<p>A. Lead</p> <p>B. Uranium</p> <p>C. An isotope of oxygen</p> <p>D. Sand</p>
430	When a body is moves along a circular path with constant speed, it has an acceleration, which is always directed:	<p>A. Along the tangent</p> <p>B. Toward the centre</p> <p>C. Away from the centre</p> <p>D. None of them</p>
431	Which one is the least multiple	<p>A. Pico</p> <p>B. Femto</p> <p>C. Nano</p> <p>D. Atto</p>
432	The efficiency of petrol engine is usually not more than 25% to 30% because of	<p>A. friction</p> <p>B. heat losses</p> <p>C. both of them</p> <p>D. none of them</p>
433	When a fluid is in motion, its flow can be considered as	<p>A. turbulent</p> <p>B. streamline</p> <p>C. either or them</p> <p>D. neither of them</p>
434	To convert galvanometer into ammeter we connect	<p>A. small resistance in parallel with galvanometer</p> <p>B. small resistance in series with galvanometer</p> <p>C. high resistance in series with galvanometer</p> <p>D. high resistance in parallel with galvanometer</p>
435	Electric flux is:	<p>A. Cross product of two vector<p class="MsoNormal"></p></p></p></p> <p>B. <p class="MsoNormal"></p></p></p></p> <p>C. <p class="MsoNormal"></p></p></p></p> <p>D. <p class="MsoNormal"></p></p></p></p> <p>E. <p class="MsoNormal"></p></p></p></p> <p>(D)</p>
436	A weakly damped system has fairly	<p>A. sharp resonance curve</p> <p>B. flat resonance curve</p> <p>C. both of them</p> <p>D. none of them</p>
437	Average KE of a gas molecule has:	<p>A. Direct relation with absolute temperature and inverse relation with pressure</p> <p>B. Direction relation with both absolute temperature and pressure</p> <p>C. Inverse relation with both absolute temperature and pressure</p> <p>D. None of these</p>
		<p>A. One coulomb<p class="MsoNormal" style="text-align: justify"></p></p></p> <p>B. One coulomb<p class="MsoNormal" style="text-align: justify"></p></p></p>

438	The current of 1 ampere is passing through a conductor. The charge passing through it in half a minute is:	<p>0.5 coulomb<o:p></o:p></p></p> <p>C. <p class="MsoNormal" style="text-align:justify">30 coulomb<o:p></o:p></p></p> <p>D. <p class="MsoNormal" style="text-align:justify">2 coulombs<o:p></o:p></p></p> <p>E. <p class="MsoNormal" style="text-align:justify">None of these<o:p></o:p></p></p>
439	If the ends of a wire are connected to a battery an electric field E will be set up at:	<p>A. <p class="MsoNormal" style="text-align:justify">The ends of the wire only<o:p></o:p></p></p> <p>B. <p class="MsoNormal" style="text-align:justify">Mid points of the wire only<o:p></o:p></p></p> <p>C. <p class="MsoNormal" style="text-align:justify">Every point within the wire<o:p></o:p></p></p> <p>D. <p class="MsoNormal" style="text-align:justify">At nodes only<o:p></o:p></p></p> <p>E. <p class="MsoNormal" style="text-align:justify">Both (B) and (D) <o:p></o:p></p></p>
440	The holes created in the L and M shells are occupied by transitions of:	<p>A. Electrons from lower states</p> <p>B. Electrons from higher state</p> <p>C. Positrons from higher states</p> <p>D. Electrons from K shell</p> <p>E. Both (A) and (B)</p>
441	Light waves are	<p>A. Mechanical waves</p> <p>B. Electromagnetic waves</p> <p>C. Any of above</p> <p>D. None of above</p>
442	The induced emf in a coil is proportional to:	<p>A. Magnetic flux through a coil</p> <p>B. Rate of change of magnetic flux through the coil</p> <p>C. Area of the coil</p> <p>D. Product of magnetic flux and area of the coil</p>
443	In which of the following components, pn-junction is used	<p>A. light emitting diode</p> <p>B. photo diode</p> <p>C. photo voltaic cell</p> <p>D. all of these</p>
444	If a 40 watt light bulb burns for 2 hours. how much heat is generated	<p>A. $288 \times 10^3 \text{ J}$</p> <p>B. $288 \times 10^8 \text{ J}$</p> <p>C. $288 \times 10^5 \text{ J}$</p> <p>D. $288 \times 10^6 \text{ J}$</p>
445	The energy of photon 'E' is proported to	<p>A. The magnetic field H</p> <p>B. The electric field E</p> <p>C. Both the electric and magnetic field H and E</p> <p>D. Frequency</p> <p>A. <p class="MsoNormal">Circle<o:p></o:p></p></p> <p>B. <p class="MsoNormal">Rectangle<o:p></o:p></p></p> <p>C. <p class="MsoNormal"><span style="font-</p>

446	While finding the electric intensity at a point between two oppositely charged parallel plates, the Gaussian surface is taken in the form of a hollow:	<p>size:12.0pt;line-height:107%;font-family: "Times New Roman";"serif";mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Sphere<o:p></o:p></p></p> <p>D. <p class="MsoNormal">Box<o:p></o:p></p></p> <p>E. <p class="MsoNormal">Cylinder<o:p></o:p></p></p>
447	In a semi-conductor material, current flows due to	<p>A. positive charge</p> <p>B. negative charge</p> <p>C. both of them</p> <p>D. none of them</p>
448	The colour sequence in a carbon resistor in red, brown, orange and silver. The resistance of the resistor is	<p>A. $21 \times 10^3 \times 10\%$</p> <p>B. $23 \times 10^1 \times 10\%$</p> <p>C. $21 \times 10^3 \times 5\%$</p> <p>D. $12 \times 10^3 \times 5\%$</p>
449	If an electron of charge 'e' is accelerated through a potential difference V., it will acquire energy	<p>A. Ve</p> <p>B. V/e</p> <p>C. e/V</p> <p>D. 2Ve</p>
450	The current through a metallic conductor is due to the motion of	<p>A. protons</p> <p>B. neutrons</p> <p>C. electrons</p> <p>D. free electrons</p>
451	The substances in which, atom are so oriented that their fields support each other and the atoms behave like tiny magnets, are called	<p>A. diamagnetic substances</p> <p>B. ferromagnetic substances</p> <p>C. paramagnetic substances</p> <p>D. all of them</p>
452	A train is moving with a velocity of 25 m/s and a car is moving behind it by a velocity of 8 m/s in same direction. The relative velocity of train with respect to car is	<p>A. 17 m/s</p> <p>B. 33 m/s</p> <p>C. 17.5 m/s</p> <p>D. none</p>
453	The time period of pendulums of different lengths would be	<p>A. same</p> <p>B. different</p> <p>C. both of them</p> <p>D. none of them</p>
454	Two sources of sound are said to be coherent if	<p>A. The produce sounds of equal intensity</p> <p>B. They produce sounds of equal frequency</p> <p>C. They produce sound waves vibrating with the same phase</p> <p>D. They produce sound waves with zero or constant phase difference all instant of time</p>
455	A force of 5 n is acting Y-axis. Its component along X-axis is:	<p>A. 7 N</p> <p>B. 5 N</p> <p>C. Zero</p> <p>D. 10 N</p>
456	The relationship between Boltzmann constant k with R and N_A is given as:	<p>A. $k = R/N_A$</p> <p>B. $k = R/N_A$</p> <p>C. $k = NR/N_A$</p> <p>D. None of these</p>
457	Speed of light in vacuum depends upon	<p>A. Frequency</p> <p>B. Wavelength</p> <p>C. Amplitude</p> <p>D. None of these</p>
458	Amorphous solids:	<p>A. Have definite melting points</p> <p>B. Are called glassy solids</p> <p>C. Have no definite melting point</p> <p>D. Both (B) and (C)</p> <p>E. Both (A) and (C)</p>
459	Which of the following options correctly states the equation of continuity for an ideal fluid?	<p>A. $A_1 v_1 = A_2 v_2$</p> <p>B. $A_1 v_1 / A_2 v_2 = V_2 / V_1$</p> <p>C. $A_1 v_1 / A_2 v_2 = V_2 / V_1$</p> <p>D. none of the above</p>

460	The locus of all points in a medium having same phase of vibration is called	A. Crest B. Trough C. Wavelength D. Wave-front
461	During the negative half-cycle of the half-wave rectification, the diode	A. does not conduct B. conducts C. either of these D. none of these
462	A ball falls on the surface from 10 m height and rebounds to 2.5 m. if the duration of contact with the floor is 0.01 seconds then the average acceleration during contact is	A. 2100 m/s^2 B. 1400 m/s^2 C. 700 m/s^2 D. 400 m/s^2
463	The law of electromagnetic induction is related to:	A. Coulomb B. Ampere C. Faraday D. Lenz E. None of these
464	Work is product of:	A. Force and velocity B. Heat and energy C. Force and displacement D. None of these
465	The force experienced by charged particle is maximum, if it moves	A. parallel to magnetic field B. perpendicular to magnetic field C. opposite to the magnetic field D. none of these
466	It is impossible to devise a processes which may convert heat, extracted from a single reservoir, entirely into work without leaving any change in the working system. This is the statement of	A. Clausius statement of second law B. Kelvin's statement of second law C. Clausius statement of first law D. Kelvin's statement of first law
467	A car travels first half distance between two places with a speed of 30 km/h and remaining half with a speed of 50 km/h. The average speed of the car is	A. 37.5 km/h B. 10 km/h C. 42 km/h D. 40 km/h
468	Synthetic materials fall into the category of	A. crystalline solids B. amorphous C. polymeric solids D. all of them
469	Total number of turns on 0.15 m length solenoid is 300. the value of n is:	A. Greater than 300 B. Smaller than 300 C. Equal to 300 D. Any of (A) or (B) E. Any of (A) or (C)
470	When charged particle is projected perpendicular to a uniform magnetic field its trajectory is	A. circular B. elliptical C. cycloid D. straight line
471	According to the equation of continuity, when water falls from the tap, it's speed increases and its cross-sectional area	A. decreases B. increases C. becomes zero D. none of them
472	If n denotes the total number of molecules in cubic vessel such that m is mass of each molecule and l is length of each side of vessel, then mN/l^3 gives the:	A. Force B. Density C. Work done D. Pressure
473	A convex lens acts as diverging lens when the object is placed:	A. Between F and 2F B. At 2F C. With focal length D. Beyond 2F
474	Which instrument is expensive and difficult to use?	A. Voltmeter B. Potentiometer C. CRO D. Both A and C E. Both A and B

A. Toner cartridge
B. Deflection plates
C. <div>

475	An important part of photocopier is:	<p>C. >Charging electrode</o:p></p></p> <p>D. >Print head</o:p></p></p> <p>E. >None of these</o:p></p></p>
476	Angular velocity is a:	<p>A. Scalar quantity</p> <p>B. Vector quantity</p> <p>C. Complex quantity</p> <p>D. None of these</p>
477	A thermistor with positive temperature coefficient is used to measure temperature in a furnace. As the furnace heats up, the resistance value of the thermistor.	<p>A. Decrease</p> <p>B. Remains unchanged</p> <p>C. Increase</p> <p>D. None of the above</p>
478	In a coil current changes from 2 to 4 A in .05 s. If the average induced emf is 8V then coefficient of self-inductance is:	<p>A. 0.2 henry</p> <p>B. 0.1 henry</p> <p>C. 0.8 henry</p> <p>D. 0.04 henry</p>
479	Self-induced e.m.f. is also called	<p>A. Motional e.m.f.</p> <p>B. Thermistor</p> <p>C. Electrostatic induction</p> <p>D. Back e.m.f</p>
480	Specific resistance of a wire depends upon	<p>A. Length</p> <p>B. Cross-section area</p> <p>C. Mass</p> <p>D. None</p>
481	A heavily damped system has a fairly	<p>A. sharp resonance curve</p> <p>B. flat resonance curve</p> <p>C. both of them</p> <p>D. none of them</p>
482	A particle having mass and charge equal to that of an electron is called:	<p>A. Proton</p> <p>B. Positron</p> <p>C. Pion</p> <p>D. Pi-meson</p> <p>E. Both (C) and (D)</p>
483	In the equilibrium state, the potential difference between two ends of the conductor moving across a magnetic field is called:	<p>A. Motion emf</p> <p>B. Electrostatic emf</p> <p>C. Induced emf</p> <p>D. Both A and B</p> <p>E. Both A and C</p>
484	Newton's law of motion does not hold in	<p>A. an accelerated frame of reference</p> <p>B. an unaccelerated frame of reference</p> <p>C. both of these</p> <p>D. none of these</p>
485	Compton studied the scattering of x-rays by loosely bound electrons from:	<p>A. NaCl crystal</p> <p>B. Graphite crystal</p> <p>C. Zirconia</p> <p>D. Copper crystal</p> <p>E. None of these</p>
486	When current passes through a solenoid coil, it behaves like a	<p>A. loop</p> <p>B. circle</p> <p>C. bar magnet</p> <p>D. none of these</p>
487	When there is no relative motion between the magnet and coil, the galvanometer indicates	<p>A. No current in the circuit</p> <p>B. An increasing current</p> <p>C. A decreasing current</p> <p>D. A constant current</p> <p>E. Either B or C</p>
488	The SI unit of capacitance is	<p>A. Farad</p> <p>B. Henry</p> <p>C. Ohm</p> <p>D. Volt</p>
489	Light year is a unit of:	<p>A. Time</p> <p>B. Distance</p> <p>C. Velocity</p> <p>D. Intensity of light</p>
490	Two photons are emitted in the same direction from a source.	<p>A. one photon</p> <p>B. two photons which travel in the same direction</p>

490	When a positron comes close to an electron they annihilate into	C. two photons which travel in the opposite direction D. two photons which travel in any direction
491	The appearance of colours in the soap (or oil) film results from	A. Dispersion B. Interference C. Reflection D. Refraction
492	The output voltage of half wave rectification is in the form of	A. a smooth curve B. a smooth wave C. pulses D. all of the above
493	In thermodynamics, internal energy is the function of	A. temperature B. pressure C. state D. none of them
494	The nuclei of an element having the same charge number but different mass numbers are called:	A. Isobars B. Isotopes C. Isomers D. Isobaric E. Isothermal
495	The state in which ice, water and vapour coexists in equilibrium is called	A. zero degree celsius B. zero degree fahrenheit C. absolute zero D. 373 K
496	The figure 1.007276μ shows the mass of an:	A. Atom B. Positron C. Electron D. Neutron E. Proton
497	Bodies falling freely under gravity provide good example of motion under	A. non-uniform acceleration B. uniform acceleration C. variable acceleration D. increasing acceleration
498	When a body moves against the force of friction on a horizontal plane, the work done by the body is:	A. Positive B. Negative C. Zero D. None of these
499	A body moving with an acceleration of 5 m/sec^2 started with velocity of 10 m/sec . What will be the distance traversed in 10 seconds?	A. 150 m B. 250 m C. 350 m D. 400 m
500	The transition from solid state to liquid state is:	A. Abrupt B. Slow C. Continuous D. Discontinuous E. Both (A) and (D)
501	When two spherical conducting balls at different potentials are joined by a metallic wire, after some time:	A. <p>Both the conductors are at the same potential</p> B. <p>Potential difference across the conductors remain constant</p> C. <p>Potential difference across the conductors becomes zero</p> D. <p>Both (A) and (B)</p> E. <p>Both (A) and (C)</p>
502	The terms phase difference and path difference are	A. Same B. Different C. Equal D. none of these

A. Small

503	In flesh, light element like carbon, hydrogen and oxygen predominate. Three elements allows _____ amount of incident X-ray to pass through them	B. Greater C. Equal D. Sometimes
504	If the acceleration of a body is not uniform, then velocity-time graph will be:	A. Curve B. Straight line C. Sphere D. All of these
505	An induced current can be produced by:	A. Constant magnetic field B. Changing magnetic field C. Varying magnetic field D. Constant electric field E. None of these
506	The range of particle depends upon the factor	A. charge, mass and energy of particle B. density of medium C. ionization potential of the atoms D. all the above
507	A transformer has 100 turns on the input side 500 turns on the output side. If rms value of input voltage are 220 V and 5A respectively. The output power is?	A. 500 watt B. 50 watt C. 1100 watt D. 1440 watt
508	_____ plays the same role during angular motion as played by the mass in linear motion	A. Torque B. Angular Momentum C. Moment of a force D. Moment of inertia
509	At the constant temperature, if the value of a given mass of a gas is double, then the density of gas becomes:	A. Double B. Remains constant C. Half D. None of these
510	Sadi carnot described an ideal heat engine in	A. 1820 B. 1840 C. 1860 D. 1880
511	Which of the following should remain constant if no torque acts upon a body.	A. Linear constant B. Momentum C. Angular momentum D. Charge
512	Due to relative motion of observer and the frame of reference of events, time always:	A. Dilates itself B. Contracts itself C. Stretches itself D. Both (A) and (C) E. None of these
513	Compton shift refers to:	A. Photon B. Meson C. Proton D. Positron E. Both (B) and (D)
514	All trigonometric functions (sine, cosine, tangent etc) are positive in:	A. 1st quadrant B. 2nd quadrant C. 3rd quadrant D. 4th quadrant
515	The time rate of change of displacement is called:	A. Time B. Acceleration C. Speed D. Velocity
516	The unit of viscosity is SI system is:	A. $\text{Kg}^{-1}\text{m sec}^{-1}$ B. $\text{Kg m}^{-1}\text{ sec}^{-1}$ C. $\text{Kg}^{-1}\text{m}^{-1}\text{ sec}^{-1}$ D. None of these
517	The waves which propagate out in the space due to oscillations of electric and magnetic fields are called:	A. Mechanical waves B. Electromagnetic waves C. Matter waves D. All of them
		A. <p>Greater than the speed at which they pass from left to right</p> <p>Less than the speed at which they pass from left to right</p> <p>Equal to the speed at which they pass from left to right</p> <p>None of these</p>

518	The rate at which the free electrons pass through any section of a metallic wire from right to left is:	<p>C. The same speed at which they pass from left to right</p> <p>D. Any of above</p> <p>E. None of them</p>
519	The definite number of significant figures in 5000 is:	<p>A. Four</p> <p>B. Three</p> <p>C. Two</p> <p>D. One</p>
520	When the bob of simple pendulum is at mean position, its K.E will be	<p>A. maximum</p> <p>B. minimum</p> <p>C. zero</p> <p>D. all of them</p>
521	If mass of 10 gm is suspended from a spring of $K=0.8 \text{ Nm}^{-1}$ then the extension will be:	<p>A. 10 cm</p> <p>B. 1 m</p> <p>C. 10 mn</p> <p>D. None of these</p>
522	In the stress-strain graph, stress is increased linearly with strain until a point is reached, this point is known as	<p>A. plastic limit</p> <p>B. plastic deformation</p> <p>C. proportional limit</p> <p>D. elastic behaviour</p>
523	Faraday's law of electromagnetic induction has been used in the construction of:	<p>A. Galvanometer</p> <p>B. Voltmeter</p> <p>C. Electric motor</p> <p>D. Electric generator</p> <p>E. Commutator</p>
524	The galvanometer can be made sensitive if the value of the factor C/BAN is	<p>A. constant</p> <p>B. small</p> <p>C. large</p> <p>D. none of these</p>
525	What is frequency of radio waves transmitted by a station, if the wavelength of those waves is 300 m?	<p>A. 1 MHz</p> <p>B. 10 Hz</p> <p>C. 1 GHz</p> <p>D. 100000 Hz</p>
526	Avo-meter is used of measure the	<p>A. current, voltage</p> <p>B. voltage, resistance</p> <p>C. resistance, current</p> <p>D. current, voltage and resistance</p>
527	Which quantity has different dimension?	<p>A. Tension</p> <p>B. Work</p> <p>C. Energy</p> <p>D. Torque</p>
528	Work is always done on a body when:	<p>A. A force acts on it</p> <p>B. It moves through certain distance</p> <p>C. None of A and B is correct</p> <p>D. Both A and B is correct</p>
529	A particle executes SHM with frequency. The frequency with which its K.E oscillates is	<p>A. $f/2$</p> <p>B. $2f$</p> <p>C. f</p> <p>D. $4f$</p>
530	Which of the following diodes can operate in the reverse biased condition	<p>A. photo diode</p> <p>B. light emitting diode</p> <p>C. photo voltaic cell</p> <p>D. none of these</p>
531	The ratio of the size of the image to that of object is called:	<p>A. Focal length</p> <p>B. Aperture</p> <p>C. Linear magnification</p> <p>D. Principal axis</p>
532	The $R_1 = \infty$ and $R_2 = 0$, then the gain of non-inverting amplifier is	<p>A. zero</p> <p>B. infinity</p> <p>C. one</p> <p>D. any one of these</p>
	Referring to above figure, current in the coil P grows from zero to its	<p>A. At the instant the switch is closed</p> <p>B. At the instant the switch is opened</p>

533	Referring to above figure, current in the coil grows from zero to its maximum value	C. When switch is kept open D. All of above E. Neither of above
534	In process of annihilation of matter, the two photons produced move in opposite direction to conserve	A. momentum B. charge C. energy D. mass
535	The SI unit of magnetic induction is	A. Weber B. Weber/meter C. Henry D. Tesla
536	The power factor of resonant series circuit is	A. 1 B. 0 C. -1 D. 0.5
537	The consumption of energy by a 1000 watt heater in half an hour is:	A. 5 Kwh B. 0.5 Kwh C. 2.5 Kwh D. 3.2 Kwh
538	A typical four stroke petrol engine undergoes how many successive processes in each cycle	A. one B. two C. three D. four
539	If electric and gravitational force on an electron in a uniform electric field will be	A. $E=mg/q$ B. $E=q/mg$ C. $E=g/q$ D. $E=qg/m$
540	According to the de-Broglie relation, an object of large mass and ordinary speed has	A. very small wavelength B. very large wavelength C. very small frequency D. all of these
541	In the above figures, tell which set is graphs shows that a body is moving uniform velocity:	A. (i) and (ii) B. (ii) and (iii) C. (i) and (iii) D. (ii) and (iv)
542	The product of cross-sectional area of the pipe and the fluid speed at any point along the pipe is called	A. constant rate B. volume rate C. flow rate D. steady rate
543	As the current flow through the wire:	A. <p>It generates heat in the wire</p> B. <p>It produces sound in the wire</p> C. <p>Resistance of the wire decreases</p> D. <p>Voltage across the ends is increased</p> E. None of these
544	An isochoric process is one which take place at	A. Constant internal energy B. Constant entropy C. Constant volume D. Constant pressure
545	Which of the following forces is responsible for SHM	A. Applied force B. Restoring force C. Fractional force D. Elastic force
546	If there identical strings each of constant K are hooked together the spring constant of resultant spring will be:	A. 3 K B. 2 K C. K/4 D. K/3
547	Rate of diffusion is	A. Faster in solids than in liquids and gases B. Faster in liquids than in solids and gases C. Equal to solids, liquids and gases

548	Wavelength of red colour as compared to that of violet colour is	A. Smaller B. Longer C. Equal D. None of these
549	In half wave rectification	A. both halves of the input voltage is used B. only one half of the input voltage is used C. either of these D. none of these
550	Efficiency of carnot engine is independent of the	A. temperature of sink B. temperature of source C. nature of the working substances D. none of them
551	Static electricity is produced by the transfer of:	A. Electrons B. Protons C. One fluid D. Two fluid E. None of these
552	When resistance of a current carrying wire increases due to rise in temperature, the drift velocity of electrons:	A. <p>Decreases</p> B. <p>Increases</p> C. <p>Remains the constant</p> D. <p>Either of these</p> E. <p>None of these</p>
553	A stone is dropped from rest from the top of a tower 19.6 m high. The distance traveled during the last second of its fall is (giving $g=9.8 \text{ m/s}^2$)	A. 9.8 m B. 14.7 m C. 4.9 m D. 19.6 m
554	Final velocity of a hoop is _____ the final velocity of a disc having same mass and radius on coming down an inclined plane.	A. Greater than B. smaller than C. Equal to D. None of these
555	An object undergoes SHM. Its maximum equilibrium positions:	A. Maximum B. Half of its maximum value C. Zero D. None
556	If we increase the distance between two plates of the capacitor, the capacitance will	A. Increase B. Decrease C. Remain same D. First increase then decrease
557	Under normal circumstances, the volume of blood is sufficient to keep the vessels	A. flatted for all times B. inflated for all times C. inflated for small times D. none of them
558	In and A.C. circuit, the current lags behind the emf. The power factor is 50% In order to make it 100%, What additional component is to be used?	A. Impedance B. Inductance C. Capacitance D. Resistance
559	The ratio of average e.m.f in the coil tot he time rate of change of current in the same coil is called	A. Mutual induction B. Mutual inductance C. Capacitance D. Self inductance
560	Which one of the following is an example of SHM	A. Motion in a plane B. Motion in a swing C. Motion in a car D. None of these

561	and walks back with a constant speed of 5 km/h. His average speed for round trip expressed in km/h is	B. 10/3 C. 3 D. 4,8
562	The field in which work done is moving body between two points depends upon the path followed is called:	A. Conservative field B. Non-conservative field C. Electric field D. None of these
563	The diameter of an atom is of the order	A. 10^{125} m B. 10^{11} m C. 10^{10} m D. 10^9 m
564	SI unit of current describes the flow of charge at the rate of	A. One ampere per second B. One coulomb per second C. One electron per second D. 6.25×10^{18} electrons per second E. Both B and D
565	Which of the following changes at an antinode in a stationary wave?	A. Density only B. Pressure only C. Both pressure and density D. Neither pressure nor density
566	In frequency modulation (FM), the carrier waves amplitude	A. Remains constant B. Increase C. Decreases D. None of these
567	Where the streamlines are very close to each other, the pressure will be	A. low B. zero C. high D. all of them
568	A body moves a distance of 10 m among a straight line under the action of a force of 5 N. If the work done is 25 J, the angle which the force makes with the direction of motion of a body is:	A. 0° B. 30° C. 60° D. 90°
569	When a bicycle is in motion, the frictional forces exerted by the ground are	A. In the forward direction on both the wheels B. In the backward direction on both the wheels C. In the forward direction on the front wheel and the backward direction on the rear wheel D. In the backward direction on the front wheel and the forward direction on the rear wheel
570	Sound waves in air always	A. Longitudinal B. Transverse C. Stationary D. Electromagnetic
571	Work done is maximum when angle between force and displacement is:	A. 0° B. 90° C. 180°

		D. None of these
572	If the resistance of 2 ohm and 4 ohm are connected in parallel, the equivalent resistance will be	A. 6 ohm B. 4 ohm C. zero ohm D. 1.33 ohm
573	If the number of turns of a solenoid (carrying a steady current I) is doubled without changing the length of a solenoid, then magnetic field:	A. Becomes Half B. Becomes double C. Is not affected D. Becomes one fourth E. None of these
574	The magnitude of the force producing an acceleration of 10 m/sec^2 in a body of mass 500 grams is:	A. 3 N B. 4 N C. 5 N D. 6 N
575	The direction of the acceleration is the same as that of	A. speed B. velocity C. both of them D. none of them
576	A body is moving with constant velocity of 10 m/sec in the north east direction. Then its acceleration will be:	A. 10 m/sec^2 B. 20 m/sec^2 C. 30 m/sec^2 D. Zero
577	When the speed of a body in a fluid increases then the drag force	A. decreases B. becomes zero C. increases D. non of them
578	If the object is placed at 12 cm distance from a convex lens of focal length 6 cm, then we get an image of ____ as that of object:	A. Double the size B. Same size C. Half the size D. None of these
579	The wave form of S.H.M will be	A. square wave B. sine wave C. rectified wave D. saw-tooth wave
580	A dimension stands for the _____ nature of certain physical quantity.	A. super B. Quantitative C. Qualitative D. Both B and C
581	Which one of the following relations is correct?	A. $1 \text{ Wb-m}^2 = \text{Nm}^{-1} \text{A}^{-1}$ B. $1 \text{ tesla} = 104 \text{ gauss}$ C. $1 \text{ Wb-m}^2 = 1 \text{ tesla}$ D. All of the above
582	At any point on the right bisector of the line joining two equal and opposite charges	A. At electric field is zero B. The electric potential is zero C. The electric potential decreases with increasing distance from the centre D. The electric field is perpendicular to the line joining the charges
583	Majority charge carriers in the p-region of p-n junction are:	A. electrons B. positrons C. Holes D. Neutrons E. None of these
584	The smooth or steady streamline flow is known as	A. laminar flow B. turbulent flow C. both of them D. none of them
585	The SI units of momentum is	A. kg m s^{-2} B. kg ms C. kg m s^2 D. N-s
586	The SI unit of viscosity is	A. $\text{kg m}^{-1} \text{s}^{-1}$ B. kg ms^{-1} C. $\text{kg m}^{-1} \text{s}^{-2}$ D. $\text{kg m}^{-1} \text{s}$
587	Which of the following four statements is false?	A. A body can have zero velocity and still be accelerated B. A body can have a constant velocity and still have a varying speed C. A body can have a constant speed and still have a varying velocity D. The direction of the velocity of a body can change

		when its acceleration is constant
588	Op-amp has been discussed as comparator of:	A. Distances B. Voltages C. Velocities D. Magnetic fields E. Both (A) and (C)
589	Satellites are held in orbits around Earth by its:	A. Gravitational field B. Magnetic field C. Own orbital motion D. Own spin motion
590	According to the special theory of relativity, a moving clock	A. runs faster B. runs slower C. neither runs faster nor slower D. all of these
591	Terminal velocity is the maximum velocity attained by a spherical droplet when the drag force _____ the weight of droplet:	A. Is smaller than B. Is greater than C. Becomes equal to D. None of these
592	Work done is independent of path followed in _____	A. Gravitational field B. Magnetic field C. Electric field D. All of these
593	The number of protons inside a nucleus is called	A. mass number B. atomic weight C. atomic number D. none of these
594	The study of fluid in motion basically involves law of conservation of:	A. Mass B. Energy C. Change D. Both A and C E. Both A and B
595	In order to get interference using two light rays	A. The sources should be monochromatic and coherent B. The sources should have the same frequency C. Superposition should be linear D. All of these
596	The temperature of gas is produced by	A. At potential energy of its molecules B. The kinetic energy of its molecules C. The attractive force between its molecules D. The repulsive force between its molecules
597	The work done on the system by the environment is considered as	A. positive B. negative C. zero D. any one of them
598	A boy pulls a toy car through a distance of 5 m by applying a force of 0.5 N, which makes an angle of 60° with the horizontal. The work done by the boy is:	A. 1.25 J B. 12.5 J C. 125 J D. None of these
599	Force is a:	A. Scalar quantity B. Base quantity C. Derived quantity D. None of these
600	The conductivity of a superconductor is	A. Infinite B. Very large C. Very small D. Zero
601	Such oscillations in which the amplitude decreases steadily with time, are called	A. resonance B. force oscillations C. large oscillations D. damped oscillations
602	Physical quantities are often divided into _____ categories	A. 3 B. 2 C. 9 D. 5

A. 30.3°
B. 45.3°

603	One radian is equal to:	background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">" C. 50.3" D. 57.3"
604	Magnetic flux passing through the an element of are A placed perpendicular to a uniform magnetic field Bis:	A. Maximum B. Minimum C. Zero D. Very small E. None of these
605	Radioactivity was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. All of them E. None of these
606	The path (or trajectory) described by a projectile is	A. a parabola B. a hyperbola C. a circle D. a straight line
607	Conventionally, all the distance p, q, f are measured from _____ of the lens:	A. Focus B. Optical center C. Edges D. None of these
608	The percentage of available heat energy converted into work by a diesel engine is roughly	A. 35 % B. 40 % C. 35 - 40 % D. 25 %
609	In the equation $E=mc^2$ value of c is?	A. 186000 miles per hour B. 186000 miles per sec C. 3×10^8 m/sec D. Both A and C E. Both B and C
610	Magnetic induction is also called as:	A. <p class="MsoNormal" style="text-align:justify"><span style="font-size: 12pt; line-height: 107%; font-family: "Times New Roman"; serif:"Ampere's law<o:p></o:p></p> B. <p class="MsoNormal" style="text-align:justify">Faraday's law<o:p></o:p></p> C. <p class="MsoNormal" style="text-align:justify">Lenz's law<o:p></o:p></p> D. <p class="MsoNormal" style="text-align:justify">Newton's law<o:p></o:p></p> E. <p class="MsoNormal" style="text-align:justify">Coulomb's law<o:p></o:p></p>
611	In case of planets, the necessary acceleration is provided by:	A. Gravitational force B. Coulomb force C. Frictional force D. None of these
612	When a mass 'm' is pulled slowly, the spring stretches by an amount x_0 , then the work done will be	A. $W=Kx^2$ B. $W=1/2Kx^2$ C. $W=1/2Kx^2$ D. $W=4Kx^2$
613	A carnot cycle consists of	A. One step B. two step C. three steps D. four steps

614	A field free region is found:	<p>A. $\langle p \text{ class="MsoNormal"} \rangle \langle \text{span style="font-size: 12.0pt; line-height: 107%; font-family: \"Times New Roman\"; \"\" serif\"; mso-fareast-font-family: \"Times New Roman\"; mso-fareast-theme-font: minor-fareast"} \rangle$ Near the outer surface of a hollow charged metal sphere $\langle o:p \rangle \langle /o:p \rangle \langle /span \rangle \langle /p \rangle$</p> <p>B. $\langle p \text{ class="MsoNormal"} \rangle \langle \text{span style="font-size: 12.0pt; line-height: 107%; font-family: \"Times New Roman\"; \"\" serif\"; mso-fareast-font-family: \"Times New Roman\"; mso-fareast-theme-font: minor-fareast"} \rangle$ In the interior of solid metal uncharged sphere $\langle o:p \rangle \langle /o:p \rangle \langle /span \rangle \langle /p \rangle$</p> <p>C. $\langle p \text{ class="MsoNormal"} \rangle \langle \text{span style="font-size: 12.0pt; line-height: 107%; font-family: \"Times New Roman\"; \"\" serif\"; mso-fareast-font-family: \"Times New Roman\"; mso-fareast-theme-font: minor-fareast"} \rangle$ In the interior of solid metal charged sphere $\langle o:p \rangle \langle /o:p \rangle \langle /span \rangle \langle /p \rangle$</p> <p>D. $\langle p \text{ class="MsoNormal"} \rangle \langle \text{span style="font-size: 12.0pt; line-height: 107%; font-family: \"Times New Roman\"; \"\" serif\"; mso-fareast-font-family: \"Times New Roman\"; mso-fareast-theme-font: minor-fareast"} \rangle$ Both (A) and (B) $\langle o:p \rangle \langle /o:p \rangle \langle /span \rangle \langle /p \rangle$</p> <p>E. $\langle p \text{ class="MsoNormal"} \rangle \langle \text{span style="font-size: 12.0pt; line-height: 107%; font-family: \"Times New Roman\"; \"\" serif\"; mso-fareast-font-family: \"Times New Roman\"; mso-fareast-theme-font: minor-fareast"} \rangle$ Both (A) and (C) $\langle o:p \rangle \langle /o:p \rangle \langle /span \rangle \langle /p \rangle$</p>
615	In deriving the Bernoulli's equation, we assume that the fluid is	<p>A. incompressible</p> <p>B. no viscous</p> <p>C. flows in a steady manner</p> <p>D. all of them</p>
616	According to Einstein, with the great increase in the speed of the body the relativistic length of the body	<p>A. Remains constant</p> <p>B. Decreases</p> <p>C. Increases</p> <p>D. Reduces to zero</p>
617	The Instantaneous value of alternative current maybe:	<p>A. The same as its RMS value</p> <p>B. Greater than its Rms value</p> <p>C. The same as its peak value</p> <p>D. Any of these</p> <p>E. None of these</p>
618	Galvanometer is a device used for the detection of	<p>A. voltage</p> <p>B. current</p> <p>C. temperature</p> <p>D. pressure</p>
619	The natural frequency of a pendulum which is vibrating freely, depends upon its	<p>A. mass</p> <p>B. length</p> <p>C. material</p> <p>D. all of them</p>
620	The use of chips in electrons is described in the form of:	<p>A. Yellow boxes</p> <p>B. Black boxes</p> <p>C. Red boxes</p> <p>D. White boxes</p> <p>E. Orange boxes</p>
621	If a freely oscillating system is subjected to an external force, then	<p>A. free vibrations will take place</p> <p>B. the body will move with its natural frequency</p> <p>C. forced vibrations will take place</p> <p>D. none of them</p>
622	From sand, we get a material used for construction with the motion of bodies under the action of forces is called:	<p>A. Optics</p> <p>B. Mechanics</p> <p>C. Thermodynamics</p> <p>D. Astrophysics</p>
623	The emission of radiations take place in elements, having charge number greater than	<p>A. 109</p> <p>B. 82</p> <p>C. 69</p> <p>D. 52</p>
624	When the p-n junction is forward biased its resistance is of the order of	<p>A. few mega ohms</p> <p>B. few kilo ohms</p> <p>C. few ohms</p> <p>D. few milli ohms</p>
625	The maximum displacement of a body on either side of its equilibrium position is called	<p>A. frequency</p> <p>B. amplitude</p> <p>C. displacement</p> <p>D. time period</p>

626	A non-inertial frame of reference is that frame of reference in which	<p>A. $\frac{b}{a} = 0$</p> <p>B. $\frac{b}{a} > 0$ or $\frac{b}{a} < 0$</p> <p>C. $\frac{b}{v} = 0$</p> <p>D. none of them</p>
627	Wave length of that color as compared to that of violet color is:	<p>A. Smaller</p> <p>B. Longer</p> <p>C. Equal</p> <p>D. None of these</p>
628	If a body reaches a speed equal to the speed of light, then its mass will became	<p>A. zero</p> <p>B. very small</p> <p>C. infinity</p> <p>D. none of these</p>
629	One radian is	<p>A. Greater than one degree</p> <p>B. Less than one degree</p> <p>C. Equal to one degree</p> <p>D. None of these</p>
630	The shortest distance between two points directed from its initial point to final point is called:	<p>A. Velocity</p> <p>B. Displacement</p> <p>C. Speed</p> <p>D. Distance</p>
631	Taking the earth to be a spherical conductor of diameter 12.8×10^3 km. Its capacity will be	<p>A. $711 \mu\text{F}$</p> <p>B. $611 \mu\text{F}$</p> <p>C. $811 \mu\text{F}$</p> <p>D. $511 \mu\text{F}$</p>
632	If a nucleus emits an alpha particle, its mass number decreases by 4 while charge number decreased by	<p>A. -4</p> <p>B. 4</p> <p>C. 2</p> <p>D. 1</p>
633	An induced current can be produced by:	<p>A. Constant magnetic field</p> <p>B. Changing magnetic field</p> <p>C. Varying magnetic field</p> <p>D. Constant electric field</p> <p>E. None of these</p>
634	In full wave rectification, simultaneous action is that:	<p>A. Two diodes conduct and two do not.</p> <p>B. One diode conduct and three do not.</p> <p>C. Three diodes conduct and one does not.</p> <p>D. All the four diodes conduct</p> <p>E. None of these</p>
635	The SI unit of flux density is.	<p>A. Tesla</p> <p>B. Weber</p> <p>C. Gaun</p> <p>D. Weber/meter</p>
636	The best conductor is:	<p>A. Silver</p> <p>B. Copper</p> <p>C. Aluminium</p> <p>D. Both B and C</p> <p>E. None of them</p>
637	For a parallel resonant circuit at resonance, current from supply is	<p>A. minimum</p> <p>B. maximum</p> <p>C. zero</p> <p>D. none of these</p>
638	Velocity of sound in vacuum (in m/s) is	<p>A. 330</p> <p>B. 1000</p> <p>C. 156</p> <p>D. 0</p>
639	The third band of the colour code:	<p>A. Gives the number of zeroes</p> <p>B. Is decimal multiplier</p> <p>C. Gives the resistance tolerance</p> <p>D. Gives the third digit</p> <p>E. Both (A) and (B)</p>
640	The concept of entropy was introduced into the study of thermodynamics in	<p>A. 1856</p> <p>B. 1865</p> <p>C. 1656</p>

641	Which are not the elementary particles?	A. Photons B. Leptons C. Hadrons D. Quarks E. None of these
642	Surface tension of water is reduced by adding	A. Detergents B. Camphor C. Plastic D. Both A and B
643	The string of a simple pendulum should be:	A. Heavy B. Extensible C. In-extensible D. None of these
644	The e/m of an electron moving in a circular path in a magnetic field is equal to	A. V/Br B. $V/B \times r^2$ C. V^2/Br^2 D. V^2/Br
645	The peak value of alternating voltage is given by	
646	Ohm established a relation between	A. voltage and resistance B. voltage and charge C. voltage and current D. voltage resistance and charge
647	The waves in which the particles of the medium have displacement along the direction of propagation of waves are called	A. longitudinal waves B. transverse waves C. non-mechanical waves D. none of them
648	The space around the earth within which it exerts a force of attraction on other bodies is known as:	A. Nuclear field B. Conservative field C. Electric field D. Gravitational field
649	The wavelength of wave is 5000 \AA . This wave will be in region	A. U.V B. Visible C. Radio D. Infrared
650	Whenever a covalent bond is broken in an intrinsic semi-conductor	A. hole is created B. an electron is created C. an electron-hole pair is generated D. all of them
651	One torr is equal to	A. 13.33 N/m^2 B. 760 N/m^2 C. 760 mm Hg D. 133.3 N/m^2
652	Lens's law deals with the	A. Magnitude of induced current B. Magnitude of induced e.m.f C. Direction of induced e.m.f D. Direction of induced current
653	The restoring force is _____ and opposite to the applied force within _____	A. Equal, Elastic limit B. Different, The walls of the laboratory C. Different, Elastic limit D. None of these
654	Photocell is a device which converts	A. chemical energy into electrical energy B. electrical energy into light energy C. heat energy into electrical energy D. light energy into electrical energy
655	The field in which work done in moving a body between two points depends upon the path followed is called:	A. Conservative field B. Non-conservative field C. Electric field D. None of these
656	The reactance of a cell changes directly with	A. frequency of a.c B. the inductance C. both a and b D. none of these
657	What must be changing when a body is accelerating uniformly?	A. the force acting on a body B. the velocity of the body C. the mass of the body D. the speed of the body
658	Addition of 2.189 kg, 11.8 kg and 5.32 kg gives the rounded off answer as:	A. 19.398 B. 19.400 C. 19.4 D. 19.3

659	One radian is equal to:	A. 30.3° B. 45.3° C. 50.3° D. 57.3°
660	Electrons of an isolated atom are bound to the nucleus, and	A. can only have distinct energy level B. can only have same energy level C. may or may not have distinct energy levels D. none of these
661	In YDS experiment, fringe spacing means the distance between two consecutive _____ fringes	A. Bright B. Dark C. Any of A or B D. None of these
662	The SI unit of magnetic flux is	A. NmA^{-2} B. NmA^{-1} C. NAmA^{-1} D. Nm^2A^{-1}
663	There is no way to detect:	A. Absolute uniform motion B. Accelerated motion C. State rest D. State of motion E. None of these
664	When a mass 'm' is pulled slowly through a distance 'x ₀ ', the elastic potential energy of the spring would be	A. $P.E = Kx^2$ B. $P.E = \frac{1}{2}Kx^2$ C. $P.E = \frac{1}{2}Kx^2$ D. $P.E = Kx^2$
665	When sound waves travel from air to water which of these remains constant?	A. Velocity B. Frequency C. Wavelength D. All the above
666	Watt x second is unit of:	A. Force B. Work C. Power D. None of these
667	The charge per unit time through any cross-section of a conductor is called	A. capacitance B. electric power C. current D. potential difference
668	At constant temperature, if the density of the gas is increased, its pressure will:	A. One kg of a substance B. Unit volume of a substance C. One mole of a substance D. None of these
669	Computer chips are made from	A. Conductors B. Semiconductors C. Insulators D. Both A and B
670	The fluid which is incompressible and non viscous is called	A. Ideal fluid B. Non-ideal fluid C. Prefect fluid D. All
671	Neutron was discovered in	A. 1915 B. 1920 C. 1925 D. 1932
672	Electromagnetic waves emitted by hot bodies are called:	A. Photoelectrons B. Alpha rays C. Thermal radiation D. None of these
673	The curie temperature of iron is about	A. 250°C B. 500°C C. 750°C D. 1000°C
674	The capacitance of a parallel plate capacitor depends upon	A. Area of the plates B. Separation between the plates C. Medium between the plates D. All of the above
675	The lines of a difference grating have a spacing of 1.2 m. When a beam of monochromatic light is incident normally on the grating. The first order maximum monochromatic light is	A. 1200 nano meters B. 450 meters C. 600 nano meters

	maximum monochromatic light is:	D. 700 nano meters
676	If the vector 5 N lies along with x-axis, then its component along y-axis will be:	A. Zero B. 5 N C. 7 N D. 10 N
677	White light is directed at a diffraction grating at an angle normal to the grating starting at the normal to the grating (0°), the order of red, green and blue lights in the diffracted spectrum is.	A. Red, green, blue B. Green, blue, Red C. Red, blue, green D. Blue , green, red
678	Mass of neutron is	A. 1.67×10^{-31} kg B. 1.67×10^{-27} kg C. 9.1×10^{-31} kg D. 1.67×10^{-19} kg
679	The SI unit of magnetic permeability is	A. $\text{WB A}^{-1}\text{m}^{-1}$ B. WB mA^{-1} C. WB Am^{-1} D. None of these
680	In an interference pattern of Young's double slit(YDS) experiment:	A. Bright fringes are wider than dark fringes B. Dark fringes are wider than bright fringes C. Both dark and bright fringes are of equal width D. Central fringes are wider than the outer fringes
681	The terms phase difference and path difference are:	A. Same B. Different C. Equal D. None of these
682	A vector which has magnitude 'one' is called:	A. Resultant vector B. A unit vector C. Position vector D. None of these
683	In the doping process, the ratio of the doping atoms to the semi conductor atom is	A. 1 to 10 B. 1 to 10^3 C. 1 to 10^6 D. 1 to 10^9
684	Through which character we can distinguish the light waves from sound waves	A. Interference B. Refraction C. Polarization D. Reflection
685	The space around the earth within it exerts a force of attraction on other bodies of known as:	A. Nuclear field B. Conservative field C. Electric field D. Gravitational field
686	For multiplication and division purposes, percentage uncertainties are:	A. Add B. subtracted C. Multiplied D. Divided
687	Angular velocity is a:	A. Scalar quantity B. Vector quantity C. Complex quantity D. None of these
688	The motion of molecules in gases is:	A. Orderly B. Random C. Circular D. All of these
689	A succession of events which bring the system back to its initial condition is called	A. reversible process B. irreversible process C. a cycle D. none of them
690	The coefficient of linear expansion of iron is $0.000011 \text{ per}^\circ\text{K}$. An iron rod is 10 metre long at 27°C . The length of the rod will be decreased by 1.1 mm when the temperature of the rod changes to	A. 0°C B. 10°C C. 17°C D. 20°C
691	Lorentz force is defined as	A. $q(\mathbf{E} + \mathbf{V} \times \mathbf{B})$ B. $q(\mathbf{E} \times \mathbf{B} + \mathbf{V})$ C. $q(\mathbf{E} \times \mathbf{V} + \mathbf{B})$ D. $q(\mathbf{E} \times \mathbf{B})$
692	Amorphous solids are also known as:	A. crystalline solids B. gases

692	Amorphous solids are also more like	<p>C. liquids</p> <p>D. any one of them</p>
693	If volume of wire is 'AL' and there are 'n' numbers of charge carriers per unit volume, then the total number of charge carriers are	<p>A. n/AL</p> <p>B. AL/n</p> <p>C. nAL</p> <p>D. nA/L</p>
694	When platinum wire is heated, then at the temperature of 500 °C, it becomes:	<p>A. Yellow</p> <p>B. Orange red</p> <p>C. Dull red</p> <p>D. White</p> <p>E. Cherry red</p>
695	Xerography means:	<p>A. Dry writing</p> <p>B. Wet writing</p> <p>C. Poor writing</p> <p>D. Excellent writing</p> <p>E. Both (A) and (B)</p>
696	Nucleon means:	<p>A. Only electrons</p> <p>B. Only neutrons</p> <p>C. Only protons</p> <p>D. Both (A) and (C)</p> <p>E. Both (B) and (C)</p>
697	Electromagnetic radiation or photons interact with matter in	<p>A. two distinct ways</p> <p>B. three distinct ways</p> <p>C. four distinct ways</p> <p>D. five distinct ways</p>
698	In stationary waves	<p>A. Energy is uniformly distributed</p> <p>B. Energy is minimum at nodes and maximum at antinodes</p> <p>C. Energy is maximum at nodes and minimum at antinodes</p> <p>D. Alternating maximum and minimum energy producing at nodes and antinodes</p>
699	A body moving with uniform velocity has	<p>A. positive acceleration</p> <p>B. negative acceleration</p> <p>C. infinite acceleration</p> <p>D. zero acceleration</p>
700	The free electrons in metals:	<p>A. Are in random motion and their speed depends upon temperature</p> <p>B. Move in particular direction</p> <p>C. Move with speed of light</p> <p>D. Move such that their speed does not depend on their temperature</p> <p>E. None of these</p>
		<p>A. Pico</p>

701	Which one is the least multiple:	B. Femto C. Nano D. Atto
702	Structure of the nucleus was explained by	A. J.J Thomson B. Bohr C. Millikan D. Rutherford
703	The maximum distance of body from mean position when body is executing SHM is called	A. Time period B. Displacement C. Amplitude D. Frequency
704	Electron volt is the unit of	A. Potential difference B. Energy C. Resistance D. Capacitance
705	The mass of the object is a quantities measure of its	A. speed B. velocity C. acceleration D. inertia
706	When the conductor moved across a magnetic field:	A. Emf induced is similar to that of a battery B. Emf induced gives rise to induced current C. An emf induced across its ends D. All are correct E. None of these
707	The nucleus left after the emission of some radiation is called:	A. Parent nucleus B. Daughter nucleus C. Mother nucleus D. Any of these E. None of these
708	A spring of constant $k = 0.4 \text{ N m}^{-1}$ is to be extended through 10 cm at a place where $g = 10 \text{ m sec}^{-2}$. The mass to be suspended should be:	A. 4 gms B. 0.4 gms C. 40 gms D. None of these
709	Compton was awarded Nobel prize in physics in	A. 1921 B. 1923 C. 1925 D. 1927
710	Most ideal gas at room temperature is.	A. CO2 B. SO2 C. NH3 D. H2
711	For a n-p-n transistor, the conventional current equation can be written as	A. $I_E = I_C + I_B$ B. $I_C = I_E + I_B$ C. $I_C = I_E - I_B$ D. $I_B = I_E + I_C$
712	The angle of deflection of coil can be measured by the	A. one method B. three method C. two method D. none of these
713	In n-p-n transistor, emitter base junction is kept	A. reversed B. forward biased C. may be reversed or may be forward biased D. none of these

714	Which one of the following is correct?	<p>A. $V_{\text{rms}} = 1.414 V_{\text{peak}}$</p> <p>B. $I_{\text{rms}} = 1.414 I_{\text{peak}}$</p> <p>C. $V_0 = 10.70 V_{\text{rms}}$</p> <p>D. Both a and b</p>
715	Fluid friction is _____ the friction between two solid surfaces:	<p>A. Greater than</p> <p>B. Smaller than</p> <p>C. Equal to</p> <p>D. None of these</p>
716	During each cycle, alternating voltage reaches a peak value	<p>A. One time</p> <p>B. Two times</p> <p>C. Four times</p> <p>D. A number of times depending on the frequency</p>
717	The nature of radiations emitted by a hot body depends upon its:	<p>A. Material</p> <p>B. Temperature</p> <p>C. colour</p> <p>D. Volume</p> <p>E. Length</p>
718	When the charged particle is projected at right angles to the field, then experienced by it will be:	<p>A. Maximum</p> <p>B. Zero</p> <p>C. qvB</p> <p>D. Both (A) and (B)</p> <p>E. Both (A) and (C)</p>
719	A body with frequency would complete one vibration in:	<p>A. f seconds</p> <p>B. $1/f$ seconds</p> <p>C. 1 second</p> <p>D. f^2 second</p>
720	The term drift velocity is used when the ends of a wire are:	<p>A. Connected to a laser source</p> <p>B. Connected to a voltage source</p> <p>C. Not connected to a voltage source</p> <p>D. At different values of potential</p> <p>E. Both (B) and (D)</p>
721	The basic circuit element in D.C. circuit is:	<p>A. A capacitor</p> <p>B. A resistor</p> <p>C. An inductor</p> <p>D. Both (A) and (C)</p> <p>E. Both (A) and (B)</p>
722	For Protium, the mass defect is:	<p>A. Infinite</p> <p>B. Zero</p> <p>C. Very large</p> <p>D. A few grams</p> <p>E. None of these</p>
723	The change of order of vectors in a dot product of two vectors:	<p>A. Changes its value</p> <p>B. Doesn't change its value</p> <p>C. Changes the direction product quantity</p> <p>D. None of these</p>
724	R.M.S velocity of a particle is V at pressure P . If pressure increases by two times, then R.M.S velocity becomes	<p>A. $2V$</p> <p>B. $3V$</p> <p>C. $0.5V$</p> <p>D. V</p>
725	Biomass includes:	<p>A. Crop residue</p> <p>B. Natural vegetation</p> <p>C. Animal dung</p> <p>D. All of these</p>
726	If a charged spherical conductor of radius 10 cm has potential V at a point distance 5 cm from its centre, then the potential at a point distance 15 cm from the centre will be	<p>A. $1/3 V$</p> <p>B. $2/3 V$</p> <p>C. $3/2 V$</p> <p>D. $3V$</p>

727	At a certain instant a stationary transverse wave is found to have maximum kinetic energy. The appearance of string of that instant is	<p>A. Sinusoidal shape with amplitude $\sqrt{3}$</p> <p>B. Sinusoidal shape with amplitude $A/2$</p> <p>C. Sinusoidal shape with amplitude A</p> <p>D. Straight line</p>
728	At absolute temperature, the kinetic energy of the molecules	<p>A. Becomes zero</p> <p>B. Becomes maximum</p> <p>C. Becomes minimum</p> <p>D. Remain constant</p>
729	At 0°K which of the following properties of a gas will be zero?	<p>A. Kinetic energy</p> <p>B. Potential energy</p> <p>C. Vibrational energy</p> <p>D. Density</p>
730	An alpha particle has a charge of	<p>A. $+2e$</p> <p>B. $-2e$</p> <p>C. $-e$</p> <p>D. $+3e$</p>
731	In a straight current carrying conductor, the direction of magnetic field can be found by	<p>A. right hand rule</p> <p>B. left hand rule</p> <p>C. head to tail rule</p> <p>D. none of these</p>
732	If the external driving force is periodic with a period comparable to the natural period of the oscillator, then we get	<p>A. diffraction</p> <p>B. beat</p> <p>C. interference</p> <p>D. resonance</p>
733	When three identical bulbs of 60 watt, 200 volt rating are connected in series to a 200 volt supply, the power drawn by them will be	<p>A. 180 watt</p> <p>B. 10 watt</p> <p>C. 20 watt</p> <p>D. 60 watt</p>
734	Another mean of electric potential energy per unit charge is given by:	<p>A. $\int \vec{E} \cdot d\vec{r}$ Electric intensity</p> <p>B. $-\int \vec{E} \cdot d\vec{r}$ Potential gradient</p> <p>C. $\int \vec{E} \cdot d\vec{r}$ Electric Flux</p> <p>D. $-\int \vec{E} \cdot d\vec{r}$ Potential difference</p> <p>E. $\int \vec{E} \cdot d\vec{r}$ None of these</p>
735	When a platinum wire is heated, it appears yellow at	<p>A. 1600°C</p> <p>B. 900°C</p> <p>C. 1100°C</p> <p>D. 1300°C</p>
736	Velocity of a body changes if	<p>A. direction of the body changes</p> <p>B. speed of the body changes</p> <p>C. neither speed nor direction changes</p> <p>D. either speed or direction changes</p>
737	The sum of the magnitude of two forces acting at a point is 18 and the magnitude of their resultant is 12. If the resultant is at 90° with the force of the smaller magnitude, then their magnitudes are	<p>A. 3, 15</p> <p>B. 4, 14</p> <p>C. 5, 13</p> <p>D. 6, 12</p>
738	The emf is measured in:	<p>A. Newton</p> <p>B. Volt</p> <p>C. J/C</p> <p>D. Both A and B</p> <p>E. Both B and C</p>
---	An airplane is flying horizontally with a velocity of 600 km/h and at a height of	<p>A. 1200 m</p> <p>B. 0.33 km</p>

739	1960 m. When it is vertically above a point A on the ground, a bomb is released from it. The bomb strikes the ground, at point B. The distance AB is	<p>A. 3333 km</p> <p>C. 3.33 km</p> <p>D. 33 km</p>
740	If one volt is needed to cause a current of one ampere to flow in a conductor, its resistance is	<p>A. one ohm</p> <p>B. one joule</p> <p>C. one volt</p> <p>D. one ampere</p>
741	The interior of a hollow charged metal sphere is a region which:	<p>A. Contain some magnitude of electric field</p> <p>B. Is full of electric field lines</p> <p>C. Is field-free region</p> <p>D. Either (A) or (B)</p> <p>E. None of these</p>
742	Longitudinal waves are also called:	<p>A. Congressional waves</p> <p>B. Transverse waves</p> <p>C. Radio waves</p> <p>D. None of them</p>
743	In case of point, source of light shape of wavefront is:	<p>A. Spherical</p> <p>B. Cylindrical</p> <p>C. Plane</p> <p>D. None of these</p>
744	The energy stored in a charge capacitor	<p>A. $\frac{1}{2}CV^2$</p> <p>B. $\frac{1}{2}C^2V$</p> <p>C. $\frac{1}{2}C/V^2$</p> <p>D. None of these</p>
745	When a body is moving with uniform positive acceleration, the velocity- time graph is a straight line. Its slope is	<p>A. zero</p> <p>B. negative</p> <p>C. positive</p> <p>D. non-existing</p>
746	A ten ohm electric heater operates on a 110 V line. Calculate the rate at which it develops heat in watts	<p>A. 1310 W</p> <p>B. 670 W</p> <p>C. 810 W</p> <p>D. 1210 W</p>
747	At the top of the trajectory of a projectile, the directions of its velocity and acceleration are	<p>A. Perpendicular to each other</p> <p>B. Parallel to each other</p> <p>C. Inclined to each other at an angle of 45°</p> <p>D. Antiparallel to each other</p>
748	The working of all DC electric meters (galvanometers, ammeters and voltmeters) depends upon	<p>A. Heating effect of current</p> <p>B. Chemical effect of current</p> <p>C. Magnetic effect of current</p> <p>D. Electromagnetic effect of current</p>
749	The example of mechanical wave is	<p>A. waves in ropes</p> <p>B. waves on water surface</p> <p>C. waves in air</p> <p>D. all of them</p>
750	The arrangement of molecules or atoms in a crystalline solid can be studied by using:	<p>A. Chemical methods</p> <p>B. Neutrons</p> <p>C. X-ray techniques</p> <p>D. Copper atoms</p> <p>E. Both (A) and (B)</p>
	Distances traveled by a body falling from rest in the first, second and third	<p>A. 1 : 2 : 3</p> <p>B. 1 : 4 : 9</p>

751	Distance traveled by a body falling from rest in the first, second and third second is in the ratio of	<p>B. 1 : 3 : 5</p> <p>C. 1 : 4 : 9</p> <p>D. None of the above</p>
752	Plan of a coil makes an angle of 20° with the lines of magnetic field. The angle between B and vector area of plane of coil is:	<p>A. Also 20°</p> <p>B. 70°</p> <p>C. 90°</p> <p>D. 180°</p> <p>E. None of these</p>
753	Mechanical waves on the surface of a liquid are	<p>A. Transverse</p> <p>B. Longitudinal</p> <p>C. Torsional</p> <p>D. both transverse and longitudinal</p>
754	The value of escape velocity of Earth planet comes out to be:	<p>A. 11 m/sec</p> <p>B. 11 km/sec</p> <p>C. 11 km/hour</p> <p>D. 11 cm/sec</p>
755	The body oscillates due to _____ accelerates and overshoots the rest position due to _____:	<p>A. Applied force, inertial</p> <p>B. Restoring force, friction</p> <p>C. Frictional force, inertial</p> <p>D. Restoring force, inertial</p>
756	Bernoulli's equation is based upon law of conservation	<p>A. Mass</p> <p>B. Momentum</p> <p>C. Energy</p> <p>D. None of these</p>
757	Magnetic effect at a point caused due to flow a current depend upon the	<p>A. Quantity of current</p> <p>B. Distance from current</p> <p>C. Both the quantity of current and distance from current element</p> <p>D. None of the all</p>
758	Blood pressure is measured by the instrument	<p>A. stethoscope</p> <p>B. sphygmomanometer</p> <p>C. barometer</p> <p>D. none of them</p>
759	Dimension of mass is written as:	<p>A. M</p> <p>B. [M]</p> <p>C. (M)</p> <p>D. [m]</p>
760	The Boltzman constant has the value	<p>A. $1.38 \times 10^{-23} \text{ JK}^{-1}$</p> <p>B. $1.28 \times 10^{-23} \text{ JK}^{-1}$</p> <p>C. $1.38 \times 10^{-26} \text{ JK}^{-1}$</p> <p>D. $1.28 \times 10^{-26} \text{ JK}^{-1}$</p>
761	If v is the velocity of flow of liquid through a tube of area of cross-section A, then according to equation of continuity	<p>A. $v/A = \text{constant}$</p> <p>B. $A/v = \text{constant}$</p> <p>C. $Av = \text{constant}$</p> <p>D. None</p>
		<p>A. Heating effect</p> <p>B. Magnetic</p>

762	The obvious effect/s of current is/are:	<p>effect<o:p></o:p></p></p> <p>C. <p class="MsoNormal" style="text-align:justify">Chemical effect<o:p></o:p></p></p> <p>D. <p class="MsoNormal" style="text-align:justify">Both (C) and (B) <o:p></o:p></p></p> <p>E. <p class="MsoNormal" style="text-align:justify">All of these</p></p>
763	Which one is not produced by sound waves in air?	<p>A. Polarization</p> <p>B. Diffraction</p> <p>C. Refraction</p> <p>D. Reflection</p>
764	A resistance used in voltmeter is called	<p>A. shunt resistance</p> <p>B. high resistance</p> <p>C. low resistance</p> <p>D. zero resistance</p>
765	If the radius of first orbit of hydrogen atom is 0.53° A the radius of second orbit will be	<p>A. 2.120°A</p> <p>B. 0.212°A</p> <p>C. 21.2°A</p> <p>D. 0.14°A<div>a</div></p>
766	The solids which has structure in-between order and disorder are called	<p>A. amorphous solids</p> <p>B. polymeric solids</p> <p>C. crystalline solids</p> <p>D. all of them</p>
767	A stone tied to the end of a 20 cm long string is whirled in a horizontal circle. If centripetal acceleration is 9.8 m/sec^2 , then its angular velocity is rad/sec is:	<p>A. $22/7$</p> <p>B. 7</p> <p>C. 14</p> <p>D. 21</p>
768	The example of reversible process is	<p>A. an explosion</p> <p>B. changes occur suddenly</p> <p>C. slow compression of a gas</p> <p>D. all of them</p>
769	The rear wheels of an automobile are rev/sec which is reduced to 38 rad/sec in 5 seconds when brakes are applied. Its angular acceleration is:	<p>A. 5 rad/sec^2</p> <p>B. -10 rad/sec^2</p> <p>C. -10 rad/sec^2</p> <p>D. -5 rad/sec^2</p>
770	From sand, we get a material used for construction of computer chips. That material is called:	<p>A. Copper</p> <p>B. Lead<div>
</div></p> <p>C. Silicon</p> <p>D. Germanium</p>
771	A sphere of mass m and velocity 2 V moving in the x direction collides with a sphere of mass 2m and velocity v moving in the direction. If the collision is perfectly elastic, which of the following statements in correct	<p>A. The two spheres sticks together after impact</p> <p>B. The total kinetic energy before the impact in 3 mv^2</p> <p>C. The total momentum before impact is 4 mv</p> <p>D. Both B and C</p>
772	Three resistors of resistance R each are combined in various ways. Which of the following cannot be obtained?	<p>A. $3R$Ω</p> <p>B. $2R/4$Ω</p> <p>C. $R/3$Ω</p> <p>D. $2R/3$Ω</p>
773	If the absolute uncertainty of an instrument is $0.0a1 \text{ cm}$, then its least count will be :	<p>A. 0.005 cm</p> <p>B. 0.01 cm</p> <p>C. 0.02 cm</p> <p>D. 0.001 cm</p>

774	Most of the geysers occur in:	A. Volcanic regions B. Magnetic regions C. Northern region D. None of these
775	In crystalline solids, atoms are held about their equilibrium positions depending upon the strength of:	A. Adhesive force B. Nuclear forces C. Inter atomic cohesive force D. Electromagnetic force E. None of these
776	When heat is removed from the system	A. negative B. positive C. zero D. any one of them
777	Those quantities which can be measured accurately are known as	A. Physical Quantities B. Scalar Quantities C. Vector Quantities D. Non Physical Quantities
778	Bodies which falls freely under gravity provides good example of motion under:	A. Uniform acceleration B. Non-uniform acceleration C. Uniform velocity D. None of these
779	An inertial frame of reference is a frame of reference which is	A. at rest B. moving with uniform velocity C. either at rest or moving with uniform velocity D. none of these
780	The space around the earth in which its gravitational force acts on a body is called	A. Electric Field B. Gravitational field C. Magnetic field D. Conservative field
781	A point on the rim of a wheel moves 0.2 m when the wheel turns through an angle of 14.3 degrees. The radius of the wheel is	A. 0.05 m B. 0.08 cm C. 0.8 m D. 0.008 m
782	A ball is thrown upwards with a velocity of 100 m/s. It will reach the ground after	A. 10 s B. 20 s C. 5 s D. 40 s
783	A laborer carrying a load on his head moves from the rest on a horizontal road to another point where he comes to rest. He has done:	A. Minimum Work B. Maximum Work C. Zero Work D. Negative Work
784	If two forces of magnitudes 3.5 and 2.5 N act on a body such that the angle between the forces is zero, then magnitude of the resultant will be:	A. 1.0 N B. 6 N C. 3.5 N D. 12 N
785	Hertz is unit of:	A. Time period B. Displacement C. Amplitude D. Frequency
786	Which of the following is/are example/s if mechanical waves i.e. waves generated in _____:	A. Rope B. Coil of spring C. Water D. All of them
787	The critical temperature of aluminium is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
788	Energy gas behaves like an ideal gas at	A. High temperature and low pressure B. Low temperature and high pressure C. Both A and B D. None
789	In the same medium, velocity of the wave:	A. Goes on increasing B. Remains constant C. Goes on decreasing D. None of these
790	At constant temperature, on increasing the pressure of a gas by 5%, its volume. The final temperature of the gas will be	A. 81 K B. 355 K C. 627 K D. 627°C

A. Also he doubled

791	If time period of a pendulum is doubled by increasing its length, then its frequency will	<p>A. Becomes half</p> <p>B. Become one fourth</p> <p>C. Become one fourth</p> <p>D. Becomes four times</p>
792	A current carrying conductor sets up its own:	<p>A. Electric field</p> <p>B. Nuclear field</p> <p>C. Magnetic field</p> <p>D. Both (A) and (C)</p> <p>E. All of these</p>
793	A choke coil is used as a resistance in	<p>A. d.c. circuit</p> <p>B. a.c. circuit</p> <p>C. d.c. potentiometer circuit</p> <p>D. wheatstone bridge</p>
794	Acceleration produced in a body by the force varies	<p>A. inversely as the applied force</p> <p>B. directly as the applied force</p> <p>C. directly as the mass of the body</p> <p>D. none of them</p>
795	The greatest stress that a material can endure without losing the proportionality between stress and strain is called	<p>A. plastic line</p> <p>B. breaking point</p> <p>C. proportional limit</p> <p>D. none of them</p>
796	The SI unit of stress is	<p>A. N/m^2</p> <p>B. N/m</p> <p>C. dynes/m</p> <p>D. N</p>
797	Truth of kinetic energy is confirmed by:	<p>A. Diffusion of gases</p> <p>B. Brownian motion</p> <p>C. Both A and B</p> <p>D. None of these</p>
798	When the shear stress and shear strain are involved, then their ratio is called	<p>A. Young's modulus</p> <p>B. Bulk modulus</p> <p>C. Shear modulus</p> <p>D. all of them</p>
799	The tidal energy is produced due to rotation of Earth relative to:	<p>A. Moon</p> <p>B. Sun</p> <p>C. Oceans</p> <p>D. Water</p>
800	Two point charge $+3\mu\text{C}$ and $+8\mu\text{C}$ repel each other with a force of 40 N. If a charge of $-5\mu\text{C}$ is added to each of them, then the force between them will become	<p>A. -10 N</p> <p>B. +10 N</p> <p>C. +20 N</p> <p>D. -20 N</p>
801	If a given spring of spring constant K is cut into two identical segments, the spring constant of each segment is:	<p>A. $K/2$</p> <p>B. $2K$</p> <p>C. $4K$</p> <p>D. None of these</p>
802	Light has	<p>A. Wave nature</p> <p>B. Dual nature</p> <p>C. Particle nature</p> <p>D. None of them</p>
803	A body moving along the circumference of a circle of radius R completes one revolution. The radius of a covered path to the angle subtended at the centre is:	<p>A. Radius of the circle</p> <p>B. Twice the radius</p> <p>C. Thrice the radius</p> <p>D. None of these</p>
804	Two electric bulbs of 200 W and 100 W have same voltage. If R_1 and R_2 be their resistance respectively then	<p>A. $R_1 = 2R_2$</p> <p>B. $R_1 = 4R_2$</p> <p>C. $R_1 = 2R_2$</p> <p>D. $R_1 = 4R_2$</p>

805	Maximum density of H ₂ O is at the temperature	<p>A. 32°F</p> <p>B. 39.2°F</p> <p>C. 42°F</p> <p>D. 4°F</p>
806	If the length of the conductor is double and its cross sectional area is halved, its conductance will	<p>A. Increase four fold</p> <p>B. Become one-fourth</p> <p>C. Become one-half</p> <p>D. Remains unchanged</p>
807	An object in SHM will have maximum speed when its displacement from equilibrium position is:	<p>A. Infinity</p> <p>B. Maximum</p> <p>C. Zero</p> <p>D. Minimum</p>
808	If the value of galvanometer constant $k = C/BAN$ is made small, the galvanometer can be made	<p>A. Sensitive</p> <p>B. Accurate</p> <p>C. Stable</p> <p>D. None of these</p>
809	The image of the tip of a needle is never sharp because of	<p>A. Polarization of light</p> <p>B. Interference of light</p> <p>C. Diffraction of light</p> <p>D. Reflection of light</p>
810	The reciprocal of decay constant λ of a radioactive material is:	<p>A. Frequency</p> <p>B. Half life</p> <p>C. Year</p> <p>D. Mean life</p> <p>E. None of these</p>
811	Crests and troughs are formed in:	<p>A. Longitudinal waves</p> <p>B. Transverse waves</p> <p>C. Both of these</p> <p>D. None of these</p>
812	The potential difference across each resistance in series combination is	<p>A. same</p> <p>B. different</p> <p>C. zero</p> <p>D. none of these</p>
813	Which one of the following waves belongs to electromagnetic spectrum	<p>A. Radio and TV waves</p> <p>B. Radar waves</p> <p>C. Micro waves</p> <p>D. All of them</p>
814	Nowadays, Most of the electric energy is produced by the A.C. generators using:	<p>A. Hydal water</p> <p>B. Geothermal energy</p> <p>C. Solar energy</p> <p>D. Biomass</p> <p>E. Both (B) and (D)</p>
815	The phase at the positive peak of an A.C. cycle is:	<p>A. 0</p> <p>B. 90</p> <p>C. 180</p> <p>D. 0 and</p> <p>E. <</p>

		font-family:"Plantagenet Cherokee";"serif";mso-fareast-font-family:Calibri; mso-fareast-theme-font:minor-latin;mso-bidi-font-family:"Times New Roman"; mso-ansi-language:EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">2 and 3 2
816	The vector in space has:	A. One component B. Two components C. Three components D. None of these
817	There is no net transfer of energy by particle of medium in	A. Longitudinal wave B. Transverse wave C. Progressive wave D. Stationary wave
818	Fire fighters have jet attached to the head of their water pipes in order to	A. Increase the mass of water flowing per second B. Increase the velocity of water flowing out C. Increase the volume of water flowing per second D. Avoid wastage of water
819	Current provided by a battery is maximum when	A. Internal resistance equal to external resistance B. Internal resistance is greater than external resistance C. Internal resistance is less then external resistance D. None of these
820	Most OP-AMP operates with	A. <u></u> 6 V supply B. <u></u> 10 V supply C. <u></u> 12 V supply D. <u></u> 24 V supply
821	In magnet-coil experiment, emf can be produced by:	A. Keeping the coil stationary and moving the magnet B. Keeping the magnet stationary and moving the coil C. Relative motion of the loop and magnet D. Any one of above E. All above
822	If a ball comes back to its starting point after bouncing off the wall several times, then its	A. total displacement is zero B. average velocity is zero C. none of them D. both of them
823	An object is dropped from a height of 100 m. Its velocity at the moment it touches the ground is:	A. 100 m/sec B. 140 m/sec C. 1960 m/sec D. 196 m/sec
824	An object moving through a fluid experiences a retarding force called a	A. frictional force B. terminal force C. opposing force D. drag force
825	If both the inputs given to a gate are 1 such that the output is 0, then it is:	A. AND gate B. NOR gate C. OR gate D. NOT gate E. Both (A) and (C)
826	A digital system deals with quantities or variables which have	A. only one state B. only two discrete states C. three discrete states D. four discrete states
827	At resonance, the phase angle for RLC series resonance circuit equals	A. 0° B. 90° C. 180° D. 270°
828	If two waves of length 50 cm and 51 cm produced 12 beats per second, the velocity of sound is	A. 360 m/s B. 306 m/s C. 331 m/s D. 340 ms
829	The example of irreversible process is	A. slowly liquification B. slowly evaporation C. an explosion D. all of them

		D. all of them
830	At 'resonance' the transfer of energy from deriving source to the oscillator is	A. maximum B. minimum C. zero D. none of them
831	$F = I(L \times B)$ is a	A. vector B. scalar C. unit vector D. none of these
832	Huygen principle is used to determine:	A. Speed of light B. Location of wavefront C. About polarized or unpolarized light D. None of them
833	The SI unit of charge is	A. Ampere B. Watt C. Coulomb D. Volt E. Joule
834	A uniform resistance wire of Length L and diameter d has a resistance R. Another wire of same material has length, 4L and diameter 2d, the resistance will be	A. 2 R B. R C. R/2 D. R/4
835	When a body moves to and fro motion, this type of motion is called	A. translatory motion B. circular motion C. oscillatory motion D. all of them
836	When an oscillatory motion repeats itself, then this type of motion is called	A. vibratory motion B. constant motion C. fixed motion D. periodic motion
837	Max plank received the Nobel Prize in physics for his discovery of energy quanta in	A. 1900 B. 1906 C. 1912 D. 1918
838	The portion of the water above its mean level forms a:	A. Crest B. Trough C. Both A and B D. None of these
839	The instantaneous velocity of a body moving along a circle is directed	A. along the radius B. along the tangent C. away from the circle D. none of them
840	In the formula $B = \mu_0 n I$, the symbol n denotes:	A. <p>class="MsoNormal" style="text-align:justify">Total number of turns of solenoid</p> B. <p>class="MsoNormal" style="text-align:justify">Number of turns per unit length</p> C. <p>class="MsoNormal" style="text-align:justify">Number of turns per unit volume</p> D. <p>class="MsoNormal" style="text-align:justify">Numbers of turns per unit area</p> E. <p>class="MsoNormal" style="text-align:justify">Number of moles</p></p> B. 10 KHZ C. Then siren will not be heard D. Less than 10 KHZ</p></p></p></p>
841	A police motor cycle running at 140 km/Hr. The apparent frequency heard by the car driver is.	A. Greater than 10 KHZ B. 10 KHZ C. Then siren will not be heard D. Less than 10 KHZ
842	The wave form of alternating voltage is the graph between:	A. Voltage across X-axis and time across y-axis B. Current and time C. Voltage along y-axis and time along x-axis D. Voltage and current E. Either (B) or (D)

843	The internal energy of an ideal gas system is generally the	A. translational K.E of molecules B. vibrational K.E of molecules C. rotational K.E of molecules D. all of them
844	In the study of thermodynamics, which gas is considered as the working substance	A. real gas B. ideal gas C. any gas may be ideal or real D. none of them
845	The total reactance of a series RLC circuit at resonance is	A. zero B. Equal to the resistance C. Infinity D. Capacitive
846	The work performed on an object does not depend on:	A. Force applied B. Angle at which force is inclined to the displacement C. Initial velocity of the object D. Displacement
847	When angular acceleration is positive, the body rotates:	A. Slower B. Slowest C. Faster D. None of these
848	Progressive waves of frequency 300 Hz are superimposed in produced a system of stationary waves in which adjacent nodes are 1.5 m apart. What is the speed of the progressive waves?	A. 100 ms^{-1} B. 200 ms^{-1} C. 450 ms^{-1} D. 900 ms^{-1}
849	Fluids resist force, This property is called	A. Stiffness B. Strength C. Ductility D. Elasticity
850	0.10 cm can be written as:	A. $1.0 \times 10^{-2} \text{ m}$ B. $1.0 \times 10^{-3} \text{ cm}$ C. $1.0 \times 10^{-4} \text{ cm}$ D. $1. \times 10^{-4} \text{ m}$
851	The magnetic field outside the solenoid due to current is	A. strong B. zero C. weak D. uniform
852	Significant figures in 0.0010 are:	A. Four B. Three C. Two D. One
853	Glycerin has viscosity _____ the viscosity of water:	A. More than B. Equal to C. Less than D. None of these
854	To hear a clear echo, the reflecting surface must be at a minimum distance of	A. 10 m B. 16.5 m C. 33 m D. 66 m
855	Speed of light in vacuum depends upon:	A. Frequency B. Wavelength C. Amplitude D. None of these
856	A (100 W , 200 W) bulb is connected to a 160 V power supply. The power consumption would be	A. 64 W B. 80 W C. 100 W D. 125 W
857	In a heat engine, heat is supplied by the	A. cold reservoir B. sink C. hot reservoir D. none of them
858	The photon of radio-waves has energy of about	A. 1 Me V B. 1 Ke v C. 10^{-10} e v D. 10^{10} e v
859	If a gymnast is sitting on a rotating stool with his arms outstretched, brings his arms towards the chest, then its angular velocity will:	A. Increase B. Decrease C. Remains constant D. None of these
860	Each atom in a metal crystal vibrates about a fixed point with an amplitude	A. Decrease the rise in temprature B. Is not affected by rise in temprature C. Increase with rise in temprature

860	that:	<p>C. increase with rise in temperature</p> <p>D. Both (B) and (C)</p> <p>E. None of these</p>
861	Two forces of 10N and 8N are applied simultaneously to a body. The maximum value of their resultant is:	<p>A. 20 N</p> <p>B. -2 N</p> <p>C. 18 N</p> <p>D. 36 N</p>
862	The three equation of motions are useful only for	<p>A. linear motion with increasing acceleration</p> <p>B. line motion with uniform acceleration</p> <p>C. linear motion with zero acceleration</p> <p>D. linear motion with varying acceleration</p>
863	Work done is lowering the bucket into the well is:	<p>A. Zero</p> <p>B. Positive</p> <p>C. Negative</p> <p>D. None of these</p>
864	The equation of continuity is	<p>A. $A_1 v_1 = A_2 v_2$</p> <p>B. $A_1 v_1 = A_2 v_2$</p> <p>C. $A_1 v_1 = A_2 v_2$</p> <p>D. $A_1 v_1 = A_2 v_2$</p>
865	INTELSAT operates at frequencies 4, 6, 11, 14 having unit of	<p>A. KHz</p> <p>B. MHz</p> <p>C. GHz</p> <p>D. BHz</p>
866	If the distance between two charges is doubled, the force between them will become:	<p>A. Double</p> <p>B. Half</p> <p>C. Three times</p> <p>D. One fourth</p> <p>E. One third</p>
867	In the case of an incompressible fluid in stead flow the net rate of flow of mass entering one end of the tube of flow is equal to the net rate of flow of mass leaving the other end. This equation is called	<p>A. Quadratic equation</p> <p>B. Equation of discontinuity</p> <p>C. Equation of continuity</p> <p>D. None of the above</p>
868	On the exaust stroke, the outlet valves opens. The residual gases are expelled and piston moves	<p>A. outwards</p> <p>B. inwards</p> <p>C. in either way</p> <p>D. none of these</p>
869	The total energy of spring mass system is	<p>A. zero</p> <p>B. changing with time</p> <p>C. constant</p> <p>D. none of them</p>
870	First law of thermodynamics is consequence of conservation of	<p>A. Work</p> <p>B. Energy</p> <p>C. Heat</p> <p>D. All of these</p>
871	Centripetal acceleration is also called _____ acceleration	<p>A. Tangential</p> <p>B. Radial</p> <p>C. Angular</p> <p>D. None of these</p>
872	Which of the following theory completely explain the three types of materials	<p>A. Bohr model of electron distribution</p> <p>B. Rutherford atomic model</p> <p>C. Pauli's exclusion principle</p> <p>D. energy band theory</p>
873	In the theory of dimensional analysis, heat may be properly represented by:	<p>A. ML^2T^{-2}</p> <p>B. MT^{-2}</p> <p>C. $ML^{-1}T^{-1}$</p> <p>D. None of these</p>
874	Tick the conservation force:	<p>A. Tension in a string</p> <p>B. Air resistance string</p> <p>C. Elastic spring force</p> <p>D. Frictional force</p>
875	A mass difference of 0.0012 u is equivalent to and energy of:	<p>A. 0.5 Me V</p> <p>B. 1.13 MeV</p> <p>C. 5.13 MeV</p> <p>D. 1.13 keV</p> <p>E. 1.13 eV</p>
876	Back emf is produced due to	<p>A. Self induction</p> <p>B. Mutual induction</p> <p>C. A.C</p> <p>D. Lenz's law</p>

877	A traveling wave has a shape of:	A. Square wave B. Sine wave C. Parabola D. hyperbola
878	The resistivity of a substance depends upon the	A. length B. mass C. area D. temperature
879	A body of mass 5 kg is acted upon by a total change in momentum will be:	A. 10 NS B. 100 NS C. 140 NS D. 200 NS
880	Neutrons are	A. positive charge B. negatively charged C. massless D. neutral
881	The ratio of the gravitational force F_g to the electrostatic force F_e between two electrons at the same distance apart is approximately	A. 9.8 B. 24×10^{19} C. 24×10^{42} D. 24×10^{-44}
882	Certain light of wavelength 600 nm is used to view an object under the microscope. If the aperture of its objective is 1.22 cm, then the limiting angle of resolution will be:	A. 6×10^{-5} rad B. 7×10^{-5} rad C. 8×10^{-5} rad D. None of these
883	Physics deals with the study of	A. Matter B. Energy C. Both of them D. Human Body
884	A diode which can turn its current ON and OFF in nano seconds is called:	A. LED B. Photodiode C. An ordinary diode. D. Both (A) and (B) E. Both (B) and (C)
885	Which waves are used in sonography?	A. Microwaves B. Infra red waves C. Sound waves D. Ultrasonic waves
886	If every particle of the flow that passes a particular point, moves along the same path as followed by particles which passed the point earlier, then this flow is said to be	A. turbulent B. streamline C. abrupt D. none of them
887	Pressure of a gas at constant volume is proportion to	A. Total energy of gas B. Average P.E to molecules C. Average K.E of molecules D. Total internal energy of gas
888	The bands below the valence band are	A. completely filled and play active part in conduction process B. completely filled and plays no part in conduction process C. completely filled and play active part in conduction process D. not completely filled and play no part in conduction process
889	The induced current in the loop can be increased by	A. Using a stronger magnetic field B. Moving the loop faster C. Replacing the loop by a coil of many turns D. All above E. Both A and B
890	Monochromatic light means waves of:	A. Same frequency B. Same colour C. Same wavelength D. All of them
891	Silicon can be obtained from	A. Lead B. Uranium C. An isotope of oxygen D. Sand
892	Inverter is the name given to:	A. NOT gate B. OR gate C. NOR gate D. AND gate E. XOR gate
		A. e.m. waves B. radio waves C. microwaves D. infrared waves

893	The waves which propagate by the collision of material particles are known as	B. mechanical waves C. light waves D. microwaves
894	Hotness and coldness of an object is represented in terms:	A. Heat B. Temperature C. Chemical energy D. None of these
895	Velocity is a	A. scalar quantity B. vector quantity C. constant quantity D. none of them
896	The results of spectra obtained by Blamer were expressed in 1896 by	A. Bohr B. Rydberg C. Planck D. Rutherford E. Coulomb
897	A man sitting in a bus travelling in a direction from west to east with a speed of 40 km/h observes that the rain drops are falling vertically down. To the another man standing on ground the rain will appear	A. To fall vertically down B. To fall at an angle going from west to east C. To fall at an angle going from east to west D. The information given is insufficient to decide the direction of rain
898	The half life of radioactive substances depends upon	A. amount of substance B. energy of substance C. state of substance D. temperature of substance
899	The pressure exerted by the gas is	A. directly proportional to the P.E B. inversely proportional to the P.E C. inversely proportional to the K.E D. directly proportional to the K.E
900	A spring of constant $k = 0.4 \text{ N m}^{-1}$ is to be extended through 10 cm at a place where $g = 10 \text{ m sec}^{-2}$. The mass to be suspended should be:	A. 4 gms B. 0.4 gm C. 40 gms D. None of these
901	The efficiency of diesel engine is	A. 25% B. 25 - 30% C. 35% D. 35 - 40%
902	A string is stretched between two points and is plucked at right angles to its length, the vibration produced is:	A. Longitudinal wave B. Transverse wave C. No vibration at all D. None of them
903	Work is a:	A. Scalar quantity B. Vector quantity C. Base quantity D. None of these
904	The statement "the electric force of repulsion or attraction between two point charges is directly proportional to the product of the charges and inversely proportional to square of the distance between them" refer to	A. Coulomb's law B. Gauss's law C. Biot-Sarwat law D. Ampere's law
905	The angle which specifies the instantaneous value of the alternating voltage or current is called	A. phase B. critical angle C. angle of incidence D. all of these
906	In RC series circuit the time during which the capacitor acquires 0.63 times the equilibrium charge is called	A. Time constant B. Decay constant C. None of these D. All of above
907	Wien's constant is measured in:	A. Metre per kelviin B. Metre kelvin C. Kelvin per meter D. Joules E. Dynes
908	Lenz's law is the consequence of	A. Mass B. Energy conservation C. Momentum conservation D. Charge
909	The quantity have dimension of ML^2T^{-2} will have SI unit of:	A. Watt B. Newton C. Joule D. Metre
		A. proton B. neutron

910	In 1932 Chadwick discovered	<p>B. neutron</p> <p>C. photon</p> <p>D. electron</p>
911	The mechanics, which deals with the objects moving with velocities approaching that of light is called:	<p>A. Relativistic mechanics</p> <p>B. Wave mechanic</p> <p>C. Quantum mechanics</p> <p>D. Statics</p>
912	Direction of motion _____ in circular motion	<p>A. Changes off and on</p> <p>B. Changes continuously</p> <p>C. Does not change</p> <p>D. None of them</p>
913	Pressure may be define as _____ per second per unit area:	<p>A. Change in force</p> <p>B. Change in momentum</p> <p>C. Change in energy</p> <p>D. Work done</p>
914	Which of the following quantity for particle executing SHM is non-zero at mean position	<p>A. Force</p> <p>B. Acceleration</p> <p>C. Velocity</p> <p>D. Displacement</p>
915	The magnitude of induced emf depends upon the:	<p>A. Rate of decrease of magnetic field</p> <p>B. Rate of change of magnetic field</p> <p>C. Rate of increase of magnetic flux</p> <p>D. Constancy of magnetic field</p> <p>E. None of these</p>
916	if the field is directed along the normal to the area, then flux is:	<p>A. Maximum</p> <p>B. Equal to zero</p> <p>C. Equal to BA</p> <p>D. Minimum</p> <p>E. Both (A) and (C)</p>
917	The velocity given to a body to go out of the influence of earth's gravity is known as:	<p>A. Terminal velocity</p> <p>B. Orbital velocity</p> <p>C. Escape velocity</p> <p>D. None of these</p>
918	The magnitude of the displacement is a line from initial position to final position which is	<p>A. straight</p> <p>B. curved</p> <p>C. either be curved or straight</p> <p>D. none of them</p>
919	Solar cell converts sunlight directly into	<p>A. potential energy</p> <p>B. thermal energy</p> <p>C. mechanical energy</p> <p>D. electrical energy</p>
920	A mass spectrograph sort out	<p>A. molecules</p> <p>B. atoms</p> <p>C. elements</p> <p>D. isotopes</p>
921	The number of "Earth Stations" which transmit signals to satellites and receive signals fro them are	<p>A. 3</p> <p>B. 24</p> <p>C. 126</p> <p>D. 200</p>
922	If the object is situated at focus of a convex lens, then its image is formed at:	<p>A. F</p> <p>B. 2F</p> <p>C. Infinity</p> <p>D. None of these</p>
923	There is a regular arrangement of molecules in a	<p>A. amorphous solids</p> <p>B. polymeric solids</p> <p>C. crystalline solids</p> <p>D. none of them</p>

924	Example of progressive wave is	A. transverse waves B. longitudinal waves C. both of them D. none of them
925	Two sound waves of slightly different frequencies propagating in the same direction produce beats due to	A. Interference B. Diffraction C. Polarization D. Refraction
926	Rate of change of momentum is called	A. Impulse B. Force C. Torque D. Momentum
927	The bicycle pump provides a good example of	A. first law of thermodynamics B. second law of thermodynamics C. third law of thermodynamics D. none of them
928	The SI unit of permittivity is	A. Nm^2C^{-2} B. $\text{N}^{-1}\text{m}^{-2}\text{C}^2$ C. NmC^2 D. Nm^2C^{-1}
929	If m means mass of gases objected per second from a rocket and v shows the change in velocity, than mv is named as:	A. Force B. Energy C. work D. impulse
930	When a stress changes length, it is called the	A. compressional stress B. tensile stress C. shear stress D. any one of them
931	In velocity of a particle at an instant is 10 m/s and after 5s the velocity of the particle is 20 m/s. The velocity 3s before in m/s is	A. 8 B. 4 C. 6 D. 7
932	A structure of polymeric solid is:	A. An ordered structure B. A disordered structure C. Intermediate between order and disorder D. Any of these E. None of these
933	NmA^{-1} is commonly called:	A. Weber B. Apmere C. Guass D. Coulomb E. None of these
934	The magnitude of chemical Effects depends upon:	A. <p><p class="MsoNormal" style="text-align:justify">Nature of liquid</p></p> <p>B. <p><p class="MsoNormal" style="text-align:justify">Quantity of Electricity passed through the liquid</p></p><p>C. <p><p class="MsoNormal" style="text-align:justify">Color of the liquid</p></p><p>D. <p><p class="MsoNormal" style="text-align:justify">Both (A) and (C)</p></p><p>E. <p><p class="MsoNormal" style="text-align:justify">Both (A) and (B)</p></p></p><p></p></p></p></p>
935	The work done moving a body between two points in a conservation field is independent of the:	A. Direction B. Force applied C. Path followed by the body D. Power
936	The current produced by moving a loop of a wire across a magnetic field is called:	A. Direct current B. Magnetic current C. Alternating current D. Induced current E. None of these

937	The CRO is used for displaying the waveform of a given	<p>A. current</p> <p>B. voltage</p> <p>C. both of them</p> <p>D. none of them</p>
938	Tick the series which lies in the visible region:	<p>A. Lyman series</p> <p>B. Balmer series</p> <p>C. Paschen series</p> <p>D. Brackett series</p> <p>E. P fund series</p>
939	A magnetic force on an electron travelling with 10^8ms^{-1} parallel to a field of strength 1 Wb m^{-2} is	<p>A. Zero</p> <p>B. 10^{15}N</p> <p>C. 10^{-10}N</p> <p>D. 10^8N</p>
940	Which quantity has different dimensions:	<p>A. Work</p> <p>B. Pressure</p> <p>C. Energy</p> <p>D. Torque</p>
941	Gaussian surface is always:	<p>A. Rectangular</p> <p>B. Spherical</p> <p>C. Cylindrical</p> <p>D. Box shape</p> <p>E. Any of these</p>
942	The law of conservation of energy gives us	<p>A. equation of continuity</p> <p>B. Bernoulli's theorem</p> <p>C. both of them</p> <p>D. none of them</p>
943	The closed loop gain of the inverting amplifier is written as	<p>A. $G = R_2/R_1$</p> <p>B. $G = 1 + R_2/R_1$</p> <p>C. $G = -R_2/R_1$</p> <p>D. $G = 1 - R_2/R_1$</p>
944	Albert Einstein got the Nobel prize in physics for his explanation of photoelectric effect in	<p>A. 1916</p> <p>B. 1919</p> <p>C. 1921</p> <p>D. 1923</p>
945	A hole in p-type may be due to:	<p>A. Trivalent impurity</p> <p>B. Breaking of some covalent bond</p> <p>C. Pentavalent impurity</p> <p>D. Germanium</p> <p>E. Either (A) or (B)</p>
946	Two forces of 10 N and 8 N are applied simultaneously to a body. the maximum value of their resultant is:	<p>A. 2 N</p> <p>B. - 2 N</p> <p>C. 18 N</p> <p>D. 36 N</p>
947	The speed of the secondary wavelets as mentioned in Huygen's principle is _____ the speed of propagation of the wave itself.	<p>A. Equal to</p> <p>B. Greater than</p> <p>C. Smaller than</p> <p>D. None of these</p>
948	In describing function of digital systems, 1 represents:	<p>A. Closed switch</p> <p>B. True Statement</p> <p>C. Lighted bulb</p> <p>D. Only (B) and (C)</p>

		E. All are true
949	With the increase of temperature viscosity	A. Increase B. Decrease C. Remains same D. Doubles
950	A gas which strictly obeys the gas laws under all conditions of temperature and pressure is called:	A. Ideal gas B. Inert gas C. Real gas D. None of these
951	A ball is dropped downwards After 1 second another ball is dropped downwards from the same point. What is the distance between them after 3 seconds	A. 25 m B. 20 m C. 50 m D. 9.8 m
952	In the equilibrium state, the potential difference between two ends of the conductor moving across a magnetic field is called:	A. Both A and C B. Induced emf C. Both A and B D. Motion emf E. Electrostatic emf
953	Blomass includes:	A. Crop residue B. Natural vegetation C. Animal dung D. All of these
954	The induced current in the loop can be increased by:	A. Using a strong magnetic field B. Moving the loop faster C. Replacing the loop by a coil of many turns D. All of above E. None of these
955	Lyman series in the spectrum of hydrogen exists in the :	A. Infra-red region B. Visible region C. Ultraviolet region D. Both(A) and (B) E. None of these
956	At the temperature, a body emits radiation which is principally	A. of long wavelengths in the visible region B. of long wavelengths in the invisible infrared region C. of short wavelength in invisible ultraviolet region D. none of these
957	Which of the following is not an assumption of kinetic energy	A. a finite volume of gas consists of very large number of molecules B. the gas molecules are in random motion C. collision between the gas molecules are inelastic D. the size of the gas molecules is much smaller than the separation between molecules
958	Electrostatics is the branch of physics which deals with the study of electro charges:	A. <p class="MsoNormal">At rest</p> B. <p class="MsoNormal">At rest under the action of electric forces</p> C. <p class="MsoNormal">In motion under the action of electric forces</p> D. <p class="MsoNormal">In motion</p> E. <p class="MsoNormal">At rest under the action of nuclear forces</p></p></p></p></p></p>
959	An amount of water of mass 20 g at 0°C is mixed with 40 g of water at 10°C. Final temperature of mixture is	A. -20°C B. 6.67°C C. 5°C D. 0°C
960	A dirty carpet is to be cleaned by heating. This is an accordance with ____ law of motion:	A. First B. Second C. Third D. None of these
961	The change of magnetic flux through a circuit will produce	A. Magnetic Field B. Electric Field C. emf

		C. e.m.f D. a.c
962	When certain nucleus emits α -particles, its mass number:	A. Remain same B. Increases by one C. Decreases by one D. Decreases by four E. None of these
963	The phenomenon of generation of induced emf is called	A. Electrostatic induction B. Magnetic induction C. Electromagnetic induction D. Electric induction E. Both (A) and (D)
964	The quantity $F \times t$ is called as	A. momentum B. velocity C. acceleration D. impulse
965	When a horse pulls a cart, the force that makes the horse run forward is the force exerted by	A. The horse on the ground B. The horse on the cart C. The ground on the horse D. The ground on the cart
966	During the upward motion of the projectile, the vertical component of velocity.	A. Decreases B. Increases C. Remains constant D. None of these
967	In case of constructive interference of two waves, the amplitude of the resultant wave is _____ either of the waves:	A. Greater than B. Equal to C. Smaller than D. None of these
968	The A.M. transmission frequency range from	A. 500-1000 KHz B. 540-1600 KHz C. 300-490 KHz D. 900-2040 KHz
969	The magnetic field in the middle of a solenoid due to current is	A. weak B. strong and uniform C. none-uniform D. zero
970	(CRO) Cathode ray oscilloscope is a device used for high speed	A. velocity B. graph plotting C. time-velocity D. none of these
971	The instrument which detects the instant at which external pressure becomes equal to the systolic pressure is	A. stethoscope B. thermometer C. manometer D. barometer
972	A physical system under going forced vibrations is known as	A. Simple harmonic oscillator B. Compound harmonic oscillator C. Physical harmonic oscillator D. driven harmonic oscillator
973	Slope of velocity-time graph represents:	A. Acceleration B. Speed C. Torque D. Work
974	According to the Bernoulli's equation, where the speed of the fluid is high, the pressure will be	A. low B. zero C. high D. all of them
975	For measuring the angle between two vectors graphically, we join:	A. Tails of both the vectors B. Tail of one vector with the head of other C. Heads of both the vectors D. None of these
976	The peak voltage in a 220 volt A.C. supply is nearly	A. 220 volt B. 253 volt C. 311 volt D. 440 volt
977	In the reverse process, the working substance passes through the same stages as in the direct process and	A. thermal effects at each stage are exactly reversed B. mechanical effects at each stage are exactly reversed C. thermal and mechanical effects at each stage remain the same D. thermal and mechanical effects at each stage are exactly reversed
		A. Chances off and on

978	Direction of motion_____ in circular of motion:	<p>B. Changes continuously</p> <p>C. Does not change</p> <p>D. None of them</p>
979	The rain drop falling from the sky reach the ground with	<p>A. Constant terminal velocity</p> <p>B. Constant gravitational acceleration</p> <p>C. Variable acceleration</p> <p>D. acceleration greater than g</p>
980	First law of thermodynamic is special case of	<p>A. Law of conservation of energy</p> <p>B. Charle's law</p> <p>C. Law of conservation of mass</p> <p>D. Boyle's law</p>
981	To make an LED, it is impreacticable to use:	<p>A. Silicon</p> <p>B. Gallium arsenide</p> <p>C. Gallium arsenide phosphide</p> <p>D. Iron</p> <p>E. Both (B) and (C)</p>
982	The practical application of the phenomenon of Mutual induction is	<p>A. Transformers</p> <p>B. Generator</p> <p>C. Motor</p> <p>D. All of these</p>
983	The rate of decay of a radioactive substance	<p>A. decrease exponentially with time</p> <p>B. decreases linearly with time</p> <p>C. increases linearly with time</p> <p>D. increases exponentially with time</p>
984	A car is turning around a corner at 10 m/sec as it travels along an arc of circle. If value of centripetal acceleration is 10 m/sec^2 in this case, find radius of the circular path:	<p>A. 1 m</p> <p>B. 5 m</p> <p>C. 10 m</p> <p>D. 15 m</p>
985	The quantity having the same unit as that of emf is:	<p>A. Force</p> <p>B. Energy</p> <p>C. Potential</p> <p>D. Current</p> <p>E. Charge</p>
986	When platinum wire is heated, it appears cherry red at	<p>A. 1600°C</p> <p>B. 900°C</p> <p>C. 1100°C</p> <p>D. 1300°C</p>
987	Which one of the following could be the frequency of ultraviolet radiation?	<p>A. $1.0 \times 10^6 \text{ Hz}$</p> <p>B. $1.0 \times 10^9 \text{ Hz}$</p> <p>C. $1.0 \times 10^{12} \text{ Hz}$</p> <p>D. $1.0 \times 10^{15} \text{ Hz}$</p>
988	In a moving coil galvanometer, the deflecting couple depends upon	<p>A. area of the coil</p> <p>B. number of turns of coil</p> <p>C. value of magnetic field</p> <p>D. all of the above</p>
989	Mass of proton is	<p>A. $1.67 \times 10^{-27} \text{ kg}$</p> <p>B. $1.67 \times 10^{-31} \text{ kg}$</p> <p>C. $1.66 \times 10^{-34} \text{ kg}$</p> <p>D. $1.67 \times 10^{-17} \text{ kg}$</p>
990	If the velocity time graph is a straight line parallel to the time-axis, then it means:	<p>A. The body is moving with uniform velocity</p> <p>B. The body is moving with uniform acceleration</p> <p>C. The body is at rest</p> <p>D. None of these</p>
991	An object thrown upward with an initial velocity at certain angle with the horizontal and moving freely under the action of gravity is called	<p>A. a rocket</p> <p>B. an aeroplane</p> <p>C. a projectile</p> <p>D. a ballon</p>
992	In vibrational motion(SHM)	<p>A. P.E remains conserved</p> <p>B. Average K.E remain constant</p> <p>C. Neither P.E nor K.E remains constant</p> <p>D. Total energy remains constant</p>
993	The pressure will change in the pipe, as the fluid moves through that pipe of varying	<p>A. cross-section</p> <p>B. height</p> <p>C. none of them</p> <p>D. both of them</p>
994	Improper biasing of a transistor circuit produces	<p>A. Heavy loading of emitter current</p> <p>B. Distortion in the output signal</p> <p>C. Excessive heat at collector terminal</p> <p>D. Both the reason of heat and</p>

995	The work done on the body will be zero if:	<p>A. No force is applied on the body B. Force is applied but no displacement C. Angle between F(force) and d(displacement) is 90° D. All of these are correct</p>
996	Velocity of particle executing SHM will be maximum at	<p>A. Extreme position B. Mean position C. b/w mean and extreme D. None</p>
997	A 5 kg mass is falling freely, the force acting on, it will be	<p>A. 19.6 N B. 9.8 N C. 5 N D. Zero</p>
998	The length of a metallic rod is 5 meter at 100°C . The coefficient of cubical expansion of the metal will be	<p>A. $2.0 \times 10^{-5} \text{ }^\circ\text{C}^{-1}$ B. $4.0 \times 10^{-5} \text{ }^\circ\text{C}^{-1}$ C. $6.0 \times 10^{-5} \text{ }^\circ\text{C}^{-1}$ D. $2.33 \times 10^{-5} \text{ }^\circ\text{C}^{-1}$</p>
999	Which of the following statements for an object in equilibrium is not true?	<p>A. The object must be at rest B. The object can be at rest C. The object is moving at constant speed D. The acceleration of the object is zero</p>
1000	Which one of the following has larger value of relative permittivity ϵ_r at room temperature?	<p>A. Vacuum B. Air C. Glass D. Water</p>
1001	Viscosity is defined as	<p>A. the friction between fluid and its container's walls B. the internal friction between two layers of fluid C. the resistance to flow a fluid experiences D. the extent to which outside factors effect the fluid's flow</p>
1002	A diatomic gas molecule has	<p>A. translational energy B. rotaional energy C. vibrational energy D. all of them</p>
1003	An ideal voltmeter has:	<p>A. Zero resistance B. Small resistance C. Large resistance D. Infinite resistance E. Both A and B</p>
1004	The expression for restoring force is	<p>A. $F=ma$ B. $F=kx$ C. $F=-kx$ D. $Kx=ma$</p>
1005	The most common source of alternating voltage is:	<p>A. Motor B. Transformer C. AC genrator D. Both (A) and (C) E. Both (A) and (B)</p>
1006	Pressure exerted by a gas on the walls of its container in due to	<p>A. adhesion between the gas molecules and the container B. cohesion between the gas molecules and the container C. collision between the gas molecules and the container D. surface tension of the gas</p>
1007	An induced current can be produced by	<p>A. Constant magnetic field B. Changing magnetic field C. Varying electric field D. Constant electric field E. None of these</p>
		<p>A. magnetism leads the magnetising current</p>

1008	In the phenomenon of hysteresis	B. magnetism lags behind the magnetising current C. magnetism goes along the magnetising current D. none of them
1009	When a water droplet falls through air, the net force on it is	A. Net force = drag force - weight B. Net force = weight - drag force C. Net force = drag force + weight D. Net force = weight + drag force
1010	Blood has a density	A. Equal to water B. Greater than water C. Lesser than water D. None of these
1011	It is customary represent a current flowing towards the reader by a symbol	A. (x) B. (+) C. (.) D. (-) E. (\odot)
1012	A railway engine (mass 10^4 kg) is moving with a speed of 73 km/h. The force which should be applied to bring it to rest over a distance of 20 m is	A. 3,600 N B. 7,200 N C. 10,000 N D. 100,000 N
1013	The energy stored in the water of the dam is:	A. Electric energy B. Kinetic energy C. Potential energy D. None of these
1014	Referring to above figure, current in the coil P grows from zero to its maximum value:	A. At the instant the switch is closed B. At the instant the switch is opened C. When switch is kept open D. All of above E. Neither of above
1015	Michael Faraday and Joseph Henry belong respectively to	A. USA and England B. England and France C. England and USA D. USA and France E. None of these
1016	The disorder in the system increases due to the	A. removal of heat B. addition of heat C. removal or addition of heat D. none of them
1017	The concept of electric field theory was introduced by	A. Michael Faraday B. Newton C. Dalton D. Kepler E. Einstein
1018	A proton is about 1840 times heavier than an electron. When it is accelerated by a potential difference of 1 KV, its kinetic energy will be	A. 1840 KeV B. 1/1840 KeV C. 1 KeV D. 920 KeV
1019	A square loop of wire is moving through a uniform magnetic field. The normal to the loop is oriented parallel to the magnetic field. The emf induced in the loop is:	A. Zero B. Of smaller magnitude C. Of larger magnitude D. Sometimes B, sometimes C E. Neither of these
1020	In an adiabatic expansion, the temperature of the gas	A. increases B. becomes zero C. decreases D. decreases rapidly
1021	A reversible cycle is the one in which	A. some of the changes are reversible B. all of the changes are reversible C. all of the changes are irreversible D. none of them
1022	The resistance of 20 cm long wire is 10Ω . When the length is changed to 40 cm. The new resistance is	A. 10Ω B. 20Ω C. 30Ω D. 40Ω

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1023	Light year is a unit of	A. Time B. Distance C. Velocity D. Intensity of light
1024	A photon is considered to have	A. Momentum B. Energy C. Wavelength D. All of the above
1025	Bernoulli's equation is the fundamental equation in fluid dynamics, which relates pressure to fluid	A. speed B. height C. none of them D. both of them
1026	When radioactive nucleus emits a β -particle, the proton-neutron ratio	A. decrease B. increase C. same D. none of these
1027	The excess (equal in number) of electrons that must be placed on each of two small spheres spaced 3 cm apart, with force of repulsion between the spheres to be 10^{-19} N, is	A. 25 B. 225 C. 625 D. 1250
1028	In an A.C circuit with resistor only, the current and voltage have a phase angle of	A. 90° B. 0° C. 180° D. none of these
1029	In an inelastic collision between two bodies, following is reserved.	A. Energy B. Both A and B C. Momentum D. None
1030	A container has a small hole in the bottom. Air can go through this hole, but water cannot. This can be best explained by the statement that	A. water contains hydrogen atoms, air does not B. water molecules are smaller than molecules in the air C. water molecules are smaller than molecules in the air D. surface tension of the water prevents it from
1031	In the expression of force experienced by electron, the direction of both \vec{v} and \vec{B} are	A. parallel B. zero C. perpendicular D. none of them
1032	The inkjet printer ejects a thin stream of:	A. Water B. Oil C. Ink D. Any of above E. None of these
1033	Distance covered by a freely falling body in the first second of its motion will be:	A. 4.9 m B. 9.8 m C. 19.6 m D. 29.4 m
1034	In case of braking radiations, when the rate of deceleration is very large, the emitted radiation corresponds to:	A. Short wavelength B. Large wavelength C. Very large wavelength D. Low frequency E. Both (B) and (C)

1035	Which one of the following elasticities is possessed by fluids:	A. Young's elastic modulus (length) B. Bulk elastic modulus (volume) C. Modulus of rigidity (shape) D. None of these
1036	Acceleration of a body is positive, if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
1037	The substance in which atoms cooperate with each other in such a way so as to exhibit a strong magnetic effect, are called	A. diamagnetic substances B. ferromagnetic substances C. paramagnetic substances D. all of them
1038	Above the curie temperature, iron becomes	A. ferromagnetic B. paramagnetic C. diamagnetic D. any one of them
1039	Range of a projectile is R, when the angle of projection is 30° . Then, the value of the other angle of projection for the same range, is	A. 45° B. 60° C. 50° D. 40°
1040	In a Millikan's oil drop experiment the charge on an oil drop is calculated to be $6.35 \times 10^{-19} \text{C}$. The number of excess electrons on the drop is	A. 3.9 B. 4 C. 4.2 D. 6
1041	Resistance of a conductor is increased, the current will	A. Decrease B. Increase C. Remain the same D. None of these
1042	The wave nature of light was proposed by	A. Newton B. Thomas Young C. Huygen D. None of these
1043	The most abundant isotope of neon is	A. neon-20 B. neon-21 C. neon-22 D. neon-23
1044	From sand, we get a material used for construction of computer chips. That material is called:	A. Germanium B. Silicon C. Copper D. Lead
1045	The valence band of an atom in a solid	A. is always empty B. may or may not be empty C. can never be empty D. none of them
1046	A medium of dielectric constant 'K' is introduced between the plates of parallel plate condenser. As a result its capacitance	A. Increase k times B. Decreases k times C. Decreases $1/K$ times D. Remains unchanged
1047	When relatively simple molecules are chemically combined into massive molecules, the reaction is called:	A. Fission reaction B. Fusion reaction C. Polymerization D. Any of these E. None of these
1048	In a three phase a.c. generator, there are	A. 2 coils B. 3 coils C. 1 coil D. No coil
1049	When thorium nucleus emits α -particle, the daughter nucleus is called:	A. Protactinium B. Actinium C. Uranium D. Radium E. Radon
1050	Beta particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons

1051	Question Image	<p>align: center; background-color: rgb(255, 255, 248);"> μF B. 10 μF C. 3 μF D. 6 μF</p>
1052	During the steady flow, different streamlines	<p>A. cannot across each other B. can across each other C. either of them D. neither of them</p>
1053	The values 1 and 0 are designated as:	<p>A. Continuous values B. Binary values C. Boolean values D. Decimal values E. Either (B) and (C)</p>
1054	Reception of particular radio station is selected by tuning knob of radio, tuning the tuning knob changes the.	<p>A. Inductance B. Impedance C. Capacitance D. All</p>
1055	The horizontal component of a projectile moving with initial velocity of 500 ms^{-1} at an angle 60° to x-axis is	<p>A. 500 ms^{-1} B. 1000 ms^{-1} C. 250 ms^{-1} D. Zero</p>
1056	Two conductors having the same type of charges are connected by a conducting wire. There would not be any amount of charges on them if	<p>A. They have the same potential B. They have the same amount of charge C. They have the same capacity D. They have the same shape</p>
1057	If the velocity of the body decreases non-uniformly then the slope of the velocity-time graph will have	<p>A. different values B. same values C. zero values D. constant values</p>
1058	A rocket carries its own fuel in the form of	<p>A. liquid only B. liquid or solid C. liquid and solid D. liquid or solid and oxygen</p>
1059	At high altitude the blood oozes out of the nose and ear because	<p>A. The blood pressure increase at high altitudes B. The percentage of oxygen in the air increase C. The atmospheric pressure decrease there D. The density of blood decrease at high altitudes</p>
1060	Eddy current is produced when:	<p>A. A metal is kept in varying magnetic field B. A metal is kept in steady magnetic field C. A circular coil is placed in a steady magnetic field D. A current is passed through a circular coil</p>
1061	The equation of continuity $A_1V_1 = A_2V_2$ is for the flow of	<p>A. an ideal fluid B. an incompressible fluid C. a non viscous fluid D. all of the above</p>
1062	Examples of crystalline solids are:	<p>A. Cooper B. NaCl C. Zirconia D. Both (A) and (B) E. All of these</p>
1063	The dimensions of work	<p>A. $[\text{MLT}^{-1}]$ B. $[\text{MLT}^{-2}]$ C. $[\text{ML}^2\text{T}^{-2}]$ D. $[\text{MLT}]$</p>
1064	Ultraviolet region lies in _____ series	<p>A. Lyman B. Balmer C. P fund D. B racket</p>
1065	Particles have the mass smallest of following is:	<p>A. Electron B. Proton C. Neutron D. Quark</p>
1066		<p>A. Positive charge B. Negative charge</p>

1066	The electric field lines start from	C. Either A or B D. Neutron E. An atom
1067	In wilson cloud chamber, the air becomes saturated with:	A. Alcohol vapours B. Water C. Helium gas D. Nitrogen gas E. None of these
1068	An compared to solid matter, a crack or an air bubble allows:	A. Great amount of X-rays to pass B. Smallest amount of X-rays to pass C. Very samall amount of X-rays to pass D. Any of these E. None of these
1069	When certain nucleus emits an α particle, its mass number:	A. Increases by one B. Decreases by one C. Remain same D. Decreases by four E. None of these
1070	A process in which no heat enters or leaves the system is called	A. isochoric process B. isothermal process C. adiabatic process D. none of them
1071	Which of the following is not a projectile	A. a bullet fired from a gun B. a space ship C. a football in air D. an artillery shell
1072	Fire fighters have a jet attached to the head of their water pipes in order to head of their water pipes in order to	A. Increase the mass of water flowing per second B. Avoid wastage of water C. Increase the velocity of water flowing out D. Increase the volume of water flowing per second
1073	The pressure of gas everywhere inside the vessel will be the same provided the gas is of	A. Non-uniform density B. uniform density C. high density D. low density
1074	The unit of resistivity is	A. ohm B. ohm-m ² C. ohm-meter D. ohm-m ⁻¹
1075	To get a resultant displacement of 10 m, two displacement vectors of magnitude 6 m and 8 m should be combined	A. Parallel B. Antiparallel C. At angle 60° D. Perpendicular to each other
1076	Two progressive waves of frequency 250 Hz are superimposed to produce a stationary wave in which adjacent nodes are 2 m apart. The speed of the progressive waves is.	A. 125 m/se B. 500 m /sec C. 250 m/sec D. 1000 m/sec
1077	The half life of uranium-238 is	A. 6.2×10^9 years B. 4.5×10^9 days C. 4.5×10^9 years D. 1.3×10^6 years
1078	The graph showing the variation of displacement with time is a:	A. Sine curve B. Straight line C. Parabola D. None of these
1079	The work done by a force keeping an object in circular motion with constant speed is:	A. Zero J. B. 0.1 J C. 1 J D. 0.01 J
1080	The work done by the system on its environment is considered as	A. positive B. negative C. zero D. any one of them
1081	The electric field lines start from:	A. Positive charge B. Negative charge C. Either A and B D. Neutron E. An atom
1082	When a falling body hits ground, its KE changes to _____ energy.	A. Potential B. Chemical C. Mechanical D. None of these

1083	A current of 1 ampere is passing through a conductor. The charge passing through it in half a minute s	A. One coulomb B. 0.5 coulomb C. 30 coulombs D. 2 coulombs E. None of these
1084	The maximum drag force on a falling sphere is 9.8 N, it weight is	A. 1 N B. 9.8 N C. 4.9 N D. Cannot be calculated
1085	In transverse waves, the individual particles of the medium move:	A. In circles B. Perpendicular to the direction of level C. Parallel to the direction of level D. None of these
1086	Origin of the electric and the gravitational forces	A. Was known in 1911 A.D. B. Was known in 1811 A.D. C. Was known in 1711 A.D. D. is still unknown E. Was known in 1611 A.D.
1087	Referring to above figure, due to change in current in the coil P, the change in magnetic flux	A. Is associated with coil P B. Is associated with coil S C. Causes and induced current in coil S D. All of these E. None of these
1088	An aircraft is moving with a velocity of 300 ms^{-1} . If all the forces acting on it are balanced, then	A. It still moves with the same velocity B. It will be just floating at the same point in space C. It will be fall down instantaneously D. It will lose its velocity gradually
1089	A signal appears after amplification, at the output terminal with a phase shift of 180° , if it is applied at	A. inverting input B. non-inverting input C. any one of the input terminal D. none of them
1090	A ball is dropped from a height of 4.2 meters. To what height will take it rise if there is no loss of KE after rebounding?	A. 4.2 m B. 8.4 m C. 12.6 m D. none of these
1091	The value of viscosity of a fluid is dependent on (at constant temperature)	A. the fluid itself B. the fluid and its container C. anything in contact with the fluid D. all of the above
1092	The materials in which there are plenty of free electrons for electrical conduction are known as	A. conductors B. insulators C. semi-conductors D. all of them
1093	When the pn-junction is forward biased. the current flows through it is of the order of	A. mili-amperes B. amperes C. nano-amperes D. micro-amperes
1094	If yellow light emitted by sodium lamp in Young's double slit experiment is replaced by blue light of the same intensity	A. Fringe width will decrease B. Fringe width will increase C. Fringe width will remain unchanged D. Fringe will become less intense
1095	A prism splits a beam of white light into seven component colors. This is so because	A. Phase of different colors is different B. Amplitude of different colors is different C. Wavelength of different colors is different D. Velocity of different colors is different
1096	Which of the following diode is used to derive the current in external circuit when light is incident in the circuit	A. photo diode B. light emitting diode C. photo voltaic cell D. none of these
1097	The discuss used by athlete has a mass of 1 kg, its weight in newton is	A. 9.8 N B. 80 N C. 98 N D. 100 N
1098	Coulomb's force between two point charges depends upon	A. Magnitude of charges B. Distance between them C. Medium in which they are located D. All of the above
1099	For inducing emf in a coil the basic requirement is that:	A. Flux should link the coil B. Change in flux should link the coil C. Coil should form a closed loop D. Both B and C are true

1100	Work-energy principle states that work done on the body by applied force is equal to change in:	A. Potential energy B. Kinetic energy C. Linear momentum D. None of these
1101	A resistance used in galvanometer to make it voltmeter is called	A. shunt resistance B. high resistance C. zero resistance D. none of these
1102	The time required for a radioactive material to decrease in active by one half is called	A. half time B. half life C. disintegration time D. mean life
1103	The induced current in a conductor depends upon	A. Resistance of the loop B. Speed with which the conductor moves C. Any of these D. Both A and B E. None of these
1104	The mass of the nucleus is always less than the total mass of the protons and neutron that make up the nucleus. The difference of the two masses is called	A. nuclear fission B. nuclear fusion C. mass defect D. radioactivity
1105	The effects of bends in a wire on its electrical resistance are:	A. <p>Zero</p> B. <p>Much larger</p> C. <p>Larger</p> D. <p>Smaller</p> E. <p>None of these</p>
1106	Which of the following has the greatest coefficient of viscosity?	A. water B. gasoline C. honey D. tar
1107	Work done in lowering a bucket into the well is:	A. Zero B. Positive C. Negative D. None of these
1108	The superposition of the two waves of same frequency and amplitude travelling in the same direction gives to an effect called	A. Diffraction B. Interference C. Polarization D. Dispersion
1109	The information from far side of the universe are gathered by	A. Radio telescope B. Microscope C. Telescope D. Spectro scope
1110	A changing magnetic flux creates around itself	A. An electromotive force B. An electric field (changing electric flux) C. Magnetic field D. None of the above
1111	Electron volt is the unit of.	A. Potential difference B. Energy C. Resistance D. Capacitance
1112	The emitter-base junction of a transistor is forward-biased and collector-base junction is reverse-biased. If the base current is increased, its	A. I_C will decrease B. V_{CE} will increase C. I_C will increase D. V_{CC} will increase
1113	On the p-v diagram, a spark fires the mixture causing a rapid increase in	A. adiabatically B. isothermally

1113	pressure and temperature and the burning mixture expands	C. isochorically D. isobarically A. Transverse waves
1114	Light waves are	B. Longitudinal waves C. Compressional D. None of them wave
1115	Which of these is not a radiation detector	A. Wilson cloud chamber B. cyclotron acceleration C. Geiger Miller counter D. solid state detector
1116	A gas is compressed adiabatically till its temperature is double. The ratio of its final volume to initial volume will be	A. 1/2 B. More than 1/2 C. Less than 1/2 D. Between 1 and 2
1117	If water in a closed bottle is taken up to the moon and opened, the water gets	A. Freeze B. Boiled C. Dissociated into O_2 and H_2 D. Evaporated
1118	In case of metallic conductors, the charge carriers are	A. Protons B. Electrons C. Antiprotons D. Positrons E. Both A and B
1119	In case of point source of light, shape of wavefront is	A. Spherical B. Cylindrical C. Plane D. None of above
1120	The intensity of emitted energy (with wavelength) radiated from a black body at different temperatures was initially measured by:	A. Lummer B. Planck C. Pringsheim D. Both (A) and (B) E. Both (A) and (C)
1121	The stopping voltage for a certain metal is 100 volts, then the work function for the cathode plate is	A. 100 J B. 1.6×10^{-17} J C. 100 eV D. 1.6×10^{-17} eV
1122	When a body moves with a constant speed in a circle:	A. No work is done on it B. No acceleration is produced in the body C. Velocity remains constant D. None of these
1123	The appearance of colours in the soap (or oil) film results from	A. Dispersion B. Interference C. Reflection D. Refraction
1124	Electric field lines emerge from the charge in:	A. <p>One dimension</p> B. <p>Two dimensions</p> C. Three dimensions D. <p>Four dimensions</p> E. <p>None of them</p>
1125	Aluminum is a:	A. <p>Good insulator</p> B. <p>Bad conductor</p> C. Both (A) and (B)

		<p>D. $\frac{1}{2} \times 10^{-18} \text{ s}$</p> <p>E. $\frac{1}{2} \times 10^{-19} \text{ s}$</p>
1126	In a charged capacitor the energy is stored in	<p>A. Both in positive and negative charges</p> <p>B. Positive charges</p> <p>C. The edges of the capacitor plates</p> <p>D. The electric field between the plates</p>
1127	Heating effect caused by an electric circuit is written	<p>A. $H = I^2 R t$</p> <p>B. $H = I^2 R$</p> <p>C. $H = I R^2 t$</p> <p>D. $H = I R^2$</p>
1128	When a wave is travels from one place to another, it transfers:	<p>A. Matter</p> <p>B. Energy</p> <p>C. Momentum</p> <p>D. Both B and C</p>
1129	A long wire wound tightly on a cylindrical core is called:	<p>A. Potentiometer</p> <p>B. Solenoid</p> <p>C. Toroid</p> <p>D. Wheat and stone bridge</p> <p>E. None of these</p>
1130	An LED emits light when it is:	<p>A. Forward biased</p> <p>B. Reverse biased</p> <p>C. Operated without battery</p> <p>D. Operated with heat source</p> <p>E. None of these</p>
1131	In the formula $R = N \times m$ for diffraction grating, N denotes:	<p>A. No. of lines/cm</p> <p>B. No. of lines/meter</p> <p>C. Total number of lines</p> <p>D. None of above</p>
1132	A body can have constant velocity when it follows:	<p>A. A circular path</p> <p>B. A rectilinear path</p> <p>C. Trajectory of a projectile</p> <p>D. None of these</p>
1133	The value of the potential difference across the depletion region for the case of germanium is	<p>A. 0.3 V</p> <p>B. 0.5 V</p> <p>C. 0.7 V</p> <p>D. 0.9 V</p>
1134	Einstein's theory about gravity is better than Newton's because it gave explanation of:	<p>A. Inverse square law</p> <p>B. Bending of light</p> <p>C. Both A and B</p> <p>D. None of above</p>
1135	The useful unit of the angular displacement in SI unit is:	<p>A. Degree</p> <p>B. Revolution</p> <p>C. Radian</p> <p>D. Metre</p>
1136	For measuring large currents, an ordinary galvanometer cannot be used without proper, then both relates with each other as	<p>A. modification</p> <p>B. voltage</p> <p>C. current</p> <p>D. resistance</p>
1137	When the same object is viewed at a shorter distance, the image on the retina of the eye is _____ the so the object appears:	<p>A. Greater, smaller</p> <p>B. Smaller, smaller</p> <p>C. Smaller, larger</p> <p>D. Greater, larger</p>
1138	Centripetal acceleration is also called _____ acceleration:	<p>A. Tangential</p> <p>B. Radial</p> <p>C. Angular</p> <p>D. None of them</p>
1139	The vector representation of force experience give the direction of	<p>A. magnetic field</p> <p>B. current</p> <p>C. length of conductor</p> <p>D. force</p>
1140	Ball pen functions on the principle of	<p>A. Viscosity</p> <p>B. Boyle's law</p> <p>C. Gravitational force</p> <p>D. Surface tension</p>
	Three resistances 500 Ω , 500 Ω and 50 Ω ohms are connected in series across 555 V	<p>A. 0.52 A</p> <p>B. 1 mA</p>

1141	Three resistance 500,500 and 50 ohms are connected in series across 550 volts mains. The current flowing through them will be	B. 1 mA C. 0.7 mA D. 1.4 A
1142	Polymeric solids have	A. low specific gravity B. high specific gravity C. either of them D. none of them
1143	1 gm-cm ⁻³ is equal to:	A. 10 ³ kg-m ⁻³ B. 10 ⁻³ kg-m ⁻³ C. 1 kg-m ⁻³ D. 10 ⁶ kg-m ⁻¹
1144	When brakes are applied to a fast moving car, the passenger will be thrown:	A. Forward B. Backward C. Downward D. none of these
1145	The unit of magnetic flux is	A. Weber-m ² B. Weber-m ³ C. Henry D. Weber
1146	Tick the conservative force	A. Tension in a string B. Air resistance C. Elastic spring D. Frictional force
1147	Resolving power in mth order diffraction for grating is given by:	A. $R = N \times m$ B. None of these C. $R = m/N$ D. $R = N/m$
1148	When heat is added into the system then change in entropy is	A. negative B. positive C. zero D. any one of them
1149	Good absorbers of heat are	A. Poor emitters B. Non emitters C. Good emitters D. Highly polarized
1150	In a metal, the valence electrons are:	A. Attached to individual atoms B. Not attached to individual atoms C. Free to move within the metal D. Both A and B E. Both A and C
1151	Strictly speaking, the earth is:	A. An accelerated frame of reference B. A non-inertial frame of reference C. An inertial frame of reference D. A non-accelerated frame of reference E. Both (A) and (B)
1152	The smallest three dimensional basic structure in a crystalline solid is called	A. lattice point B. crystal lattice C. cubic crystal D. unit cell
1153	The field around a moving charge is called	A. magnetic field B. conservative field C. non-conservative field D. none of these
1154	Where the streamlines are very far apart from each other, the pressure will be	A. low B. zero C. high D. all of them
1155	The path followed by the projectile is known as:	A. Cycle B. Hyperbola C. Trajectory D. Route
1156	Centripetal acceleration is also called _____ acceleration	A. Tangential B. Radial C. Angular D. None of them
1157	The charge carriers in electrolyte are positive and negative	A. protons B. electrons C. ions D. none of these
1158	An electronic computer is basically a vast arrangement of electronic switches which are made from	A. Resistors B. Transistors C. N-type crystals D. P-Type crystals

1159	What will be the ratio of the distance moved by a freely falling body from rest in 4th and 5th seconds of journey?	<p>A. 4 : 5 B. 7 : 9 C. 16 : 25 D. 1 : 1</p>
1160	The current that flows through the coil of a motor causes:	<p>A. <p class="MsoNormal" style="text-align:justify">">Its shaft to revolve<o:p></o:p></p> B. <p class="MsoNormal" style="text-align:justify">">Its brushes to rotate<o:p></o:p></p> C. <p class="MsoNormal" style="text-align:justify">">Motor to move<o:p></o:p></p> D. <p class="MsoNormal" style="text-align:justify">">Its shafts to rotate<o:p></o:p></p> E. <p class="MsoNormal" style="text-align:justify">">None of these<o:p></o:p></p></p>
1161	Velocity of sound in a diatomic as is 300 m/sec. what is its rms velocity?	<p>A. 400 m/sec B. 40 m/sec C. 430 m/sec D. 300 m/sec</p>
1162	In bringing an electron towards another electron, electrostatic potential energy of system	<p>A. Decreases B. Increases C. Remains uncharged D. Becomes zero</p>
1163	Distance covered by a freely falling body in 2 sec will be	<p>A. 4.9 m B. 19.6 m C. 29.2 m D. 44.1 m</p>
1164	The resistance offered by a fluid to a solid moving inside it is called:	<p>A. Drag force B. Surface force C. Viscosity D. None of these</p>
1165	The linear momentum of the body is defined as	<p>A. $p=ma$ B. $p=1/2ma$ C. $p=mv$ D. $p=1/2mv$</p>
1166	An A.C. voltage is applied across the inductor. When the frequency of the voltage is increased, the current	<p>A. Decreases B. Increases C. Does not change D. Momentarily goes to zero</p>
1167	The electric lines of force are	<p>A. Imaginary B. Physically existing everywhere C. Physically existing near the charge D. All of the above</p>
1168	Density of fluid is defined as:	<p>A. Its volume to mass ratio B. Product of volume and mass C. Its mass of volume ratio D. None of these</p>
1169	Electromagnetic waves transport	<p>A. Energy only B. Momentum only C. Both A and B D. None is correct</p>
1170	The un-steady streamline flow is called	<p>A. laminar flow B. turbulent flow C. both of them D. none of them</p>
1171	The device which allows only the flow of an A.C. through a circuit is	<p>A. Capacitor B. Inductor C. D.C. motor D. Battery</p>
		<p>A. one dimension B. two dimension</p>

1172	The motion of a projectile is	<p>B. two dimension</p> <p>C. three dimension</p> <p>D. all of them</p>
1173	Addition of 2.189 kg, 0.089 kg, 11.8 kg, and 5.32 kg gives the rounded off answer as:	<p>A. 19.398</p> <p>B. 19.400</p> <p>C. 19.4</p> <p>D. 19.3</p>
1174	The range of wavelengths of colours in the visible colours is	<p>A. 140 nm to 456 nm</p> <p>B. 10 nm to 56 nm</p> <p>C. 410 nm to 656 nm</p> <p>D. 910 nm to 956 nm</p> <p>E. None of these</p>
1175	In the resonance condition, the amplitude of the oscillator becomes	<p>A. very large</p> <p>B. very small</p> <p>C. zero</p> <p>D. any one of them</p>
1176	In a three phase a.c generator if the first coil has a phase 0, then the other two coils will have phases	<p>A. 90° - 120°</p> <p>B. 20° and 140°</p> <p>C. 120° and 240°</p> <p>D. 120° and 140°</p>
1177	When the atomic particle are moving with velocities approaching that of light:	<p>A. Newton's laws become valid</p> <p>B. Relativistic effects become prominent</p> <p>C. Both(A) and (B) are valid</p> <p>D. Neither (A)nor (B)</p> <p>E. There mass becomes zero.</p>
1178	The sum of positive and negative peak values are usually written as	<p>A. P-P value</p> <p>B. negative</p> <p>C. zero</p> <p>D. may be positive or negative</p>
1179	The branch of physics which is mainly concerned with the motion of bodies under the action of forces is called:	<p>A. Optics</p> <p>B. Mechanics</p> <p>C. Thermodynamics</p> <p>D. Astro physics</p>
1180	The smooth or steady stream-line flow is know as	<p>A. Laminar flow</p> <p>B. Turbulent flow</p> <p>C. Both a and b</p> <p>D. None of the above</p>
1181	the symbol to be used in relativity problems denotes:	<p>A. Dilated time</p> <p>B. Proper time</p> <p>C. Life time</p> <p>D. Half time</p> <p>E. None of these</p>
1182	A cube of metal is given a positive charge Q. For the above system, which of the following statements is true?	<p>A. Electric potential at the surface of the cube is zero</p> <p>B. Electric potential within the cube is zero</p> <p>C. Electric filed is normal to the surface of the cube</p> <p>D. Electric filed varies within the cube</p>
1183	The electric flux is linked with a surface will be maximum when	<p>A. The surface is held parallel to the electric field</p> <p>B. The surface is held perpendicular to the electric field</p> <p>C. The surface makes an angle of 45° with the electric field</p> <p>D. All of the above</p>
1184	Number of supplementary units are	<p>A. Three</p> <p>B. Two</p> <p>C. Seven</p> <p>D. Five</p>
	If the distance between the plates of a parallel plate condenser of capacity	<p>A. $5\mu\text{F}$</p> <p>B. $20\mu\text{F}$</p>

1185	$10\mu\text{F}$ is doubled then new capacity will be	<p>C. $10\mu\text{F}$</p> <p>D. $15\mu\text{F}$</p>
1186	The curve representing an isothermal process is called	<p>A. adiabat</p> <p>B. isotherm</p> <p>C. fixed temperature</p> <p>D. none of them</p>
1187	During the free fall motion of an object, when its weight becomes equal to the drag force, then it will move with	<p>A. maximum speed</p> <p>B. zero speed</p> <p>C. maximum speed</p> <p>D. none of them</p>
1188	The magnitude of the force producing an acceleration of 10 m/sec^2 in a body of mass 500 grams is:	<p>A. 3 N</p> <p>B. 4 N</p> <p>C. 5 N</p> <p>D. 6 N</p>
1189	Unit vector is used to specify:	<p>A. Magnitude of a vector</p> <p>B. Dimensions of a vector</p> <p>C. Direction of a vector</p> <p>D. Position of a vector</p>
1190	If the instantaneous velocity of a body does not change. the body is said to be moving with	<p>A. average velocity</p> <p>B. uniform velocity</p> <p>C. instantaneous velocity</p> <p>D. variable velocity</p>
1191	Unit of impulse in	<p>A. Newton</p> <p>B. Kg m</p> <p>C. Kg m/s</p> <p>D. Joule</p>
1192	In a transistor, collector current is controlled by	<p>A. Collector voltage</p> <p>B. Base current</p> <p>C. Collector resistance</p> <p>D. All of the above</p>
1193	It is possible to recognize a person by hearing his voice even if he is hidden behind a solid wall. This is due to the fact that his voice	<p>A. Has a definite pitch</p> <p>B. Has a definite quality</p> <p>C. Has a definite capacity</p> <p>D. Can penetrate the wall</p>
1194	Coulomb force, when any material medium is placed between two charges	<p>A. Increases</p> <p>B. Decreases</p> <p>C. Remain unchanged</p> <p>D. None of these</p>
1195	Ohm's law states that	<p>A. The current through a resistor is directly proportional to the applied voltage</p> <p>B. The voltage across a resistor is directly proportional to the current passing through it</p> <p>C. Resistance is the constant of proportionality between the voltage and current</p> <p>D. all of these</p>
1196	If the mass of the simple pendulum becomes double, its time period	<p>A. increase</p> <p>B. decreases</p> <p>C. remains constant</p> <p>D. none of them</p>
1197	Equal charges are given to two spheres of different radii. The potential will	<p>A. Be more on the smaller sphere</p> <p>B. Be more on the bigger sphere</p> <p>C. Be equal on both the sphere</p> <p>D. Depend on the nature of the material of the sphere</p>
1198	The conventional current is the name given to current due to flow of	<p>A. Positrons</p> <p>B. Positive charges</p> <p>C. Negative charges</p> <p>D. Both A and C</p> <p>E. None of these</p>
1199	To and fro motion of a body is about its mean position is known as:	<p>A. Translatory motion</p> <p>B. Vibratory motion</p> <p>C. Rotatory motion</p> <p>D. None of these</p>
1200	The total work done in moving the body up and then down through the same height in a gravitational field is equal to:	<p>A. mgh</p> <p>B. Its wight</p> <p>C. Weight X height</p> <p>D. Zero</p>

1201	For addition and subtraction purposes, absolute uncertainties are:	<p>A. Added</p> <p>B. Subtracted</p> <p>C. Multiplied</p> <p>D. Divided</p>
1202	Gaussian surface is always:	<p>A. Rectangular</p> <p>B. Spherical</p> <p>C. Cylinder</p> <p>D. Box shape</p> <p>E. Any of these</p>
1203	When a platinum wire is heated, it appears dull red at about	<p>A. 500°C</p> <p>B. 900°C</p> <p>C. 1100°C</p> <p>D. 1300°C</p>
1204	When the mass of the colliding body is much larger than the mass of the body at rest, its velocity after collision.	<p>A. Becomes half</p> <p>B. Becomes zero</p> <p>C. Remains same</p> <p>D. Becomes double</p>
1205	The speed of randomly moving electrons depends upon	<p>A. pressure</p> <p>B. volume</p> <p>C. temperature</p> <p>D. mass</p>
1206	The efficiency of carnot engine cannot be 100% or one unless cold reservoir is at	<p>A. 100 K</p> <p>B. 273 K</p> <p>C. 0 K</p> <p>D. -273 K</p>
1207	The ratio of the diameter of two convex lenses is _____-the ratio of their focal lengths:	<p>A. Greater than</p> <p>B. Less than</p> <p>C. Equal to</p> <p>D. None of these</p>
1208	A relationship between Gausses of magnetic induction and Tesla(T) is given by	<p>A. $G = 10^{-3} T$</p> <p>B. $G = 10^{-2} T$</p> <p>C. $G = 10^{-4} T$</p> <p>D. $G = 10^{-1} T$</p>
1209	When an electron is accelerated through a P.D. of an one volt, it will acquire energy equal to	<p>A. One joule</p> <p>B. One erg</p> <p>C. One electron volt</p> <p>D. None of these</p>
1210	An inertial frame of reference is that frame of reference in which	<p>A. $\frac{d^2x}{dt^2} = 0$</p> <p>B. $\frac{d^2x}{dt^2} \neq 0$</p> <p>C. $\frac{d^2x}{dt^2} \neq 0$</p> <p>D. all of them</p>
1211	The number of vibrations in two seconds can be expressed as _____if frequency of vibration is f.	<p>A. f</p> <p>B. 2 f</p> <p>C. 3 f</p> <p>D. 1/2 f</p>
1212	Static electricity is produced by the transfer of:	<p>A. <p><p class="MsoNormal"><span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif","Protons<o:p></o:p></p></p></p> <p>B. <p><p class="MsoNormal"><span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif","Protons<o:p></o:p></p></p></p> <p>C. <p><p class="MsoNormal"><span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif","One fluid<o:p></o:p></p></p></p> <p>D. <p><p class="MsoNormal"><span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif","Two fluids<o:p></o:p></p></p></p> <p>E. <p><p class="MsoNormal"><span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman","serif","None of these<o:p></o:p></p></p></p>
1213	The instantaneous velocity is define as the limiting value of $\Delta d/\Delta t$ on the time interval Δt approaches to	<p>A. zero</p> <p>B. maximum</p> <p>C. minimum</p> <p>D. infinity</p>
1214	A body whose momentum is constant must have constant	<p>A. Acceleration</p> <p>B. Velocity</p> <p>C. Force</p> <p>D. None of these</p>
1215	Amplitude in SHM is equivalent to _____ in circular motion:	<p>A. Diameter</p> <p>B. Radius</p>

1215	Amplitude in SHM is equivalent to _____ in circular motion.	C. Circumference D. None of these
1216	The results of spectra obtained by Balmer were expressed in 1896 by:	A. Bohr B. Rydberg C. Planck D. Rutherford E. Coulomb
1217	The relation $V = IR$ represents	A. Ampere law B. Faraday's law C. Ohm's law D. Len's law
1218	An alpha particle is accelerated through a potential difference of 10^6 volt. Its kinetic energy will be	A. 1 MeV B. 2 MeV C. 4 MeV D. 8 MeV
1219	If the distance between two charges is doubled, the force between them will become:	A. Double B. Half C. One third D. One fourth
1220	A device used to measure the speed of liquid flow is known as	A. barometer B. speedometer C. sphygmomanometer D. ventur-meter
1221	A projectile on its path gets divided into two pieces at its highest point. Which is true?	A. Momentum increases B. Momentum decreases C. Kinetic energy increases D. Kinetic energy decreases
1222	The energy is found from Einstein's mass energy relation is called	A. binding energy of electron B. binding energy of proton C. binding energy of neutron D. binding energy of nucleus
1223	If one newton force acts on a body and displaces the body through 1m work done on body is	A. 1 dyne B. 1 joule C. 1KJ D. 1 Watt
1224	The SI unit of electric flux is	A. Weber B. Nm^2/C C. NmC^{-1} D. Nm^{-2}/C
1225	The molecules or ions in a crystalline solids are	A. static B. not static C. randomly moving D. all of them
1226	A galvanometer in which the coil comes to rest quickly after the current passed through it, or the current stopped from flowing through it, is called	A. dead beat galvanometer B. stable galvanometer C. shunt galvanometer D. sensitive galvanometer
1227	The flow of an ideal fluid is	A. streamline flow B. incompressible flow C. non-viscous D. all of the above
1228	When a dielectric material is introduced between the plates of a charged condenser the electric field between the plates	A. Decreases B. Increases C. No change D. May increase or decrease
1229	For the virtual image, option _____ is not correct:	A. $1/p = 1/f - 1/q$ B. $1/f = 1/p - 1/q$ C. $1/p = 1/f - 1/q$ D. $1/p = 1/f + 1/q$
1230	When the velocity of a liquid flowing steadily in a tube increases, its pressure?	A. Decreases B. Increases C. Remains same D. Zero
1231	When the bob of simple pendulum is at extreme position, its K.E. will be	A. maximum B. minimum C. zero D. all of them
1232	Marie Curie and Pierre Curie discovered two new radioactive elements, which are called	A. polonium uranium B. uranium and radium C. polonium and radium D. none of these

1233	The emission of electrons from a metal surface when exposed to light of suitable frequency is called the	<p>A. pair production</p> <p>B. Compton effect</p> <p>C. photoelectric effect</p> <p>D. relativity</p>
1234	An example of photoconductor is:	<p>A. Boron</p> <p>B. Carbon</p> <p>C. Iron</p> <p>D. Aluminum</p> <p>E. Selenium</p>
1235	An atom in which there is a resultant magnetic field, behaves like a tiny magnet and is called as	<p>A. magnetic</p> <p>B. magnetic dipole</p> <p>C. magnetic monopole</p> <p>D. none of them</p>
1236	In case of a parallel plate capacitor if the plate separation is doubled and plate area is halved, the capacitance becomes	<p>A. Four-fold</p> <p>B. One-half</p> <p>C. One-fourth</p> <p>D. Zero</p>
1237	Depletion region contains:	<p>A. Protons</p> <p>B. Positive ions</p> <p>C. Negative ions</p> <p>D. Both (B) and (C)</p> <p>E. Both (A) and (C)</p>
1238	Matter is made up of very tiny particles called	<p>A. Atoms</p> <p>B. Molecules</p> <p>C. Ions</p> <p>D. None of these</p>
1239	A body moves a distance of 10 m along a straight line under the action of a force of 5 N and work done is 25J. the angle which the force makes with the direction of motion will be:	<p>A. 60°</p> <p>B. 90°</p> <p>C. 30°</p> <p>D. 0°</p>
1240	Electron is a particle whose mass is:	<p>A. Greater than that of a proton</p> <p>B. Smaller than of a proton and greater than mass of neutron</p> <p>C. Smaller than that of proton or neutron</p> <p>D. Greater than that of an atom</p>
1241	The decrease in velocity per unit time is called:	<p>A. Variable Acceleration</p> <p>B. Average Acceleration</p> <p>C. Retardation</p> <p>D. None of these</p>
1242	The counter, which also provides the power to the G.M. tube is called:	<p>A. Thin mica window</p> <p>B. thin glass window</p> <p>C. Airy window</p> <p>D. Wooden window</p> <p>E. None of these</p>

1243	If R is gas constant for 1 gram mole, C_p and C_v are specific heat for a solid then	<p>A. $C_p - C_v = R$</p> <p>B. $C_p - C_v < R$</p> <p>C. $C_p - C_v = 0$</p> <p>D. $C_p - C_v > R$</p>
1244	If one of the pipes has a much smaller diameter than the other and are placed horizontally then from both sides of Bernoulli's equation, we can drop the term	<p>A. P</p> <p>B. $\frac{1}{2} \rho v^2$</p> <p>C. ρgh</p> <p>D. none of them</p>
1245	All the valence electrons present in a crystal of silicon are bound in their orbits by	<p>A. Ionic bond</p> <p>B. covalent bond</p> <p>C. Molecular bond</p> <p>D. Both (A) and (B)</p> <p>E. Both (B) and (C)</p>
1246	The projectile motion is composed of	<p>A. horizontal motion only</p> <p>B. vertical motion only</p> <p>C. horizontal and vertical motion</p> <p>D. none of them</p>
1247	A beam of electrons is provided by an	<p>A. electron gun</p> <p>B. Supray</p> <p>C. Injection</p> <p>D. None of these</p>
1248	magnetic field is a:	<p>A. $\vec{B} = \frac{\mu_0}{4\pi} \frac{q \vec{v} \times \vec{r}}{r^3}$ Vector quantity</p> <p>B. $B = \frac{\mu_0}{4\pi} \frac{q v \sin \theta}{r^2}$ Scalar quantity</p> <p>C. $B = \frac{\mu_0}{4\pi} \frac{q v}{r^2}$ Scalar as well as scalar quantity</p> <p>D. $B = \frac{\mu_0}{4\pi} \frac{q v \cos \theta}{r^2}$ Any of (A) or (B)</p> <p>E. Neither (A) nor (B)</p>
1249	Internal energy is the sum of all the forms of	<p>A. K.E</p> <p>B. P.E</p> <p>C. both of them</p> <p>D. none of them</p>
1250	During the positive half-cycle in the half-wave rectification, the diode	<p>A. does not conduct</p> <p>B. conducts</p> <p>C. either of these</p> <p>D. neither of these</p>
1251	A curie represents a very strong source of	<p>A. α-particle</p> <p>B. β-particle</p> <p>C. γ-particle</p> <p>D. none of these</p>
1252	The pressure will be low where the speed of the fluid is	<p>A. Zero</p> <p>B. High</p> <p>C. Low</p> <p>D. Constant</p>
1253	The current produced by moving a loop of wire across a magnetic field is called	<p>A. Direct current</p> <p>B. Magnetic current</p> <p>C. Alternating current</p> <p>D. Induced current</p> <p>E. None of these</p>
1254	Two forces each of the magnitude F act perpendicular to each other. The	<p>A. 30°</p> <p>B. 45°</p>

angle made by the resultant force with the horizontal will be:

initial;">"
C. 60"
D. 90"

1255 One KWh is equal to:

A. 3.6×10^2 J
B. 3.6 KJ
C. 3.6×10^1 KJ
D. 3.6 MJ

1256 The restoring force is always directed towards:

A. Rest position
B. Equilibrium position
C. Mean position
D. All of them

1257 Linear momentum is a

A. fixed quantity
B. constant quantity
C. scalar quantity
D. vector quantity

1258 Resistance is measured in

A. volts
B. ampere
C. ohm
D. watt

1259 When either L or C is increased, the resonant frequency of the RLC series circuit

A. Increases
B. Decreases
C. Remains the same
D. Becomes zero

1260 An Astronaut in space comes to know of an explosion on nearby planet. The astronaut came to know about this explosion because.

A. The astronaut saw, heard and felt the explosion
B. The astronaut only saw the explosion
C. The astronaut only heard the explosion
D. The astronaut both saw and heard the explosion

1261 The principle of superposition states that

A. The total displacement due to several waves is the sum of the displacement due to those waves acting individually
B. Two stationary waves superimpose to give two progressive waves
C. A diffraction pattern consists of many interference patterns superimposed on one another
D. Two progressive waves superimpose to give a stationary wave

1262 Two dissimilar metals joined at their ends kept at constant temperature constitute:

A.

Cell<o:p></o:p></p>
B.

Voltmeter<o:p></o:p></p>
C.

Thermocouple<o:p></o:p></p>
D.

Potentiometer<o:p></o:p></p>
E. None of these

1263 Direction of angular momentum is determined by:

A. Right hand rule
B. Head to tail rule
C. Left hand rule
D. None of them

1264 The first super conductor was discovered in

A. 1811
B. 1890
C. 1901
D. 1911

1265 The basis to define a temperature scale that is independent of material properties is provided by

A. carbon cycle
B. nitrogen cycle
C. Carnot cycle
D. irreversible cycle

A. 100 eV

1266	The energy of a photon in a beam of infrared radiation of wavelength 1240 nm is	<p>A. 100 eV</p> <p>B. $10^{>6}</sup>$ eV</p> <p>C. $10^{>3}</sup>$ eV</p> <p>D. 1.0 eV</p>
1267	The ratio of linear stress/linear strain is called as	<p>A. Yong's modulus</p> <p>B. Bulk modulus</p> <p>C. Shear modulus</p> <p>D. Modulus</p>
1268	When body moves along a circular path with constant speed, it has an acceleration, which is always directed;	<p>A. Along the tangent</p> <p>B. Towards the centre</p> <p>C. Away from the centre</p> <p>D. None of them</p>
1269	When a charged particle passes through matter, it produces ionization, this effect is used in	<p>A. fission reaction</p> <p>B. reactor</p> <p>C. radiation detector</p> <p>D. fusion reaction</p>
1270	Light year is a unit of:	<p>A. Time</p> <p>B. Distance</p> <p>C. Velocity</p> <p>D. Intensity of light</p>
1271	The first shell near the neucles is	<p>A. L-shell</p> <p>B. X-shell</p> <p>C. N-shell</p> <p>D. M-shell</p>
1272	The measure of the deformation in a solid when stress is applied to its is called	<p>A. elastic constant</p> <p>B. young's modulus</p> <p>C. strain</p> <p>D. elasticity</p>
1273	We can excite an atom by	<p>A. Bombardment of particles</p> <p>B. Radiating photons</p> <p>C. Providing potential difference</p> <p>D. All answer are true</p>
1274	If a mass of 10 gm is suspended from a spring of $k = 9.8 \text{ Nm}^{-1}$, then the extension will be:	<p>A. 1 cm</p> <p>B. 1 m</p> <p>C. 10 mm</p> <p>D. None of these</p>
1275	When using optical fiber in data transmission, the angle of incidence θ_i of the light source on the glass fiber should be.	<p>A. Less than critical angle</p> <p>B. Less than angle of refraction</p> <p>C. Greater than critical angle</p> <p>D. Greather than angle of refraction</p>
1276	The conduction band in a solid	<p>A. may be empty</p> <p>B. cannot be empty</p> <p>C. should be filed</p> <p>D. all of them</p>
1277	In the forward biases situation, the current flowing across the p-n junction is a few:	<p>A. amperes</p> <p>B. Milli amperes</p> <p>C. Micro amperes</p> <p>D. Pico amperes</p> <p>E. None of these</p>
1278	Examples of physical quantities are:	<p>A. Length</p> <p>B. Color</p> <p>C. Effect of music</p> <p>D. All of these</p>
1279	Acceleration in a body is always produced in the directin of:	<p>A. Velocity</p> <p>B. Weight</p> <p>C. Force</p> <p>D. Botha B and C</p>
1280	CRO deflects the beam of	<p>A. proton</p> <p>B. a-particle</p> <p>C. electron</p> <p>D. neutron</p>
1281	X-rays produced in a tube operating at 10^5 V . The speed of X-rays produced is	<p>A. $3 \times 10^{>8}</sup>$ m/s</p> <p>B. $3.1 \times 10^{>8}</sup>$ m/s</p> <p>C. $2.8 \times 10^{>8}</sup>$ m/s</p> <p>D. $1.88 \times 10^{>8}</sup>$ m/s</p>
1282	Which of the following does not exhibit S.H.M?	<p>A. a plucked violin string</p> <p>B. a mass attached to a spring</p> <p>C. a train shunting between two terminals</p> <p>D. a simple pendulum</p>
1283	A one microfarad capacitor of a TV is subjected to 4000 V potential difference. The energy stored in capacitor is	<p>A. 8 J</p> <p>B. 16 J</p> <p>C. $4 \times 10^{>-3}</sup>$ J</p> <p>D. $2 \times 10^{>-3}</sup>$ J</p>

1284	The decrease in velocity per unit time is called	A. deceleration B. acceleration C. uniform acceleration D. variable acceleration
1285	Which one of the following is the unit of electric field intensity	A. JC^{-1} B. Vm^{-1} C. Cm^{-1} D. CJ^{-1}
1286	Electromagnetic waves transport:	A. Energy only B. Momentum only C. Both A and B are correct D. None of is correct
1287	The vector is space has:	A. One Component B. Two Components C. Three Components D. Non of these
1288	When the upward drag force of the fluid becomes equal to downward force of gravity of the droplet, then its velocity:	A. Starts increasing B. Starts decreasing C. Becomes constant D. Is called escape velocity
1289	The law of conservation of mass gives us the	A. equation of continuity B. Bernoulli's theorem C. both of them D. none of them
1290	When the temperature of source and sink of a heat engine become equal entropy change will be	A. Zero B. Max C. Min D. -ve
1291	Change in momentum is one second called.	A. Impulse B. Force C. Energy D. Work
1292	When a shall explodes a mid-air, the total momentum of its fragments is	A. less than the momentum of shell B. equal to the momentum of shell C. greater than the momentum of shell D. none of them
1293	The inkjet printer eject a thin stream of:	A. Water B. Oil C. Ink D. Any above E. None of these
1294	Physicist George Simon ohm was a	A. German physical B. French physicist C. Chinese physicist D. Russian physicist
1295	The projectile attains maximum horizontal range when it is projected at an angle of	A. 30° B. 45° C. 60° D. 75°
1296	If we plot graph between potential difference (V) and current (I) obeying ohm's law, it will give us	A. parabola B. straight line C. hyper bola D. ellipse
1297	The henry is the unit for	A. Resistance B. Magnetic flux C. Magnetic field D. Inductance
1298	The ideal gas law is	A. $P = nRT$ B. $V = nRT$ C. $PV = RT$ D. $PV = nRT$
1299	The focal length of convex lens having magnifying power of 5.55 is:	A. 5.5 cm B. 5 cm C. 4.5 cm D. 6 cm
1300	The second law gives the relationship between	A. mass and velocity B. force and acceleration

1300	The second law gives the relationship between	C. velocity and acceleration D. mass and weight
1301	To and from motion of a body about its mean position is known as:	A. Translatory motion B. Vibratory motion C. Rotatory motion D. None of these
1302	The mass of fluid passing through any cross-section per unit time is called	A. electric flux B. magnetic flux C. mass flux D. none of them
1303	The amount of coal used since 1945 up till now as compared to that used in the whole of history before that is	A. Much more B. Very small C. No amount at all D. None of these
1304	When a constant potential difference is applied across the conductor, the drift velocity of electrons:	A. <p>Increases</p> B. <p>Decreases</p> C. <p>Remains the constant</p> D. <p>Either of these</p> E. <p>None of these</p>
1305	If force and displacement are in opposite direction, the work done is taken as:	A. Positive work B. Negative work C. Zero work D. Infinte work
1306	Rutherford performed an experiment on nuclear reactions in:	A. 1718 A.D B. 1818 A.D C. 1918 A.D D. 2001 A.D. E. 1701 A.D.
1307	The year when A.H. compton was awarded Nobel Prize is:	A. 1923 B. 1927 C. 1931 D. 1935 E. None of these
1308	A process is a reversible process, if the entropy of the system	A. increases B. decreases C. remains constant D. none of them
1309	Pair production is the phenomenon in which	A. matter is converted into energy B. energy is converted into matter C. light is converted into electrical energy D. electrical energy is converted into light
1310	A stationary sound wave has frequency 165 Hz (speed of sound in air = 330 m/s) then distance between two consecutive nodes is	A. 2 m B. 1 m C. 0.5 m D. 4 m
1311	In his experiment on nuclear reactions, Rutherford bombarded α particles on:	A. Nitrogen B. Hydrogen C. Lead D. Oxygen E. Krypton
1312	The nature of capacity of electrostatic capacitor depends on	A. Shape B. Size C. Thickness of plates D. Area
1313		A. Motion in a plane B. Motion in a swing

1313	Which one of the following is an example of SHM:	<p>B. Motion in a spring</p> <p>C. Motion in a car</p> <p>D. None of these</p>
1314	We can express the work in term of	<p>A. directly measurable variables</p> <p>B. indirectly measurable variables</p> <p>C. either of them</p> <p>D. both of them</p>
1315	According to the law of conservation of linear momentum, the total linear momentum of an isolated system	<p>A. increases</p> <p>B. decreases with time</p> <p>C. remains constant</p> <p>D. none of them</p>
1316	An ideal choke (used along with fluorescent tube) would be	<p>A. A pure resistor</p> <p>B. A pure capacitor</p> <p>C. A pure inductor</p> <p>D. A combination of an inductor and a capacitor</p>
1317	The number of field lines passing through unit area held perpendicular to the field lines represent:	<p>A. Flux in that region</p> <p>B. Intensity of the field</p> <p>C. Charge</p> <p>D. Area of the region</p> <p>E. None of these</p>
1318	1 amu is equal to.	<p>A. 1.66×10^{-24} kg</p> <p>B. 1.66×10^{-19} kg</p> <p>C. 1.66×10^{-24} kg</p> <p>D. 1.66×10^{-27} kg</p>
1319	Recent studies of ferromagnetism have shown that there exists in ferromagnetic substances small regions called	<p>A. tiny regions</p> <p>B. domains</p> <p>C. vectors</p> <p>D. none of them</p>
1320	The bob of a simple pendulum is suspended by	<p>A. string</p> <p>B. heavy inextensible string</p> <p>C. light extensible string</p> <p>D. light inextensible string</p>
1321	Work done by the force of friction is always	<p>A. Positive</p> <p>B. Zero</p> <p>C. Negative</p> <p>D. Maximum</p>
1322	A metal rod of length 1m is moving at a speed of 1 ms^{-1} in a direction making angle of 30° with 0.5 T magnetic field. The emf produced in the rod is:	<p>A. 0.25 N</p> <p>B. 0.25 V</p> <p>C. 2.5 V</p> <p>D. 2.5 N</p> <p>E. 25 V</p>
1323	In an elevator moving vertically up with an acceleration 'g' the force exerted on the floor by a passenger of mass M is	<p>A. Mg</p> <p>B. $\frac{1}{2}$ Mg</p> <p>C. Zero</p> <p>D. 2 Mg</p>
1324	A black body is	<p>A. an ideal absorber</p> <p>B. an ideal radiator</p> <p>C. both of them</p> <p>D. none of them</p>
1325	When there is no relative motion between the magnet and coil, the galvanometer indicates:	<p>A. No current in circuit</p> <p>B. An increasing current</p> <p>C. A decreasing current</p> <p>D. Either B or C</p>
1326	An emf is set up in a conductor when it	<p>A. Is kept in a magnetic field</p> <p>B. Is kept in an electric field</p> <p>C. Moves across a magnetic field</p> <p>D. Both A and B</p> <p>E. None of these</p>
		<p>A. An electron</p> <p>B. A meson</p>

1327	Three quarks make:	<p>C. A baryon</p> <p>D. A photon</p> <p>E. None of these</p>
1328	The whole shape of the black body spectrum for all wavelengths was explained by the formula proposed by	<p>A. Max plank</p> <p>B. Newton</p> <p>C. Einstein</p> <p>D. J.J. Thomson</p>
1329	The energy of the 4th orbit in hydrogen atom is	<p>A. 2.5 ev</p> <p>B. - 3.5 ev</p> <p>C. -0.85 ev</p> <p>D. -13.6 ev</p>
1330	The earth's potential is taken as	<p>A. Negative</p> <p>B. Positive</p> <p>C. Zero</p> <p>D. Infinite</p>
1331	Gamma rays consist of steam of	<p>A. electron</p> <p>B. proton</p> <p>C. photons</p> <p>D. all of these</p>
1332	The direction of velocity is along the direction of	<p>A. distance</p> <p>B. displacement</p> <p>C. acceleration</p> <p>D. all of them</p>
1333	The charge carriers in gases are	<p>A. electrons</p> <p>B. ions</p> <p>C. protons</p> <p>D. ions and electrons</p>
1334	The curve representing an adiabatic process is called	<p>A. isotherm</p> <p>B. adiabat</p> <p>C. adiabale</p> <p>D. none of them</p>
1335	Rocket engines lift a rocket from the earth surface, because hot gas with high velocity	<p>A. Push against the air</p> <p>B. React against the rocket and push it up</p> <p>C. Heat up the air which lifts the rocket</p> <p>D. Push against the earth</p>
1336	Which force is not a conservative force:	<p>A. Frictional force</p> <p>B. Gravitational force</p> <p>C. Electric force</p> <p>D. Elastic spring force</p>
1337	Blood is an	<p>A. Compressible fluid</p> <p>B. incompressible fluid</p> <p>C. hard</p> <p>D. none of them</p>
1338	By convention, torques producing clockwise rotation are taken as:	<p>A. Positive</p> <p>B. Nagative</p> <p>C. Zero</p> <p>D. None of these</p>
1339	A 10 F capacitor is charged to a potential difference of 50 V and is connected to another uncharged capacitor in parallel. Now the common potential difference becomes 20 volt.The capacitance of second capacitor is	<p>A. $10\mu\text{F}$</p> <p>B. $20\mu\text{F}$</p> <p>C. $30\mu\text{F}$</p> <p>D. $15\mu\text{F}$</p>
1340	Wave disturbances may also come in a concentrated bundle, like shock wave from an aeroplane flying at	<p>A. subsonic speed</p> <p>B. sonic speed</p> <p>C. super sonic speed</p> <p>D. any one of them</p>
1341	If current through conductor is 1 A and length of conductor is 1m placed at right angle to the magnetic field, then the strength of magnetic field is	<p>A. $F = B \times 2$</p> <p>B. $F = 0$</p> <p>C. $F = B$</p> <p>D. $F = B/2$</p>
1342	If the waves produced in a microwave oven are of wave-length 12 cm, then their frequency will be:	<p>A. 2500 MHz</p> <p>B. 0.25 MHz</p> <p>C. 2500 kHz</p>

	their frequency will be.	<p>C. 2000 Hz</p> <p>D. None of these</p>
1343	For production of beats the two sources must have	<p>A. Different frequencies and same amplitude</p> <p>B. Different frequencies</p> <p>C. Different frequencies, same amplitude and same phase</p> <p>D. Different frequencies and same phase</p>
1344	SI unit of impedance is	<p>A. hertz</p> <p>B. henry</p> <p>C. ampere</p> <p>D. ohms</p>
1345	Energy is not carried by	<p>A. Transverse progressive waves</p> <p>B. Longitudinal vibration</p> <p>C. Stationary waves</p> <p>D. Electromagnetic</p>
1346	A tube tapers from 20 cm diameter to 2 cm, the velocity at first cross-section is 50 ms^{-1} then velocity at second cross-section is	<p>A. 5000 cms^{-1}</p> <p>B. 500 cms^{-1}</p> <p>C. 50 cms^{-1}</p> <p>D. 0.5 cm/s</p>
1347	The net force acting on a 100 kg man standing in an elevator accelerating downward with $a = 9.8 \text{ m sec}^{-2}$ comes out to be	<p>A. 980 N</p> <p>B. 580 N</p> <p>C. 1380 N</p> <p>D. Zero</p>
1348	A toy car moves around a circular track of radius 0.3 m at the rate of 120 rev/min. The speed V of the car is:	<p>A. 38 m/sec</p> <p>B. 3.8 m/sec</p> <p>C. 0.6 m/sec</p> <p>D. None of these</p>
1349	In solids, only following type/s of wave can travel:	<p>A. Transverse</p> <p>B. Longitudinal</p> <p>C. Both A and B</p> <p>D. None of them</p>
1350	The rate at which the free electrons pass through any section of a metallic wire from right to left is:	<p>A. <p><p class="MsoNormal" style="text-align:justify">Greater than the speed at which they pass from left to right<o:p></o:p></p></p></p> <p>B. <p><p class="MsoNormal" style="text-align:justify">Less than the speed at which they pass from left to right<o:p></o:p></p></p></p> <p>C. <p><p class="MsoNormal" style="text-align:justify">The same speed at which they pass from left to right<o:p></o:p></p></p></p> <p>D. <p><p class="MsoNormal" style="text-align:justify">Any of above<o:p></o:p></p></p></p> <p>E. <p><p class="MsoNormal" style="text-align:justify">None of them<o:p></o:p></p></p></p>
1351	The charge carriers in an electrolyte are	<p>A. Positive ions</p> <p>B. Negative ions</p> <p>C. Either A or B</p> <p>D. Both A and B</p> <p>E. Neither A nor B</p>
1352	Electrolysis is the study of conduction of electricity through:	<p>A. Solids</p> <p>B. Liquids</p> <p>C. Gases</p> <p>D. Plasma</p>
1353	When certain area A is held parallel to the field lines, then:	<p>A. <p><p class="MsoNormal">">No lines cross this area<o:p></o:p></p></p></p> <p>B. <p><p class="MsoNormal">">Maximum lines pass through this area<o:p></o:p></p></p></p> <p>C. <p><p class="MsoNormal">">The number of lines are between zero and maximum<o:p></o:p></p></p></p>

		<p>imes are between zero and maximum.</p> <p>D. Both (A) and (B) correct</p> <p>E. None of these</p>
1354	No spark plug is needed in	<p>A. petrol engine</p> <p>B. diesel engine</p> <p>C. both of them</p> <p>D. none of them</p>
1355	A P-N junction or semiconductor diode cannot be used as	<p>A. A rectifier</p> <p>B. Detector</p> <p>C. Oscillator</p> <p>D. An amplifier</p>
1356	What temperature is the same on Celsius scale as well as on Fahrenheit scale?	<p>A. 32°C</p> <p>B. -32°C</p> <p>C. -40°C</p> <p>D. -212°C</p>
1357	Total number of base units are	<p>A. Three</p> <p>B. Five</p> <p>C. Seven</p> <p>D. Nine</p>
1358	A charged particle moving at right angle to the magnetic field will experience	<p>A. minimum force</p> <p>B. maximum force</p> <p>C. zero</p> <p>D. moderate force</p>
1359	In the force applied is parallel to the direction of motion, then work done is:	<p>A. Maximum</p> <p>B. Minimum</p> <p>C. Zero</p> <p>D. None of these</p>
1360	The restoring force always directed towards the	<p>A. extreme position</p> <p>B. mean position</p> <p>C. both of them</p> <p>D. none of them</p>
1361	In a building, there are 15 bulbs of 40 watts, 5 bulbs of 100 watts, 5 fans of 80 watts and a heater of 1 kilowatt. The voltage of the electric main is 220 volts. The minimum efficiency of the main fuse of the building will be	<p>A. 0.4 A</p> <p>B. 11.4 A</p> <p>C. 9.8 A</p> <p>D. 10.6 A</p>
1362	The induced current in a conductor depends upon:	<p>A. Resistance of the loop</p> <p>B. Speed with which the conductor moves</p> <p>C. Any of these</p> <p>D. Both A and B</p> <p>E. None of these</p>
1363	The force which opposes the applied force producing the displacement in the spring is called	<p>A. restoring force</p> <p>B. periodic force</p> <p>C. centripetal force</p> <p>D. resistive force</p>
1364	Gauss(G) is smaller unit of magnetic induction which is related to tesla(T) as	<p>A. $1\text{ T} = 10^4\text{ G}$</p> <p>B. $1\text{ T} = 10^5\text{ G}$</p> <p>C. $1\text{ T} = 10^3\text{ G}$</p> <p>D. $1\text{ T} = 10^4\text{ G}$</p>
1365	INTELSAT operates at frequencies 4, 6, 11, 14 having unit of:	<p>A. KHz</p> <p>B. MHz</p> <p>C. GHz</p> <p>D. BHz</p>
1366	Associated with the motion of a driven harmonic oscillator, there is a very striking phenomenon, know as	<p>A. waves</p> <p>B. beat</p> <p>C. interference</p> <p>D. resonance</p>
1367	The work is stored in the inductor as	<p>A. Electric potential energy</p> <p>B. Elastic potential energy</p> <p>C. Magnetic energy</p> <p>D. Absolute potential energy</p>
1368	Some charge is being given to a conductor. Then its potential	<p>A. Is maximum at surface</p> <p>B. Is maximum at centre</p> <p>C. Is remain same throughout the conductor</p>

		D. Is maximum somewhere between surface and centre
1369	You have 20 inductors available each of 15H. You need an inductor of 1H in a circuit. You achieve it by combination.	A. 15 inductor in parallel B. 20 inductor in series C. 20 inductor in parallel D. 15 inductor in series
1370	If a given spring of spring constant k is cut into two identical segments, the spring constant of each segment is:	A. $k/2$ B. $2k$ C. $4k$ D. None of these
1371	When the different streamlines cannot cross each other, then this condition is known as	A. continuity condition B. turbulent flow condition C. steady flow condition D. none of them
1372	The magnifier forms a virtual image of the object at:	A. None of these B. Least distance of distinct vision C. Much farther than the least distance D. Both A and B are correct
1373	Surface tension of water is due to	A. Inter molecular attractions B. Inter molecular spaces C. Inter molecular repulsion D. None of above
1374	Uncertainty is of following type/types:	A. Absolute B. Fractional C. Percentage D. All of these
1375	Two forces each of 10 N act on a body, if the force are inclined at 30° and 60° respectively with x-axis, then x-component of their resultant is:	A. 20 N B. 13.66 N C. 10 N D. 8.66 N
1376	The size of the domain is such that they can contain	A. $10^{2\text{ to }4}$ atoms B. $10^{4\text{ to }8}$ atoms C. $10^{8\text{ to }12}$ atoms D. $10^{12\text{ to }16}$ atoms
1377	The r.m.s. value of alternating current is equal to its maximum value at angle of	A. 60° B. 45° C. 30° D. 90°
1378	The number of vibrating body at any instant from its equilibrium position is called	A. displacement B. frequency C. amplitude D. time period
1379	The liquid which conduct current is known as	A. heating effect B. chemical energy C. electrolyte D. ohm's law
1380	At constant volume temperature is increased. Then	A. Collision on walls will be less B. Number of collisions per unit time will increase C. Collision will be in straight lines D. Collision will not change
1381	Which one of the followings can act approximately as a source of monochromatic light	A. Neon lamp B. Fluorescent tube C. Sodium lamp D. None of these
1382	A typical rocket ejects the burnt gases at speeds over	A. 400 ms^{-1} B. 40000 m s^{-1} C. 40000 ms^{-1} D. 60000 ms^{-1}
1383	Converse of pair production is known as	A. Compton effect B. annihilation of matter C. photoelectric effect D. none of these
1384	Monochromatic light of wavelength λ in vacuum is incident on the surface of glass at an angle θ . Assuming the refractive index of glass is 1.5 the wavelength of the refracted ray in glass is.	A. $\lambda/1.5$ B. λ C. 1.5λ D. There is no refracted ray
1385	One kWh is equal to	A. $3.6 \times 10^2\text{ J}$ B. 3.6 KJ

1385	One Kwh is equal to:	C. $3,6 \times 10^1$ KJ D. 3,6 MJ
1386	If 2.2 kilowatt power is transmitted through a 10 ohm line at 22000 volt, the power loss in the form of heat will be	A. 0.1 watt B. 1 watt C. 10 watt D. 100 watt
1387	There are some whose resistivity becomes zero below a certain temperature, called	A. absolute zero B. 0°C C. critical temperature D. lower fixed point
1388	Balmer series lies in that region of electromagnetic wave spectrum which is called:	A. Visible region B. Invisible region C. Infra-red region D. ultraviolet region E. None of these
1389	If a liquid is heated in weightlessness, the heat is transmitted through	A. Conduction B. Convection C. Radiation D. Neither, because the liquid cannot be heated in weightlessness
1390	Examples of moderators used in a fission reactor is/are:	A. Water B. Heavy water C. Carbon D. Hydrocarbon E. All of these
1391	A dirty carpet is to be cleaned by heating. This is in according with _____ law of motion.	A. First B. Second C. Third D. None of these
1392	Electric field lines emerge from the charges in	A. One dimension B. Two dimensions C. Three dimensions D. Four dimensions E. None of these
1393	Example of vibratory motion is	A. mass suspended from a spring B. a bob of simple pendulum C. mass attached to a spring placed D. all of them
1394	Silicon is one of the most commonly used:	A. conductor B. Dielectric C. Insulator D. Semiconduction E. Both (B) and (C)
1395	Bernoulli's equation is important in the field of	A. Electrical circuit B. Magnetism C. Photoelectric effect D. Flow of fluids
1396	The electric potential at the surface of an atomic nucleus ($Z = 50$) of radius 9.0×10^{-15} is	A. 9×10^5 V B. 9 V C. 8×10^6 V D. 80 V
1397	The SI unit of conductivity is	A. ohm-m B. $\text{ohm}^{-1}\text{m}^{-1}$ C. ohm-m^{-1} D. ohm^{-1}m
1398	The SI unit of electric field intensity is	A. CN^{-1} B. NC^{-1} or Vm^{-1} C. JC^{-1} D. AV^{-1}
1399	Victor de-Broglie received the Nobel prize in physics in	A. 1925 B. 1929 C. 1932 D. 1935
1400	The pattern of crystalline solid is:	A. One dimensional B. Two dimensional C. Three dimensional D. None of these E. Either (A) or (B)
1401	In the equation $E=mc^2$ value of c is:	A. 1,86,000 miles per hour B. 1,86,000 miles per sec C. 3×10^8 m/sec D. 1,86,000 km per sec

		D. Both A and C E. Both B and C
1402	The current sensitivity of the galvanometer is	A. C/BAN B. BAN/C C. CAN/B D. CBNA
1403	If we connect a A.C. volt meter to read A.C. voltage, It would read its:	A. RMS value B. Instantaneous value C. Valued average over a cycle D. Zero E. Both (B) and (C)
1404	Time period of simple pendulum is independent of	A. length B. mass C. acceleration due to gravity D. none of them
1405	Micheal Faraday and joseph Henry belong respectively to:	A. USA and England B. England and France C. England and USA D. USA and France E. None of these
1406	Acceleration of a body is negative if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
1407	When the body is moves against the force of friction on a horizontal plane, the work done by the body is:	A. Positive B. Negative C. Zero D. None of these
1408	Which of the following does not have the same units:	A. Work B. Heat C. Kinetic energy D. Power
1409	In a normally biased n-p-n transistor, an electron c current I_E flows from the	A. emitter into the base B. collector into the base C. base into collector D. none of these
1410	A charge of 0.1 c accelerated through a potential difference of 1000V acquires kinetic energy	A. 200 J B. 100 J C. 1000 J D. 400 J
1411	A wave, which transfer energy by moving away from the source of disturbance is called a	A. progressive wave B. travelling wave C. both of them D. none of them
1412	According to kinetic theory of gases, molecules of a gas behave like	A. Inelastic spheres B. Perfectly elastic rigid sphere C. Perfectly elastic non-rigid spheres D. Inelastic non-rigid spheres
1413	The transition from solid to liquid is actually from:	A. Order to disorder B. Disorder to order C. Order to order D. Disorder to disorder E. None of these
1414	For an atom having atomic number Z and atomic weight A, the charge on the nucleus is	A. A - Z B. A + Z C. Z D. A
1415	An object thrown in arbitrary direction in space with an initial velocity and moving freely under gravity will follow	A. a circular path B. a straight line C. a hyperbola D. a parabola
1416	At higher frequency of the alternating current, the capacitive reactance X_C	A. Increases B. Decreases C. Remains the same D. Increases only when the voltage increases
1417	The waves produced in a microwave oven have wavelength.	A. 12 mm B. 12 cm C. 12 m D. 12 nm
1418	In order to produce pair production, a photon must have a energy	A. 0.511 Me v B. 0.256 Me v C. 1.02 Me v

		D. 0.956 Me v
1419	The distance covered by the wave during one period is called its:	A. Wave number B. Frequency C. Wavelength D. Time period
1420	A current carrying wire loop is placed in between the poles of a magnet as shown in the figure below. The direction of current flow is also shown in the figure with respect to the axis, the wire loop will tend to.	A. Rotate clockwise B. Move at all C. Rotate anti-clock wise D. Move towards magnetic north
1421	Above a certain velocity of a fluid is called	A. turbulent flow B. steady flow C. either of them D. both of them
1422	Triple point of water is	A. 273.16 °F B. 372.16K C. 273.16 °F D. 273.16
1423	The product of force and time is called	A. acceleration B. linear momentum C. angular momentum D. impulse
1424	If the acceleration of a body is negative, then slope of the velocity-time graph will be:	A. Zero B. Positive C. Negative D. Infinity
1425	The closed loop gain of the non-inverting amplifier is given by	A. $G = R_2/R_1$ B. $G = -R_2/R_1$ C. $G = 1 + R_2/R_1$ D. $G = 1 + R_2/R_1$
1426	Escape velocity from surface of Moon as compared to that from Earth surface is:	A. Greater B. Smaller C. Equal D. None of these
1427	The wave motion set up in any medium depends upon:	A. Elasticity B. Inertia C. Density D. All of these
1428	Density is defined as:	A. Mass per volume B. Volume per mass C. Mass X volume D. Mass per length
1429	The ohm's is defined as	A. 1 ampere / 1 volts B. 1 coulomb / 1 volt C. 1 volt / 1 ampere D. 1 volt / 1 coulomb
1430	In case of metallic conductors, the charge carriers are	A. Protons B. Electrons C. Antiprotons D. Positrons E. Both A and B
1431	The inside cavity of the black body is	A. painted white B. painted silver C. blackened with soot D. painted red
1432	Second's pendulum is the pendulum whose time period is:	A. 1 second B. 2 second C. 3 second D. None of these
1433	Slope of velocity time graph represents:	A. Acceleration B. Speed C. Torque D. Work
1434	The number of neutrons in the nucleus of ${}_{92}\text{U}^{235}$ are	A. Infinite B. 92 C. 235 D. 143
1435	Battery is charged in motor cars, which is based on	A. Chemical effect B. Magnetic effect C. Electric effect D. None

		D. None
1436	Acceleration of body executing SHM is always directed towards	A. Extreme position B. Mean position C. Along the direction of motion D. None
1437	The process in which energy is dissipated from the oscillating system is known as	A. resonance B. interference C. diffraction D. damping
1438	In case of constructive interference of two waves, the amplitude of the resultant wave is _____ either of the waves	A. Greater than B. Equal to C. Smaller than D. None of these
1439	The relation between charge 'Q' and current 'I' is given by	A. $Q = I/t$ B. $Q = It$ C. $Q = I \times t^2$ D. $Q = I \times t^2/t$
1440	The electrode connected with the positive terminal of the current source is called	A. cathode B. anode C. electrolyte D. position
1441	Work done is maximum when angle between force and displacement is:	A. 0° B. 90° C. 180° D. None of these
1442	If an iron ball and a wooden ball of the same radius was released from a height 'h' in vacuum, then time taken by both of them to reach ground will be	A. Unequal B. Exactly equal C. Roughly equal D. Zero
1443	When a source of light is at a very large distance, the shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
1444	The force of repulsion between two point charges is F, when these are at a distance 0.1 m apart. Now the point charges are replaced by spheres of radii 5 cm each having the same charge as that of the respective point charges. The distance between their centres is again kept 0.1 m; then the force of repulsion will	A. Increase B. Decrease C. Remain F D. Become $10F/9$
1445	Charge to mass ratio (e/m) of an electron is given by the relation	A. $e/m = 2V/B^2$ B. $e/m = 2V/B^2 r$ C. $e/m = 2V/B^2 r^2$ D. $e/m = V/2B^2 r^2$
1446	When an object moves with a uniform angular velocity, then its instantaneous angular velocity is equal to:	A. Zero B. Its average velocity C. Its angular displacement D. None of these
1447	The value of LDR depends upon intensity of:	A. Sound falling on it B. Current passing through it C. Magnetic field surrounding it D. Light falling on it E. None of these
1448	If the object and its image are located at a distance of 5 cm from the focus of a convex lens, the focal length of the lens will be:	A. 5 cm B. 10 cm C. 20 cm D. 25 cm
1449	A ball is dropped from a certain height and another ball is projected horizontally from the same point. Which of the following statements is correct?	A. Both hit the ground at the same velocity B. Both hit the ground at the same speed C. The change of velocity during the path for both balls is the same D. The change of speed during the path for both balls is the same

		is the same
1450	A device which converts Electrical energy into mechanical energy is called as	A. Transformer B. Generator C. Motor D. All of these
1451	A wire is bent into a ring of radius R is given a charge q. The magnitude of the electrical field at the centre of the ring is	A. Two B. 1/2 C. Zero D. 3/2
1452	The mass of an object will be doubled at speed	A. $1.6 \times 10^{8\frac{1}{2}}$ B. $2.6 \times 10^{8\frac{1}{2}}$ C. $2.6 \times 10^{7\frac{1}{2}}$ D. $2.6 \times 10^{9\frac{1}{2}}$
1453	When quarter of a cycle is completed, the phase of vibration is:	A. 90° B. 180° C. 45° D. 360°
1454	Cosine of an angle is positive in:	A. 2nd quadrant B. 3rd quadrant C. 4th quadrant D. All of these
1455	The unit of conductance is	A. ohm B. meter C. mho D. ohm-meter
1456	A boat of mass 40 kg is at rest, A dog of mass 4 kg moves in the boat with a velocity of 10 m/s. What is the velocity of boat?	A. 4 m/s B. 2 m/s C. 8 m/s D. 1 m/s
1457	Root out of the conventional source of energy:	A. Energy from biomass B. Hydroelectric energy C. Geothermal energy D. None of these
1458	Scalar product is also called:	A. Cross product B. Dot product C. Product scalar D. Product vector
1459	Hydrogen atom with only one proton and one neutron in its nucleus, and one electron, is called	A. deuterium B. protium C. tritium D. none of these
1460	To observe interference of light, the condition, which must be met with is that the sources must be	A. Monochromatic B. Phase coherent C. Both of above D. None of above
1461	If the two charges in Coulomb's law have double distance between them, then electric force	A. Becomes two-fold B. Becomes four-fold C. Remains the same D. None of these
1462	The alternative voltage of current is actually measured by:	A. Its RMS value B. Square root of its mean square value C. Instantaneous value D. Peak value E. Both (A) and (B)
		A. $\frac{4}{5}$

1463	The minimum resistance that can be obtained by connecting 5 resistance of $\frac{1}{4}\Omega$ each is	<p> "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);">Ω B. $\frac{5}{4}$Ω C. 20Ω D. 0.05 Ω </p>
1464	An object is dropped from a height of 100 m. Its velocity at the moment it touches the ground is:	<p> A. 100 m/sec B. 140 m/sec C. 1960 m/sec D. 196 m/sec </p>
1465	The heat required to raise the temperature of one mole of the substance through 1 K is called	<p> A. heat capacity B. specific heat capacity C. molar specific heat D. all of them </p>
1466	The Nobel Prize on the explanation of photoelectric effect was awarded to:	<p> A. Max. Planck B. Maxwell C. Bohr D. Rutherford E. None of these </p>
1467	The SI unit of spring constant is identical with that of:	<p> A. Force B. Surface tension C. Pressure D. Loudness </p>
1468	The maximum possible error in the reading for a meter rod with least count 1 mm is:	<p> A. 0.005 mm B. 0.05mm C. 0.5mm D. 5.0mm </p>
1469	The electric field will be uniform	<p> A. Near a positive point charge B. Near a negative point charge C. Between two oppositely charged parallel metal plates D. None of above </p>
1470	When monochromatic light is allowed to fall on cathode, it begins to emit electrons, these electrons are called	<p> A. thermoionic electrons B. free electrons C. photoelectrons D. slow electrons </p>
1471	The powers of tow electric bulbs are 100 W and 200 W. Both of them are joined with 220 V mains. The ratio of resistances of their filaments will be	<p> A. 1 : 2 B. 2 : 1 C. 1 : 4 D. 4 : 1 </p>
1472	To designate the voltage as low or 0 by a logic gate, the specified minimum value is:	<p> A. 0.2 volt B. 0.8 volt C. 0 volt D. 2.0 volt E. 5.0 volt </p>
1473	The absolute temperature for an ideal gas is	<p> A. directly proportional to the rotational K.E of gas molecules B. directly proportional to the vibrational K.E of gas molecules C. directly proportional to the average translational K.E.of gas molecules D. directly proportional to the P.E. of gas molecules </p>
1474	Shock absorber of the car is an example of	<p> A. resonance B. forced oscillations C. interference D. damped oscillations </p>
1475	A thermistor is a resistor which is:	<p> A. Light Sensitive B. Heat Sensitive C. Sound Sensitive D. All of these E. None of these </p>
		<p> A. 90$^{\circ}$ </p>

1476	When quarter of a circle is completed, the phase of vibration is:	<p>B. 180°</p> <p>C. 45°</p> <p>D. 360°</p>
1477	The average value of current and voltage over a cycle is	<p>A. Positive</p> <p>B. Negative</p> <p>C. Zero</p> <p>D. May be positive or negative</p>
1478	A person standing near the track of a fast moving train has tendency to fall towards it because of	<p>A. Vibration due to motion of train</p> <p>B. Gravitation force of attraction between person and trains</p> <p>C. The high speed of train</p> <p>D. Some other effect</p>
1479	If water rises 4 cm in a long, thin tube because of capillary action, then, under corresponding conditions of use, the rise (in the tube) of a liquid whose density is 2 g/cm^3 will be	<p>A. 1 cm</p> <p>B. 2 cm</p> <p>C. 8 cm</p> <p>D. None</p>
1480	Conversion of chemical energy to electrical energy can be achieved by:	<p>A. Primary cell</p> <p>B. Secondary cell</p> <p>C. Both (A) and (B)</p> <p>D. Photovoltaic cell</p> <p>E. Solar cell</p>
1481	In radio-active decay, the original element which disintegrate to another element is called	<p>A. element</p> <p>B. daughter element</p> <p>C. parent element</p> <p>D. none of these</p>
1482	The electric field due to an infinite long thin wire at a distance R varies as	<p>A. $1/R$</p> <p>B. $1/R^2$</p> <p>C. R</p> <p>D. R^2</p>
1483	The number of different crystals systems based on the geometrical arrangement of their atoms and the resultant geometrical structure are	<p>A. 5</p> <p>B. 7</p> <p>C. 9</p> <p>D. 14</p>
1484	In a normal healthy person the value of systolic pressure is	<p>A. 75 torr</p> <p>B. 80 torr</p> <p>C. 120 torr</p> <p>D. all of them</p>
1485	For a fixed force, larger is the mass of a body the	<p>A. greater is its acceleration</p> <p>B. smaller is its acceleration</p> <p>C. smaller is its weight</p> <p>D. zero is its acceleration</p>
1486	Tick the one which is not a crystalline solid:	<p>A. Zirconia</p> <p>B. Glass</p> <p>C. Copper</p>

		<p>D. Ceramic solid</p> <p>E. An ionic compound</p>
1487	Intensity of light determines the:	<p>A. Energy of each photon</p> <p>B. Number of photons</p> <p>C. Speed of photons</p> <p>D. Size of photons</p> <p>E. None of these</p>
1488	A body moving with an acceleration of 5 m/sec^2 started with velocity of 10 m/sec. What will be the distance traversed in 10 seconds?	<p>A. 150 m</p> <p>B. 250 m</p> <p>C. 350 m</p> <p>D. 400 m</p>
1489	The vast majority of solids are in the form of	<p>A. amorphous structure</p> <p>B. polymeric structure</p> <p>C. crystalline structure</p> <p>D. all of them</p>
1490	Angular momentum	<p>A. Scalar</p> <p>B. Axial vector</p> <p>C. Polar vector</p> <p>D. At 45° angle</p>
1491	The crystalline structure of NaCl is	<p>A. rectangular</p> <p>B. hexagonal</p> <p>C. tetrahedral</p> <p>D. cubical</p>
1492	When two spherical conducting balls at different potentials are joined by a metallic wire, after some time:	<p>A. Both the conductors are at the same potential</p> <p>B. Potential difference across the conductors remain constant</p> <p>C. Potential difference across the conductors becomes zero</p> <p>D. Both (A) and (B)</p> <p>E. Both (A) and (C)</p>
1493	The electric field intensity at a point due to a point charge	<p>A. Falls off inversely as the distance</p> <p>B. Falls off inversely as the square of distance</p> <p>C. Remains unchanged with distance</p> <p>D. Increase directly as square of distance</p>
1494	The temperature at which the vibrations become so great that structure of the Crystal breaks up, is called:	<p>A. Critical temperature</p> <p>B. Temperature of vaporization</p> <p>C. Melting point</p> <p>D. Both (A) and (C)</p> <p>E. Both (A) and (B)</p>
1495	Ferromagnetic substances lose their magnetism when heated above a certain temperature, known as	<p>A. critical temperature</p> <p>B. curie temperature</p> <p>C. high temperature</p> <p>D. fixed temperature</p>
1496	Radioactivity is	<p>A. self disruptive activity</p> <p>B. spontaneous activity</p> <p>C. exhibited by all elements under proper conditions</p> <p>D. both 'a' and 'b'</p>
1497	The graph showing the variation of displacement with time is a	<p>A. Sine curve</p> <p>B. Straight line</p> <p>C. Parabola</p> <p>D. None of these</p>
1498	Moment of inertia depends upon:	<p>A. Mass</p> <p>B. Selection of axis of rotation</p> <p>C. Both of them</p> <p>D. None of these</p>

A. Velocity

1499	Acceleration in a body is always produced in the direction of :	<p>A. Velocity</p> <p>B. Weight</p> <p>C. Force</p> <p>D. Both B and C</p>
1500	According to the Bernoulli's theorem the pressure velocity are	<p>A. equal to each other</p> <p>B. proportional to each other</p> <p>C. inversely proportional to each other</p> <p>D. none of them</p>
1501	The magnitude of the resultant of two forces may be increased by:	<p>A. Increasing the angle between them</p> <p>B. Decreasing the angle between them</p> <p>C. Drawing a triangle to represent them</p> <p>D. None of these</p>
1502	The number of LED'S needed to display all the digits is:	<p>A. Four</p> <p>B. Five</p> <p>C. Nine</p> <p>D. Six</p> <p>E. Seven</p>
1503	In the compton's effect, it is found that the wavelength of incident x-rays is	<p>A. greater than the wavelength of scattered x-rays</p> <p>B. equal to the wavelength of scattered x-rays</p> <p>C. less than the wavelength of scattered x-rays</p> <p>D. any one of these</p>
1504	The work performed on an object does not depend on:	<p>A. Force applied</p> <p>B. Angle at which force is inclined to the displacement</p> <p>C. Initial velocity of the object</p> <p>D. Displacement</p>
1505	The maximum possible error in the reading of an instrument is _____ its least count.	<p>A. Half of</p> <p>B. Quarter of</p> <p>C. Equal to</p> <p>D. Double than</p>
1506	The branch of physics which deals with the structure and properties of solids is called:	<p>A. Plasma physics</p> <p>B. Solid state physics</p> <p>C. Any of above</p> <p>D. Astrophysics</p>
1507	A typical rocket consumes about	<p>A. 100 kg s⁻¹ of fuel</p> <p>B. 1000 kg s⁻¹ of fuel</p> <p>C. 10000 kg s⁻¹ of fuel</p> <p>D. 100000 kg s⁻¹ of fuel</p>
1508	The magnetism produced by electrons within an atom can arise from	<p>A. electrons orbiting the nucleus</p> <p>B. electrons posses a spin</p> <p>C. both motions</p> <p>D. none of these motions</p>
1509	The time taken to complete one vibration is called:	<p>A. Frequency</p> <p>B. Amplitude</p> <p>C. Time</p> <p>D. Time period</p>
1510	The device in which induced emf is statically induced emf is:	<p>A. Transformer</p> <p>B. AC generator</p> <p>C. Alternator</p> <p>D. Dynamo</p>
1511	An L-R circuit has R = 10 Ω and L = 2 H. If 120 V, 60 Hz A.C. voltage is applied, then current in the circuit will be	<p>A. 0.32 A</p> <p>B. 0.16 A</p> <p>C. 0.48 A</p> <p>D. 0.80 A</p>
1512	When a platinum wire is heated, it appears white at	<p>A. 1600°C</p> <p>B. 900°C</p> <p>C. 1100°C</p> <p>D. 1300°C</p>
1513	Work is always done on a body when:	<p>A. A force acts on it</p> <p>B. It moves through certain distance</p> <p>C. None of A or B is correct</p> <p>D. Both A and B is correct</p>
1514	If two bulbs one of 60 W and other of 100 W are connected in parallel, then which one of the following will flow more?	<p>A. 60 W bulb</p> <p>B. 100 W bulb</p> <p>C. Both equally</p> <p>D. None of these</p>
1515	A charge Q is divided into two parts q and Q - q and separated by a distance R. The force of repulsion between them will be maximum when	<p>A. q = Q/4</p> <p>B. q = Q/2</p> <p>C. q = !</p> <p>D. None of these</p>

1516	The temperature scale approved in SI units is:	A. Celsius scale B. Kelvin scale C. Fahrenheit scale D. None of these
1517	Monochromatic light means wave of	A. Same frequency B. Same colour C. Same Wavelength D. All of them
1518	The expression $F \times t$ is called impulse if the time 't' is	A. zero B. very large C. very small D. infinite
1519	The value of the plank's constant 'h' is given by	A. $1.6 \times 10^{-19} \text{ J}$ B. $1.67 \times 10^{-27} \text{ Kg}$ C. $6.63 \times 10^{-34} \text{ Js}$ D. $6.63 \times 10^{-34} \text{ Js}$
1520	Magnetic flux and flux density are related by	A. Flux density = flux x area B. Flux density = flux / area C. Flux density = flux - area D. None of these
1521	The idea of quantization of energy was proposed by:	A. Einstein B. Max. Planck C. Maxwell D. Bohr E. Rutherford
1522	The shell closer to the nucleus is called:	A. N shell B. L shell C. K shell D. M shell E. O shell
1523	Conversion of alternating current into direct current is called	A. amplification B. rectification C. conduction D. polarization
1524	1 J = _____ ?	A. 10^7 erges B. 10^{-7} erges C. 10^5 erges D. 10^{-5} erges
1525	The force experienced by a single charge carrier moving with velocity 'v' i magnetic field of strength 'B' is given by	A. $F = q(v/B)$ B. $F = q \times 2(v \times B)$ C. $F = q(v \times B)$ D. $F = vx B$
1526	A parallel plate capacitor is first charged and then a dielectric slab is introduced between the plates. The quantity that remains unchanged is	A. Charge Q B. Potential V C. Capacity D. Energy U
1527	A magnifier gives an image which is:	A. Virtual, inverted B. Real, erect C. Virtual, erect D. Real, inverted
1528	The direction of a vector in space requires:	A. X-axis B. X and Y-axes C. XYZ axes D. Y and Z-axes
1529	Swimming becomes possible because of _____ law of motion:	A. First B. Second C. Third D. None of these
1530	Resonance occurs when one of the natural frequencies of vibration of the forced or driven harmonic oscillator	A. greater than the frequency of applied force B. equal to the frequency of applied force C. less than the frequency of applied force D. all of them
1531	Huygen's theory cannot explain	A. Diffraction B. Interference C. Polarization D. Photoelectric effect
1532	In case of streamed lined flow of liquid, the loss of energy is	A. Maximum B. Minimum C. Infinite D. equal to what is in turbulent flow
1533	The current in microamperes required to produce one millimeter deflection	A. ammeter B. voltmeter

1533	on a scale placed one meter away from the mirror of the galvanometer, defined the sensitivity of	<p>C. galvanometer</p> <p>D. avo-meter</p>
1534	Amplitude is the displacement of the vibrating body from:	<p>A. One extreme position to the other extreme position</p> <p>B. Mean position any one extreme position</p> <p>C. Both A and B are correct</p> <p>D. None of these</p>
1535	If a wave can be polarized, it must be	<p>A. An electromagnetic wave</p> <p>B. A longitudinal wave</p> <p>C. A progressive wave</p> <p>D. A transverse wave</p>
1536	The heat required to raise the temperature of one mole of the gas through 1 K at constant volume is called	<p>A. heat capacity</p> <p>B. specific heat capacity</p> <p>C. molar specific heat</p> <p>D. molar specific heat at constant volume</p>
1537	A body is moving through a viscous medium eventually comes to rest because of:	<p>A. Force of gravity</p> <p>B. Force of friction</p> <p>C. Its weight</p> <p>D. Both A and C</p>
1538	Laws of reflection and refraction can also be explained by	<p>A. Particle nature of light</p> <p>B. Quantum nature of light</p> <p>C. Wave nature of light</p> <p>D. Complex nature of light</p>
1539	According to Stokes's law, drag force depends on	<p>A. Radius of the spherical body</p> <p>B. Terminal velocity of body</p> <p>C. Coefficient of viscosity</p> <p>D. All of above</p>
1540	The Space around the Earth within which it exerts a force of attraction on other bodies is known as	<p>A. Nuclear field</p> <p>B. Conservative field</p> <p>C. Electric field</p> <p>D. Gravitational field</p>
1541	A certain force gives an acceleration of 2 m/sec^2 to a body mass 5 kg. The same force would give a 20 kg object an acceleration of:	<p>A. 0.5 m/sec^2</p> <p>B. 5 m/sec^2</p> <p>C. 1.5 m/sec^2</p> <p>D. 9.8 m/sec^2</p>
1542	If a process cannot be retraced in the backward direction by reversing the controlling factors, it is	<p>A. a reversible process</p> <p>B. an irreversible process</p> <p>C. any one of them</p> <p>D. both of them</p>
1543	The highest value reached by the voltage or current:	<p>A. In quarter cycle is called Instantaneous value</p> <p>B. In half cycle is called peak-to-peak value</p> <p>C. In one cycle is called peak value</p> <p>D. In half cycle is called Instantaneous value</p> <p>E. None of these</p>
1544	Area under the force displacement graph gives	<p>A. Power</p> <p>B. Work</p> <p>C. Heat</p> <p>D. Energy</p>
1545	Thermocouple is an arrangement of two different metals	<p>A. To convert heat energy in to electrical energy</p> <p>B. To produce more heat</p> <p>C. To convert heat energy into chemical energy</p> <p>D. To convert electric energy in to heat energy</p>
1546	The total number of lines of magnetic induction passing through a surface perpendicular to the magnetic field is called	<p>A. magnetic flux</p> <p>B. magnetic flux density</p> <p>C. magnetic induction</p> <p>D. magnetic field intensity</p>
1547	A vehicle of mass 120 kg is moving with a uniform velocity of 108 km/h. The force required to stop the vehicle in 10s is	<p>A. $120 \times 10.8 \text{ N}$</p> <p>B. 180 N</p> <p>C. 720 N</p> <p>D. 360 N</p>
1548	A body is executing free vibrations when it oscillates	<p>A. with the interference of an external force</p> <p>B. without the interference of an external force</p> <p>C. with the interference of an internal force</p> <p>D. none of them</p>
1549	If the focal length of the convex lens is 5 cm, then to get the real and inverted image of the same size as that of object, the object should be placed at:	<p>A. 5 cm</p> <p>B. 20 cm</p> <p>C. 10 cm</p> <p>D. 15 cm</p>
1550	When the pn-junction is in reversed biased, current flows through the junction due to the	<p>A. majority carriers</p> <p>B. minority carriers</p> <p>C. either of them</p> <p>D. none of them</p>

1551	In a capacitive circuit	<p>A. Current leads voltage by phase of $\pi/2$</p> <p>B. Voltage leads current by phase of $\pi/2$</p> <p>C. Current and voltage are in same phase</p> <p>D. Sometime current and sometime voltage leads</p>
1552	A field in which the work done is moving a body along closed path is zero is called:	<p>A. Nuclear field</p> <p>B. Conservative field</p> <p>C. Gravitational field</p> <p>D. Non-conservative field</p>
1553	The length contraction happens only	<p>A. Opposite to the direction of motion</p> <p>B. along the direction of motion</p> <p>C. perpendicular to the direction of motion</p> <p>D. In any direction</p>
1554	In a metal, the valence electrons are:	<p>A. Attached to individual atoms</p> <p>B. Not attached to individual atoms</p> <p>C. Free to move within the metal</p> <p>D. Both (A) and (C)</p> <p>E. Both (B) and (C)</p>
1555	The vertical and horizontal range will be equal if angle of projection is	<p>A. 76°</p> <p>B. 45°</p> <p>C. 60°</p> <p>D. 120°</p>
1556	The blood pressure of a person	<p>A. decrease with age</p> <p>B. increase with age</p> <p>C. has no effect with age</p> <p>D. none of them</p>
1557	A real gas can be approximated to an ideal gas at	<p>A. Low density</p> <p>B. High pressure</p> <p>C. High density</p> <p>D. Low temperature</p>
1558	In Bernoulli's theorem the relation between velocity and pressure is	<p>A. Inverse</p> <p>B. Direct</p> <p>C. None of the above</p> <p>D. Both a and b</p>
1559	At what temperature the adiabatic change is equivalent to the isothermal change?	<p>A. Zero degree Celsius</p> <p>B. Zero Kelvin</p> <p>C. Critical temperature</p> <p>D. Above critical temperature</p>
1560	Light waves are:	<p>A. Transverse wave</p> <p>B. Longitudinal wave</p> <p>C. Compressional wave</p> <p>D. None of them</p>
1561	In magnet-coil experiment, emf can be produced by	<p>A. Keeping the coil stationary and moving the magnet</p> <p>B. Keeping the magnet stationary and moving</p> <p>C. Relative motion of the loop and magnet</p> <p>D. Any one of above</p> <p>E. All above</p>

1562	Within each domain, the magnetic field of all the spinning electrons are	A. parallel B. antiparallel C. perpendicular D. all of them
1563	The direction of induced current is always so as to oppose the cause which produces it. This is	A. Lenz's law B. Ampere's law C. Faraday's law D. Coulomb's law E. None of these
1564	The angular speed of a particle moving along a circular path is 5π rad sec^{-1} , Its period of motion is:	A. 2.5 sec B. 0.06 sec C. 15.7 sec D. 0.4 sec
1565	Density of oxygen is about 16 times that of hydrogen therefore if speed of hydrogen is x, then speed of oxygen.	A. Greater than x B. The same C. Less than x D. Depending upon the pressure of gases
1566	Flux through a closed surface of any shape and flux through the surface of a sphere drawn around a charge are:	A. <p>different</p> B. <p>same</p> C. <p>Such that it is greater in the first case</p> D. <p>Such that it is greater in the second case</p> E. <p>None of these</p>
1567	During the whole carnot cycle	A. Thermal equilibrium is maintained B. mechanical equilibrium is maintained C. both the thermal and mechanical equilibrium is maintained D. both the thermal and mechanical equilibrium is not maintained
1568	Balmer series was identified in:	A. 1685 B. 1785 C. 1885 D. 1985 E. 1585
1569	Position and momentum of a particle cannot both be measured simultaneously with perfect accuracy. This is the statement of	A. photoelectric effect B. pair production C. Compton effect D. uncertainty principle
1570	The results of mechanical tests are usually expressed in terms of	A. stress B. strain C. stress and strain D. neither stress nor strain
1571	Each atom in metal crystal:	A. Remains fixed B. Vibrates about a fixed point C. Moves randomly D. Rotates about center of a crystal E. None of these
1572	In a semi-conductor material, the total current is	A. only the +ve current B. only the electronic current C. sum of +ve and electronic current D. all of them
1573	Which of the following represents an electric current?	A. $C \times 10^{-1}$ B. $C \times 10^{-1}$ C. $J \times 10^{-1}$ D. $\text{dynes} \times 10^{-1}$
		A. <p>Be zero</p> B. <p></p>

1574	In order to have a constant current through wire, the potential difference across its end should:	<p>B. Be maintained constant</p> <p>C. Goes on increasing</p> <p>D. Go on decreasing</p> <p>E. Both (A) and (B)</p>
1575	The pattern of NaCl particles have a shape which is :	<p>A. Cubic</p> <p>B. Body centred cubic</p> <p>C. Simple cubic</p> <p>D. face centred</p> <p>E. Both (A) and (C)</p>
1576	Stoke;s law is not applicable when the speed of the object moving through a fluid is:	<p>A. Zero</p> <p>B. Small</p> <p>C. Large</p> <p>D. None of these</p>
1577	If the slope of the velocity-time graph increases at constant rate with time, then the body is said to have	<p>A. uniform deceleration</p> <p>B. uniform negative acceleration</p> <p>C. average acceleration</p> <p>D. uniform positive acceleration</p>
1578	A body moves a distance of 10 m along a straight line under the action of a force of 5 N and work done is 25J. The angle which the force makes the direction of motion will be:	<p>A. 60°</p> <p>B. 90°</p> <p>C. 30°</p> <p>D. 0°</p>
1579	The center of mass of a sphere lies at:	<p>A. The axis of the sphere</p> <p>B. Circumference of sphere</p> <p>C. Center of the sphere</p> <p>D. None of them</p>
1580	A.C. can be measure with the help of	<p>A. Nuclear effect</p> <p>B. Magnetic effect</p> <p>C. Chemical effect</p> <p>D. Heating effect</p>
1581	The sum of positive and negative peak values is called:	<p>A. Instantaneous value</p> <p>B. Peak value</p> <p>C. Rms value</p> <p>D. Peak-to peak-value</p> <p>E. None of these</p>
1582	Resistance of a conductor depends upon	<p>A. the quantity of current passing through it</p> <p>B. the voltage applied between its end</p> <p>C. its dimensions, physical state and nature of its material</p> <p>D. all of the above</p>
1583	In circuit X, L = 100 mH and C= 100 meo F are attached in series. In circuit Y, L=100 mH and C= 10 meo G are attached in parallel. The resonating frequency fx and fy are related	<p>A. $f_x = f_y$</p> <p>B. $f_x = 10 f_y$</p> <p>C. $f_x = 0.01 f_y$</p> <p>D. Cannot be determined</p>
1584	Relative humidity is	<p>A. absolute</p> <p>B. relative</p>

1584	The concept of direction and position are purely	C. Relative C. absolute or relative D. none of these
1585	The unit of work function is:	A. Joule B. Electron volt C. That of threshold frequency D. Both (A) and (B) E. None of these
1586	Experiments revealed that the ratio of the stress to the strain is a constant value for	A. different material B. all materials C. a given material D. all of them
1587	Ethanol (alcohol) is a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
1588	Acceleration produced in a body by a force varies	A. inversely as the applied force B. directly as the applied force C. directly as the mass of the body D. none of them
1589	The types of mechanical energy is/are:	A. Kinetic energy B. Potential energy C. Both of these D. None of these
1590	If speed of electron is 5×10^5 m/s. How long does it take one electron to transverse 1 m?	A. $1 \times 10^{>6</sup>}$ B. $2 \times 10^{>6</sup>}$ C. $2 \times 10^{>5</sup>}$ D. $1 \times 10^{>5</sup>}$
1591	If a force of 0.05 N produces an elongation of 20 mm in string, then its spring constant will be:	A. $250 \text{ N m}^{>-1</sup>}$ B. $25 \text{ N m}^{>-1</sup>}$ C. $2.5 \text{ N m}^{>-1</sup>}$ D. None of these
1592	The motional e.m.f depends upon the	A. Length of a conductor B. Strength of a magnet C. Speed of the conductor D. All of the above
1593	The property of light which does not change with the nature of the medium is:	A. Frequency B. Amplitude C. Wavelength D. None of these
1594	The r.m.s value of a.c. current is always	A. positive B. negative C. zero D. all of these
1595	In all natural processes where heat flows from one system to another, there is always a net	A. decrease in entropy B. increase in entropy C. decrease or increase in entropy D. none of them
1596	The photocopying process is called:	A. Geography B. Sonography C. Xerography D. Zerography E. None of these
1597	The number of translation degree of freedom for a diatomic gas is	A. 2 B. 3 C. 5 D. 6
1598	Alternating current is produced by a voltage source which polarity:	A. Remains the same B. Reverse after period T C. Keeps on reversing with time D. Reverse after every time interval T/2 E. Both (C) and (D)
1599	Work is a scalar product of	A. Force, Velocity B. Velocity, Displacement C. Force, Displacement D. Force, Momentum
1600	The concept of direction is purely:	A. Absolute B. Relative C. Relative to stars always D. Relative to the sun always E. None of these
		A. Majority carriers B. Minority Carriers

1601	The reverse saturation current in a PN junction diode is only due to	<p>B. minority carriers</p> <p>C. Acceptor ions</p> <p>D. Donor ions</p>
1602	The displacement coincides with the path of the motion when a body moves is a	<p>A. curved line</p> <p>B. straight line</p> <p>C. may be curved or straight</p> <p>D. none of them</p>
1603	High energy physics is branch of physics, which deals with:	<p>A. Stars and galaxies</p> <p>B. Sub-atomic particles</p> <p>C. Light and sound</p> <p>D. Molecules</p>
1604	The location and speed anywhere on earth can now be determined using relativistic effects by NAVISTAR to an accuracy of	<p>A. 2 cm/s</p> <p>B. 20 cm/s</p> <p>C. 200 cm/s</p> <p>D. 2000 cm/s</p>
1605	When a positron comes close to an electron they annihilate into photons such that	<p>A. each photon has energy 0.51 MeV</p> <p>B. each photon has energy 1.02 MeV</p> <p>C. each photon has energy 0.25 MeV</p> <p>D. none of these</p>
1606	Absolute temperature can be calculated by	<p>A. Mean square velocity</p> <p>B. Motion of the molecule</p> <p>C. Both A and B</p> <p>D. None of these</p>
1607	Which of the following is not a unit of power:	<p>A. J-sec</p> <p>B. Watt</p> <p>C. N m/sec</p> <p>D. Horsepower</p>
1608	The materials in which valence electrons are bound very tightly to their atoms and are not free, are known as	<p>A. conductors</p> <p>B. insulators</p> <p>C. semi-conductors</p> <p>D. all of them</p>
1609	A body absorbs heat at a constant temperature, then this phenomenon will be.	<p>A. Melting point</p> <p>B. Evaporation</p> <p>C. Boiling point</p> <p>D. Both A and B</p>
1610	A piece of fuse wire melts when a current of 15 ampere flows through it. With this current. If it dissipates 22.5 W, the resistance of fuse wire will be	<p>A. Zero</p> <p>B. $10\sqrt{3}\ \Omega$</p> <p>C. $1\sqrt{3}\ \Omega$</p> <p>D. $0.1\sqrt{3}\ \Omega$</p>
1611	When a silicon crystal is doped with a pentavalent element, such an extrinsic semi-conductor is called	<p>A. p-type semi-conductor</p> <p>B. n-type semi-conductor</p> <p>C. either of them</p> <p>D. none of them</p>
1612	For making cooking utensils, which of the following pairs of properties is most suited?	<p>A. Low specific heat and high conductivity</p> <p>B. Low specific heat and low conductivity</p> <p>C. High specific heat and high conductivity</p> <p>D. High specific heat and low conductivity</p>
1613	According to Huygen's principle	<p>A. light travels in straight line</p> <p>B. Light is a transverse wave</p> <p>C. Light has dual nature</p> <p>D. All points on the primary wave-front are the sources of secondary wavelets</p>
1614	Referring to above figure, current in coil P falls from its maximum value to zero:	<p>A. At the instant the switch is closed</p> <p>B. At the instant the switch is opened</p> <p>C. When switch is kept open</p> <p>D. When switch is kept closed</p> <p>E. None of these</p>
1615	Transmitting antenna emits	<p>A. Magnetic waves</p> <p>B. Electric waves</p> <p>C. Electromagnetic waves</p> <p>D. Sound waves</p>
1616	Two metal rods A and B have their initial lengths in the ratio 2 : 3 and coefficients of linear expansion in the ratio 4 : 3. When they are heated through same temperature difference the ratio of their linear expansion is	<p>A. 1 : 2</p> <p>B. 2 : 3</p> <p>C. 3 : 4</p> <p>D. 8 : 9</p>

1617	A body is moving with constant velocity of 10 m/sec in the north-east direction. Then its acceleration will be:	A. 10 m/sec ² B. 20 m/sec ² C. 30 m/sec ² D. Zero
1618	Weber is a unit of	A. magnetic flux B. magnetic field intensity C. magnetic induction D. magnetic flux density
1619	The motion in a plane is the motion in	A. one dimension B. two dimension C. three dimension D. four dimension
1620	Graphs which are used to illustrate the variation of velocity of an object with time are called	A. distance time graphs B. speed time graphs C. velocity time graphs D. acceleration time graphs
1621	If 2.2 kilowatt power is transmitted through 1 10 ohm line at 22000 volt, the power loss in the form of heat will be	A. 0.1 watt B. 1 watt C. 10 watt D. 100 watt
1622	The potential difference across the conductors should be maintained constant by connecting the ends of wire to the terminal of a device called a source of	A. power B. current C. resistance D. temperature
1623	The phenomenon of generation of induced emf is called:	A. Electrostatic induced B. Magnetic induced C. Electromagnetic induced D. Electric induced E. Both A and C
1624	Which one of the following is dimensionless:	A. Acceleration B. Velocity C. Density D. Angle
1625	The magnifier forms a virtual image of the object at:	A. None of these B. Both A and B are correct C. Much farther than the least distance D. Least distance of distinct vision
1626	Inertial frame of references are those frame of references which are moving with	A. increasing velocity B. decreasing velocity C. constant velocity D. all of them
1627	Magnetic flux passing through a element whose vector area makes an angle θ with lines of magnetic force is:	A. $BA \cos \theta$ B. Zero C. BA D. $BA \sin \theta$ E. None of these
1628	A labourer carrying a distance a load on his head moves from rest on a horizontal road to another point where he comes to rest. He has done:	A. Minimum work B. Maximum work C. Zero work D. Negative work
1629	A rotating body tends to be slower, when its angular acceleration is:	A. Positive B. Negative C. Zero D. Infinity
1630	When brakes are applied to a fast moving car, the passengers will be thrown:	A. Forward B. Backward C. Downward D. None of these
1631	The spectrum emitted from hydrogen filled discharge tube is:	A. Line spectrum B. Discrete spectrum C. And spectrum D. Absorption spectrum

E. Both (A) and (B)

1632	If A represents linear momentum and c, the velocity of light, then unit of pc in international system of units is:	A. Newton B. Joule C. Joule-Sec D. Joule-s ⁻¹ E. Watt
1633	A convex lens acts as diverging lens when the object is placed:	A. Beyond 2F B. At 2F C. With focal length D. Between F and 2F
1634	The highest efficiency of a heat engine whose low temperature is 17°C and the high temperature is 200°C is	A. 70% B. 100% C. 35% D. 38%
1635	When the emitter-base junction of a transistor is reverse biased, collector current	A. Reverses B. Increases C. Decreases D. Stops
1636	The amplitude of oscillation of each atom in a metallic crystal rises with the	A. rise in temperature B. decrease in temperature C. even temperature remains constant D. all of them
1637	Which of the following is not thermo dynamical function?	A. Enthalpy B. Work done C. Gibb's energy D. Internal energy
1638	The time of flight of a projectile motion equal to	A. half of the time to reach maximum height B. twice the time to reach maximum height C. one fourth of time to reach maximum height D. time to reach maximum height
1639	The energy acquired by a mass of 1g moving with the speed of light is	A. 3×10^{18} J B. 9×10^{13} J C. 3×10^{13} J D. 9×10^{16} J
1640	Aerodynamics is a branch of:	A. Hydrodynamics B. Thermodynamics C. Both of them D. Statics
1641	Which quantity is important in stating the entropy of the system	A. initial entropy B. final entropy C. change in entropy D. none of them
1642	The threshold frequency of sodium is 6×10^6 MHz. The cut-off wavelength for this metal will be	A. 500 m B. 500 nm C. 500 km D. 500 cm E. None of these
1643	The first series which was identified in the spectrum of hydrogen is called:	A. Lyman series B. Balmer series C. Paschen series D. Brackett series E. Pfund series
1644	A mass of 5kg moves with an acceleration of 10 m s^{-2} force applied is	A. 10 N B. 50 N C. 2 N D. 20 N
1645	Surface density of charge is defined as	A. Charge per unit volume B. Charge per unit length C. Charge per unit area D. Charge per unit mass
1646	If one end of a rubber cord is fixed with a support and the other end is wiggled by hand, the waves generated on the cord are:	A. Stationary waves B. Transverse waves C. Both of these D. None of these

A. Positrons
B. Positive charges
C. Positive charges

1647	The conventional current is the name given to current due to flow of:	<p> Negative charges </p> <p> Both (A) and (C) </p> <p> None of these </p>
1648	The value of output resistance of OP-AMOP is of the order of	<p> A. few ohms B. few hundred ohms C. several kilo ohms D. several mega ohms </p>
1649	A current carrying conductor is placed at right angle to the magnetic field. The magnetic force experienced by the conductor is	<p> A. minimum B. maximum C. zero D. none of these </p>
1650	Rice takes longest to cook	<p> A. In a submarine 100 m below the surface of the sea B. At sea level C. At Murree D. At Mount Everest </p>
1651	Frequency of red color as compared to that of violet color is:	<p> A. Equal B. Smaller C. Greater D. None of these </p>
1652	The restoring force is _____ and opposite to the applied force within _____.	<p> A. Equal, elastic limit B. Different, the walls of the laboratory C. Different, elastic limit D. None of these </p>
1653	β -particles are easily deflected by collisions than heavy	<p> A. α-particles B. β-particles C. γ-particles D. none of these </p>
1654	Which of the following is an example of SHM(in ideal situations)	<p> A. Motion of simple pendulum B. Motion of horizontal spring man system C. Motion of violin string D. All of these </p>
1655	The value of current gain of n-p-n transistor is of the order of	<p> A. tens B. hundreds C. thousands D. ten thousands </p>
1656	The power of an electric generating station is expressed in:	<p> A. Kilo Jule B. Kilowatt-hour C. Kilo watt D. Watt </p>
1657	A train cover 90 km in half an hour. the time taken by it to travel 15 km will be:	<p> A. 20 minutes B. 48 minutes C. 10 minutes D. 5 minutes </p>
1658	Specific heat at constant pressure is greater than the specific heat at constant volume because	<p> A. Heat is used up to increase temperature at constant pressure B. Heat is used by gas for expansions purposes at constant pressure C. Heat is use dup to increase internal energy D. The above statement is invalid </p>
1659	When a body moves along a circular path with constant speed, it has an acceleration, which is always directed	<p> A. Along the tangent B. Towards the centre C. Away from the centre D. None of them </p>
1660	The information from far side of the universe are gathered by:	<p> A. Radio telescope B. Microscope C. Telescope D. Spectro scope </p>
1661	While deriving equation of pressure by kinetic theory of gases, we take into account:	<p> A. Only linear motion of molecules B. Only rotational motion C. Only vibratory motion D. All of these </p>

		D. All of these
1662	The unit of induced emf is:	A. Volt B. Nm/As C. Joule coul ⁻¹ D. Both A and C E. All of these
1663	Which of the following material has smaller has life	A. uranium B. polonium C. radium D. radian
1664	In a transistor, the central region is called	A. collector B. emitter C. base D. none of them
1665	Compton derived an expression to find compton shift by applying to the process, the law of conservation of:	A. Energy only B. Momentum only C. Mass only D. Charge only E. Both (A) and (B)
1666	A bar 1.0 m in length and located along x-axis moves with a speed of 0.75 c with respect to a stationary observer. The length of the bar as measured by the stationary observer is	A. 1.66 m B. 1.0 m C. 0.66 m D. 2.66 m
1667	The whole structure obtained by the repetition of unit cells is called:	A. Crystal lattice B. Amorphous solid C. Polymeric solid D. Polysterne E. None of these
1668	The chemical properties of all the isotopes of an elements are	A. same B. different C. slightly different D. none of these
1669	Cause of heat production in a current carrying conductor is	A. Collisions of free electrons with one another B. High drift speed of free electrons C. Collisions of free electrons with atoms or ions of conductor D. High resistance value
1670	There is certain frequency below which no electrons are emitted from the metal surface, this frequency is known as	A. maximum frequency B. minimum frequency C. threshold frequency D. all of these
1671	The force between two chares 0.06 m apart is 5 N. If each charge is moved towards the other by 0.01 m, then the force between them will become	A. 7.20 N B. 11.25 N C. 22.50 N D. 45.00
1672	dimensions are the same for:	A. Work and energy B. Force and weight C. None of these D. Both a and b
1673	A solar cell converts energy of the Sun into:	A. Heat energy B. Magnetic energy C. Light energy D. Sound energy
1674	SI unit of frequency is	A. second B. hertz C. revolution D. vibrations/sec
1675	Proton was discovered by Rutherford in	A. 1915 B. 1906 C. 1910 D. 1920
1676	If the length of a simple pendulum is 0.25 m its time period would be	A. 1.0 s B. 2.0 s C. 3.0 s D. 4.0 s
1677	Change in momentum is one second is called:	A. Impulse B. Force C. Energy D. Work
1678	The rate of decay of radioactive substance	A. is constant B. decrease exponentially with time C. varies inversely as time

		D. decreases linearly with time
1679	The most suitable material for permanent magnet is	A. cobalt B. iron C. steel D. aluminium
1680	A 50 volt battery is connected across 10 ohm resistor. The current is 4.5 A. The internal resistance of the battery is	A. Zero B. 0.5Ω C. 1.1Ω D. 5.0Ω
1681	When small number of atoms from some other suitable element is added to the semi-conductor material, then this process is known as	A. impurification B. adding C. doping D. extrinsivity
1682	A body of weight 1 N has a kinetic energy of 1 joule when its speed is:	A. 1.46 m sec^{-1} B. 2.44 m sec^{-1} C. 3.42 m sec^{-1} D. 4.43 m sec^{-1}
1683	Davision and Germer performed experiment to verify	A. de-Broglie hypothesis B. theory of relativity C. Newton's law of gravitation D. Mass-energy relation
1684	The photoelectric effect, the maximum energy of photoelectrons depends on the	A. particular metal surface B. frequency of incident light C. both of them D. none of them
1685	In case of two identical charges placed certain distance apart, the electric field lines are:	A. Straight lines B. Sine curves C. Curved D. Both (A) and (B) E. None of these
1686	Smaller the damping, the resonance will be	A. more flat B. more sharp C. both of them D. none of them
1687	Conventionally the angular velocity is directed to an angle of:	A. 90° to the axis of rotation B. 30° to the axis of rotation C. 0° to the axis of rotation D. None of the above A. Proton B. Deuteron

1688	The nucleus/nuclei of hydrogen is/are:	C. Triton D. All of these E. None of these
1689	In a _____ flow, each particle of the fluid is called a streamline and different streamlines _____ cross each other.	A. Streamline, cannot B. Turbulent, cannot C. Streamline, can D. None of these
1690	At resonance, the impedance of RLC series circuit is	A. Maximum B. Zero C. Minimum D. Determinate
1691	Fog droplets are suspended in air when their weight is balanced by:	A. Force of gravity B. Upward thrust due to air C. Surface tension D. None of these
1692	When two protons are brought closer potential energy of both of them:	A. Increases B. Decreases C. Remains same D. None of these
1693	One moving a charge of 20 coulombs by 2 cm, 2 J of work is done, then the potential difference between the points is	A. 0.1 V B. 8 V C. 2 V D. 0.5 V
1694	A potential barrier of 0.7V exists across p-n junction made from:	A. Germanium B. Silicon C. Arsenic D. Gallium E. Indium
1695	The transitions of electrons in the hydrogen atom result in the emission of spectral lines in the:	A. Ultra red region B. Visible region C. Ultraviolet region D. Any of these E. None of these
1696	A flywheel accelerates from rest to an angular velocity of 7 rad/sec in 7 seconds. Its average acceleration will be:	A. 49 rad/sec^2 B. 1 rad/sec^2 C. 0.16 rev/sec^2 D. Both A and C E. Both B and C
1697	If N is the total number of molecules and V is the volume of the container, then the expression for the pressure of gas is	A. $P = \frac{P}{V} \cdot \frac{1}{2} m v^2$ B. $P = \frac{2N}{V} \cdot \frac{1}{2} m v^2$ C. $P = \frac{2}{3} \frac{N}{V} \cdot \frac{1}{2} m v^2$ D. $P = \frac{2}{3} \frac{N}{V} \cdot m v^2$
1698	Which quantity has the same dimension as that of impulse?	A. KE B. Power C. Momentum D. Work
1699	Boyle's law is applicable in	A. Isochoric process B. Isothermal process C. Isobaric process D. Isotonic process
1700	The energy of a photon is represented by	A. $\frac{h}{c}$ B. $\frac{h}{T}$ C. hc D. $\frac{hf}{c}$
1701	In an N-type silicon, which of the following statement is true	A. Electrons are majority carriers and trivalent atoms are the dopants B. Electrons are minority carriers and pentavalent atoms are the dopants C. Holes are minority carriers and pentavalent atoms are the dopants D. Holes are majority carriers and trivalent atoms are the dopants
1702	The square of 0.4 is:	A. Greater than 0.4 B. Smaller than 0.4 C. Equal to 0.4 D. None of them
1703	A resonance curve for RLC series circuit is a plot of frequency versus	A. Voltage B. Current C. Impedance D. Reactance
1704	The value of relative permittivity of different dielectrics are	A. Equal B. Different C. Greater than one

1705	The rectangular components of a vector are equal in magnitude when the vector makes an angle _____ with their x-component:	<p>A. 0°</p> <p>B. 30°</p> <p>C. 45°</p> <p>D. 60°</p>
1706	The special theory of relativity is based on the	<p>A. one postulate</p> <p>B. two postulates</p> <p>C. three postulates</p> <p>D. four postulates</p>
1707	The earliest heat engine was	<p>A. petrol engine</p> <p>B. diesel engine</p> <p>C. electric engine</p> <p>D. steam engine</p>
1708	A person starts his journey from a point O, travels 4 Km SW, then 4 Km NW, and finally 4 Km north-east. At what distance is he now from point O?	<p>A. 0 Km</p> <p>B. 4 Km</p> <p>C. 8 Km</p> <p>D. 12 Km</p>
1709	The cause of mirage observed in deserts in bright sunlight is due to	<p>A. Refraction of light</p> <p>B. Reflection of light</p> <p>C. Scattering of light</p> <p>D. Total internal reflection of light</p>
1710	The velocity of sound at same temperature is maximum in	<p>A. H₂</p> <p>B. N₂</p> <p>C. O₂</p> <p>D. NH₃</p>
1711	In case of metallic conductors, the charge carriers are:	<p>A. Protons</p> <p>B. Electrons</p> <p>C. Antiprotons</p> <p>D. Positrons</p> <p>E. Both (A) and (B)</p> <p>A. 90°</p> <p>B. 180°</p>

1712	When quarter of a circle is completed, phase of vibration is:	<p>initial; background-clip: initial; ">" C. 45" D. 360"</p>
1713	In the production of beats by 2 waves of same amplitude and nearly same frequency, the maximum intensity to each of the constituent waves is	<p>A. Same B. 2 times C. 4 times D. 8 times</p>
1714	Absolute zero is considered as that temperature at which:	<p>A. All liquid become gases B. All gases become liquid C. Water freezes D. None of these</p>
1715	The resultant of two velocities 3 m/sec and 400 cm/sec making an angle 90° with each other is:	<p>A. 20 m/sec B. 5 m/sec C. 3 m.sec D. None of these</p>
1716	To turn the transistor OFF, the base current is set:	<p>A. At maximum value B. At zero C. Either (A) or (B) D. All are correct E. None of correct</p>
1717	An electric dipole is at the centre of a hollow sphere of radius r. The total normal electric flux through the sphere is (here Q is the charge and d is the distance between the two charges of the dipole)	<p>A. $\frac{Q}{4\pi r^2}$ B. $\frac{2Q}{4\pi r^2}$ C. Q.d D. Zero</p>
1718	Fluids have three types of energies. The Bernoulli's equation combines those energies. which of the following is one of the three enrgies possessed by a fluid?	<p>A. potential energy B. pressure energy C. strain energy D. (a) and (b) only</p>
1719	Which of the following material has longer half life	<p>A. radium B. polonium C. radium D. uranium</p>
1720	When two objects are rubbed together, their internal energy	<p>A. remains same B. decreases C. remains the same then decreases D. increases</p>
1721	If the length of second pendulum becomes four times then its time period will become	<p>A. Four time B. Two times C. Six times D. Eight times</p>
1722	Arsenic, antimony and phosphorus are the elements from	<p>A. third group B. fourth group C. fifth group D. none of them</p>
1723	Electron is a particle whose mass is:	<p>A. Greater than that of a proton B. Smaller than that of a proton C. Smaller than that of a proton or a neutron D. Greater than that of an atom</p>
1724	While deriving the equation for pressure of a gas we consider the	<p>A. rotational motion of molecules B. vibrational motion of molecules C. linear motion of molecules D. all of them</p>

1725	The earth's potential and potential at infinity are taken:	<p>family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Zero<o:p></o:p></p></p> <p>C. <p class="MsoNormal">First is greater than the second<o:p></o:p></p></p> <p>D. <p class="MsoNormal">Second is greater than the first<o:p></o:p></p></p> <p>E. <p class="MsoNormal">Both (A) and (B)<o:p></o:p></p></p>
1726	A 100 W, 200 V bulb is connected to a 160 volts supply. The actual power consumption would be	<p>A. 64 W</p> <p>B. 80 W</p> <p>C. 100 W</p> <p>D. 125 W</p>
1727	The band above the valence band is called	<p>A. high energy band</p> <p>B. conduction band</p> <p>C. empty band</p> <p>D. none of them</p>
1728	The wave form of SHM is	<p>A. Pulsed wave</p> <p>B. Square wave</p> <p>C. Triangular waved</p> <p>D. Sine wave</p>
1729	The units of modulus of elasticity are	<p>A. Nm<sup>-2</sup></p> <p>B. Nm</p> <p>C. ms<sup>-1</sup></p> <p>D. Pascal</p>
1730	While describing the motion of a simple pendulum, the frictional effects are	<p>A. taken into account</p> <p>B. completely ignored</p> <p>C. partially ignored</p> <p>D. none of them</p>
1731	When the source of light is at very large distance, the shape of wavefront is	<p>A. Spherical</p> <p>B. Cylindrical</p> <p>C. Plane</p> <p>D. None of these</p>
1732	The force exerted by the fluid in a hydraulic pump on the piston is 10 cm ² , the fluid pressure on the piston is, in N/cm ²	<p>A. 20</p> <p>B. 200</p> <p>C. 2000</p> <p>D. 20,000</p>
1733	The velocity gained by the fluid in falling through the distance (h ₁ - h ₂) under the action of gravity is equal to the speed of the action of gravity is equal to the speed of the	<p>A. orifices</p> <p>B. efflux</p> <p>C. fluid</p> <p>D. none of them</p>
1734	The natural arrangement of colours in the spectrum of white light spectrum is	<p>A. VIBGYOR</p> <p>B. ROYBGIV</p> <p>C. ROYBIGV</p> <p>D. BIGROYV</p> <p>E. None of these</p>
1735	Which one is related to angular motion:	<p>A. Moment of a force</p> <p>B. Moment of inertia</p> <p>C. Moment of momentum</p> <p>D. None of these</p>
1736	The unit of flux density is also given by	<p>A. Weber/m<sup>2</sup>or Wb . m<sup>-2</sup></p> <p>B. Weber/mor Wb . m</p> <p>C. Weber/mor Wb . m<sup>-1</sup></p> <p>D. Weber or Wb</p>
		<p>A. <p class="MsoNormal" style="text-align: justify">Chemical energy<o:p></o:p></p></p> <p>B. <p class="MsoNormal" style="text-align: justify">Mechanical energy<o:p></o:p></p></p> <p>C. <p class="MsoNormal" style="text-align: justify"></p>

1737	The example/s of non-electrical energy to electrical is/are:	<p>Heat energy</p> <p>D. <p class="MsoNormal" style="text-align:justify">Both (A) and (B)</p> <p>E. <p class="MsoNormal" style="text-align:justify">All of these</p></p></p> </p></p>
1738	Which force is not a conservative force?	<p>A. Frictional force</p> <p>B. Gravitational force</p> <p>C. Electric force</p> <p>D. Elastic spring force</p>
1739	A particle is moving in a straight line with velocity $v = (4-t^2)$ where t is the time from fixed point then acceleration of the particle after 4 sec is.	<p>A. -8 m/sec²</p> <p>B. -4 m/sec</p> <p>C. -8 m/sec</p> <p>D. - 4 m/sec²</p>
1740	All trigonometric functions (since, cosine tangent etc.) are positive in:	<p>A. 1st Quadrant</p> <p>B. 2nd Quadrant</p> <p>C. 3rd Quadrant</p> <p>D. 4th Quadrant</p>
1741	High speed meteors rushing through air reduces to ashes because of:	<p>A. Force of gravity</p> <p>B. High resistance of air</p> <p>C. Drag force</p> <p>D. None of these</p>
1742	A person is sitting in a traveling train and facing the engine. He tosses up a coin and the coin falls behind him. It can be concluded that the train is	<p>A. Moving forward and gaining speed</p> <p>B. Moving forward and losing speed</p> <p>C. Moving forward with uniform speed</p> <p>D. Moving backward with uniform speed</p>
1743	AC voltage is passed through single diode rectifier, the output of the bridge rectifier is.	<p>A. Full wave DC voltage</p> <p>B. Double frequency AC Voltage</p> <p>C. Half wave DC voltage</p> <p>D. None</p>
1744	For the conversion of galvanometer into voltmeter, we connect a	<p>A. small resistance in series with galvanometer</p> <p>B. small resistance in parallel with galvanometer</p> <p>C. high resistance in parallel with galvanometer</p> <p>D. high resistance series with galvanometer</p>
1745	The magnitude of induced emf depends upon the	<p>A. Rate of decrease of magnetic field</p> <p>B. Rate of change of magnetic field</p> <p>C. Rate of increase of magnetic flux</p> <p>D. Constancy of magnetic field</p> <p>E. None of these</p>
1746	Angle between ray of light and the corresponding wavefront is	<p>A. 0⁰</p> <p>B. 60⁰</p> <p>C. 90⁰</p> <p>D. 120⁰</p>
1747	The energy required to charge a capacitor of 5 μ F by connecting D.C. source of 20 KV is	<p>A. 10 KJ</p> <p>B. 5 KJ</p> <p>C. 2 KJ</p> <p>D. 1 KJ</p>
1748	The body oscillates due to _____ accelerates and overshoots the rest position due to _____	<p>A. Applied force, Inertia</p> <p>B. Restoring force, Friction</p> <p>C. Frictional force, Inertia</p> <p>D. Restoring force, Inertia</p>
1749	Fidelity refers to	<p>A. Reproduction of original sound</p> <p>B. Reproduction of original image</p> <p>C. Reproduction of music</p> <p>D. Reproduction of a CD from original copy</p>
1750	To observe interference of light, the condition, which must be met with is that the sources must be:	<p>A. Monochromatic</p> <p>B. Phase coherent</p> <p>C. Both of above</p> <p>D. None of above</p>
1751	An irreversible heat flow from a hot to cold substances of a system, causes the disorder to	<p>A. decrease</p> <p>B. remains the same</p> <p>C. increase</p> <p>D. any one of them</p>
1752	An electron of charge e coulomb passes through a potential difference of V volts its energy in joules will be	<p>A. V/e</p> <p>B. eV</p> <p>C. e/V</p> <p>D. V/e^2</p>

		D. V
1753	Current is measured in	A. volts B. watt C. ohm D. ampere
1754	Fluids can transmit:	A. Transverse wave B. Compressional wave C. Both of them D. None of them
1755	Tick the correct pair when M denotes the molecular mass and other symbols carry usual meanings:	A. $N = nN_{\text{A}}$, $M = MN_{\text{A}}$ B. $n = N/N_{\text{A}}$, $M = mN_{\text{A}}$ C. $M = N_{\text{A}}/N$, $N_{\text{A}} = m/n$ D. $N = nN_{\text{A}}$, $M = mN_{\text{A}}$
1756	The substances whose resistance decreases with the increase in temperature these substances have coefficient of	A. positive temperature B. negative temperature C. absolute temperature D. zero temperature
1757	The study of physics involves?	A. Structure of space and time B. Interaction of electromagnetic radiation with matter C. Both of them D. Chemical changes E. None of them
1758	The straight current carrying conductor experiences maximum force in a uniform magnetic field when it is placed	A. parallel to the field B. Perpendicular to the field C. At an angle of 45 to the field D. None of the above
1759	Electric intensity at a place due to a charged conductor is a	A. Scalar quantity B. Vector quantity C. Semi vector and semi scalar D. Dimensionless quantity E. Both A and D are true
1760	The characteristic of a body executing S.H.M is that its acceleration is	A. inversely proportional to displacement B. directly proportional to displacement C. independent of displacement D. equal to zero
1761	If you are moving at relativistic speed between two points that are a fixed distance apart, then the distance between the two points appears	A. larger B. shorter C. equal D. none of these
1762	Strength of magnetic field is measured in SI units, in:	A. N B. N/Am C. Am/N D. Nm/A E. None of these
1763	U-238 present in the natural uranium is about:	A. 59% B. 0.007% C. 99% D. 39% E. 19%
1764	Heat travels through vacuum by	A. Conduction B. Convection C. Radiation D. Both A and B
1765	How many number of anodes used in electron gun	A. one B. two C. three D. six
1766	The neighbours of every molecule in crystalline solids are arranged in	A. an irregular manner B. a regular manner C. any manner D. none of them
1767	Data transmitted along glass-fiber cables is in the form of pulses of monochromatic red light each of duration 2.5 ns. Which of the following is the best estimate of the number of wavelength in each pulse?	A. 10^3 B. 10^6 C. 10^9 D. 10^{12}
1768	Drag force increases if speed of the object moving through the fluid:	A. Increases B. Decreases C. Remains constant D. None of these
1769	Free electrons are	A. tightly bound B. fixed C. loosely bound

		<p>C. loosely fixed</p> <p>D. tightly fixed</p>
1770	Any superconductor with critical temperature above 77 K, is referred as	<p>A. low temperature superconductor</p> <p>B. high temperature superconductor</p> <p>C. very low temperature superconductor</p> <p>D. none of them</p>
1771	If we connected the ordinary DC ammeter to measure alternating current, it would measure its:	<p>A. Instantaneous value</p> <p>B. RMS value</p> <p>C. Value averaged over a cycle</p> <p>D. Either (B) or (C)</p> <p>E. Either (A) or (C)</p>
1772	The information from far side of the universal are gathered by:	<p>A. Radio telescope</p> <p>B. Microscope</p> <p>C. Telescope</p> <p>D. Spectro scope</p>
1773	The current produced by moving a loop of wire across a magnetic field is called:	<p>A. Direct current</p> <p>B. Magnetic current</p> <p>C. Alternating current</p> <p>D. Induced current</p> <p>E. None of these</p>
1774	The life time of metastable state is equal to	<p>A. Life time of excited state</p> <p>B. Greater than by excited state</p> <p>C. Zero</p> <p>D. Less than by excited state</p>
1775	The process of formation of spectrum is called:	<p>A. Interference</p> <p>B. Spectroscopy</p> <p>C. Dispersion</p> <p>D. Reflection</p> <p>E. Botha (A) and (D)</p>
1776	A field in which the work done in moving a body along closed path is zero is called	<p>A. Nuclear Field</p> <p>B. Conservative field</p> <p>C. Gravitational field</p> <p>D. Non-conservative field</p>
1777	Three resistors of resistance 2,3 and 6 ohms are connected in parallel, their equivalent resistance is	<p>A. 11.0 ohm</p> <p>B. 1.0 ohm</p> <p>C. 7.0 ohm</p> <p>D. 3.0 ohm</p>
1778	Which of the following are the units of intensity of light	<p>A. Pois</p> <p>B. Lux</p> <p>C. Siemen</p> <p>D. Candela</p>
1779	A car is moves around a circular track of radius 0.3 m at the rate of 120 rev/min. The speed v of the car is:	<p>A. 38 m/sec</p> <p>B. 3.8 m/sec</p> <p>C. 0.6 m/sec</p> <p>D. None of these</p>
1780	The electric flux from a closed surface	<p>A. Is independent of the shape of the surface</p> <p>B. Depends on the charge enclosed by the surface</p> <p>C. Both a and b</p> <p>D. None of the above</p>
1781	An emf is set up in a conductor when it:	<p>A. is kept in a magnetic field</p> <p>B. is kept in a electric field</p> <p>C. Move across a magnetic field</p> <p>D. Both (A) and (B)</p> <p>E. None of these</p>
1782	The angle between centripetal force and displacement of the body moving in a circle is:	<p>A. 0°</p> <p>B. 90°</p> <p>C. 180°</p> <p>D. None of these</p>
1783	Current varies with voltage	<p>A. Inversely</p> <p>B. as square root</p> <p>C. Directly</p>

		<p>C. unity</p> <p>D. None of these</p>
1784	The phase at the positive peak is	<p>A. $\frac{\pi}{2}$</p> <p>B. π</p> <p>C. $\frac{3\pi}{2}$</p> <p>D. 2π</p>
1785	0.0001210 has _____ significant figures.	<p>A. Four</p> <p>B. Three</p> <p>C. Seven</p> <p>D. Eight</p>
1786	A ball of mass m moving with uniform speed collides elastically with another stationary ball. The incident ball will lose maximum kinetic energy when mass of the stationary ball is	<p>A. m</p> <p>B. 2 m</p> <p>C. 4 m</p> <p>D. Infinity</p>
1787	The value of electrical constant of proportionality k is	<p>A. $9 \times 10^9 \text{ Nm}^2 \text{C}^{-2}$</p> <p>B. $9 \times 10^{-9} \text{ Nm}^2 \text{C}^{-2}$</p> <p>C. $9 \times 10^{10} \text{ Nm}^2 \text{C}^{-2}$</p> <p>D. $9.85 \times 10^{-12} \text{ N}^{-1} \text{C}^{-2}$</p>
1788	The velocity of sound in air not effected by changes in	<p>A. Moisture contents in air</p> <p>B. Temperature of air</p> <p>C. The atmosphere pressure</p> <p>D. The composition of air</p>
1789	Positron was discovered by Carl Anderson in	<p>A. 1920</p> <p>B. 1925</p> <p>C. 1928</p> <p>D. 1932</p>
1790	The sum of two or more vectors is equal to a single vector which is called:	<p>A. Component vector</p> <p>B. Resultant vector</p> <p>C. Product vector</p> <p>D. None of these</p>
1791	The net force acting on a 100 kg man standing in an elevator accelerating downward with $a = 0.8 \text{ m sec}^{-2}$ comes out to:	<p>A. 980 N</p> <p>B. 580 N</p> <p>C. 1380 N</p> <p>D. Zero</p>
1792	The chemical behaviour of an atom is determined by	<p>A. binding energy</p> <p>B. atomic number</p> <p>C. mass number</p> <p>D. number of isotopes</p>
1793	The solids are classified as:	<p>A. Metals</p> <p>B. Crystalline</p> <p>C. Amorphous</p> <p>D. Polymeric</p> <p>E. All except (A)</p>
1794	If the displacement of a body executing S.H.M is plotted against time, then the curve is known as	<p>A. frequency of S.H.M</p> <p>B. period of S.H.M</p> <p>C. wave form</p> <p>D. none of them</p>
1795	When transistors are used in digital circuits they usually operate in the	<p>A. Active region</p> <p>B. Breakdown region</p> <p>C. Saturation and cutoff regions</p> <p>D. Linear region</p>
1796	The magnitude of resultant of three vectors is 3. Its x-component is one, y-component is two, then its z-component is:	<p>A. 0</p> <p>B. 1</p> <p>C. 2</p> <p>D. 3</p>
1797	The dot product of electric field intensity E and vector area A is called	<p>A. Electric potential</p> <p>B. Electric flux</p> <p>C. Electric field</p> <p>D. Magnetic field</p>

1798	Branch of physics which deals with the study of stars and galaxies is called:	<p>A. Solid state physics</p> <p>B. Astrophysics</p> <p>C. Molecular physics</p> <p>D. Chemical physics</p>
1799	The strength of magnetic field at certain points around a wire depends upon:	<p>A. $\frac{1}{r}$</p> <p>B. $\frac{1}{r^2}$</p> <p>C. $\frac{1}{r^3}$</p> <p>D. $\frac{1}{r^4}$</p>
1800	The magnetic force exerted on an electron moving with velocity 'v' at right angle to the magnetic field is given by	<p>A. $F = eVB$</p> <p>B. $F = e\sqrt{2}VB$</p> <p>C. $F = eVB$</p> <p>D. $F = B\sqrt{2}ev$</p>
1801	An ordinary glass gradually softens into a 'paste -like' state before it becomes a very viscous liquid. It happens almost at:	<p>A. 800°C</p> <p>B. 500°C</p> <p>C. 300°C</p> <p>D. 100°C</p> <p>E. None of these</p>
1802	When angular acceleration is positive, the body rotates:	<p>A. Slower</p> <p>B. Slowest</p> <p>C. Faster</p> <p>D. None of these</p>
1803	Electric potential of earth is taken to be zero because the earth is good	<p>A. Semiconductor</p> <p>B. Conductor</p> <p>C. Insulator</p> <p>D. Dielectric</p>
1804	Different radioactive material have	<p>A. same half lives</p> <p>B. different half lives</p> <p>C. same mean lives</p> <p>D. same total lives</p>
1805	The basic circuit elements of A.C circuit are	<p>A. Resistor</p> <p>B. Inductor</p> <p>C. Capacitor</p> <p>D. All the three</p>
1806	The consumption of energy by a 60 W bulb in 2 minutes is:	<p>A. 2 watt-hour</p> <p>B. 120 watt-hour</p> <p>C. 30 watt-hour</p> <p>D. None of these</p>
1807	The image of an object 5 mm length is only 1 cm high. The magnification produced by lens is:	<p>A. 1</p> <p>B. 0.2</p> <p>C. 2</p> <p>D. 0.1</p>
1808	The speed of a pendulum is measured to be 3.0 s in the inertial reference frame of the pendulum. What is its period measured by an observer moving at a speed of 0.95 c with respect to the pendulum	<p>A. 2.9 s</p> <p>B. 3.0 s</p> <p>C. 6.6 s</p> <p>D. 9.6 s</p>
1809	Work has the dimensions as that of	<p>A. Torque</p> <p>B. Angular momentum</p> <p>C. Linear momentum</p> <p>D. Power</p>
1810	The charged nucleus of an atom itself spins its magnetic field	<p>A. equal to the field produced by orbital electrons</p> <p>B. greater than the field produced by orbital electrons</p> <p>C. much weaker than the field produced by orbital electrons</p> <p>D. none of these</p>
		A. mass

1811	Bernoulli's equation is based upon law of conversation of	B. momentum C. Energy D. None
1812	A tight wire is clamped at two points 2.0 m apart. It is plucked near one end. Which are the three longest wavelengths present on the vibrating wire.	A. 2.0 m, 1m, 0.67 m B. 4.0 m, 2.0 m, 1m C. 4.0 m, 2.0 m, 1.33 m D. 1m, 0.5 m, 0.33 m
1813	A certain charge liberates 0.8 g of oxygen. The same charge will liberate. how many g of silver?	A. 108 g B. 10.8 g C. 0.8 g D. 108/0.8 g
1814	The electrons occupying the conduction band are known as	A. conduction electrons B. free electrons C. both of them D. none of them
1815	At the top of the trajectory of a projectile the acceleration is	A. The maximum B. The minimum C. Zero D. g
1816	Atoms of hydrogen gas can be excited by passing electric current through it when the gas is filled into the discharge tube at a pressure which is	A. Less than atmospheric pressure B. Much less than atmospheric pressure C. Greater than atmospheric pressure D. Much greater than atmospheric pressure E. Both C and D
1817	A unit cell is smallest basic structure which is:	A. One dimensional B. Two dimensional C. Three dimensional D. Four dimensional E. None of these
1818	In which process the condition for the application of Boyle's law on the gas is fulfilled	A. isochoric process B. adiabatic process C. isothermal process D. none of them
1819	A ray passing through optical center of a lens, after refraction:	A. Passes through focus B. Go deviated C. Retraces its path D. Both B and C
1820	The magnitude of alternative voltage V:	A. Always increase B. Always decrease C. Remains constant D. Does not remain constant E. None of these
1821	Referring to the above figure, we can say that of all the elements, the most stable element is	A. Phosphours B. Iron C. uranium D. Lithium E. Bismuth
1822	A ball is dropped vertically down and it takes time t to reach the ground. At time t/2	A. The ball had covered exactly half the distance B. The velocity of the ball was V/3 where V is the velocity when it reached the ground C. The ball had covered less than half the distance D. The ball had covered more than half the distance
1823	Angular momentum is a:	A. vector quantity B. Imaginary quantity C. Complex Quantity D. Scalar Quantity
1824	When weight of an object falling freely becomes equal to the drag force, then the body will move with	A. increasing speed B. decreasing speed C. constant speed D. none of them
1825	G.P. Thomson observer experimentally that electrons and neutrons possess	A. particle-like properties B. wave-like properties C. neither particle nor wave like properties D. none of these
1826	When a mass 'm' is pulled slowly, the spring stretches by an amount x_0 , then the average force would be	A. $F = Kx_0$ B. $F = \frac{1}{2}Kx_0$ C. $F = 2Kx_0$ D. $F = 4Kx_0$
1827	The terminal velocity of water droplet of radius 1×10^{-4} m and desity 1000 kg m^{-3} descending through air of viscosity $19 \times 10^{-6} \text{ kg. m}^{-1} \text{ s}^{-1}$ is	A. 2.5 ms^{-1} B. 3.2 ms^{-1} C. 4.3 ms^{-1} D. 1.1 ms^{-1}

1828	Most practical applications of electricity involve	<p>A. Charges at rest</p> <p>B. Charges in motion</p> <p>C. Electrons at rest</p> <p>D. Atoms in motion</p> <p>E. Molecules in motion</p>
1829	The entity which measures the quantity of motion in a body is called	<p>A. force</p> <p>B. energy</p> <p>C. momentum</p> <p>D. power</p>
1830	Electrons are	<p>A. positive charged</p> <p>B. negatively charged</p> <p>C. massless</p> <p>D. neutral</p>
1831	A body of weight 1 N has a kinetic energy of 1 joule when its speed is:	<p>A. 1.46 m sec⁻¹</p> <p>B. 2.44 m sec⁻¹</p> <p>C. 3.42 m sec⁻¹</p> <p>D. 4.43 m sec⁻¹</p>
1832	When a stress changes the shape, it is called the	<p>A. compressional stress</p> <p>B. tensile stress</p> <p>C. shear stress</p> <p>D. any one of them</p>
1833	Which of the following options states the names of fluids in the order of increasing viscosity?	<p>A. mercury, motor oil, methanol</p> <p>B. methanol, mercury, motor oil</p> <p>C. motor oil, mercury, methanol</p> <p>D. methanol, motor oil, mercury</p>
1834	In an adiabatic process the work is done at the expense of the	<p>A. energy supplied to the system</p> <p>B. energy gained from the surroundings</p> <p>C. internal energy</p> <p>D. none of them</p>
1835	For a body executing S. H. M, its	<p>A. momentum remains constant</p> <p>B. potential energy remains constant</p> <p>C. kinetic energy remains constant</p> <p>D. total energy remains constant</p>
1836	The direction of the streamlines is the same as the direction of the	<p>A. force</p> <p>B. torque</p> <p>C. velocity</p> <p>D. weight</p>
1837	With increase of temperature, the viscosity of liquid and gases	<p>A. Increases for both</p> <p>B. Decreases for both</p> <p>C. Increases for liquids and decreases for gases</p> <p>D. Decreases for liquids and increases for gases</p>
1838	Amperean path is a:	<p>A. <p><p class="MsoNormal" style="text-align:justify"> Closed path<o:p></o:p></p></p></p> <p>B. <p><p class="MsoNormal" style="text-align:justify"> Rectangular path<o:p></o:p></p></p></p> <p>C. <p><p class="MsoNormal" style="text-align:justify"> Circular path<o:p></o:p></p></p></p> <p>D. <p><p class="MsoNormal" style="text-align:justify"> Any of above<o:p></o:p></p></p></p> <p>E. <p><p class="MsoNormal" style="text-align:justify"> Broken path<o:p></o:p></p></p></p>
1839	SI unit of wave length is:	<p>A. Kilometer</p> <p>B. Metre</p> <p>C. Centimetre</p> <p>D. Hertz</p>
1840	The velocity given to a body to go out of the influence of earth's gravity is known as:	<p>A. Terminal velocity</p> <p>B. Orbital velocity</p> <p>C. Escape velocity</p> <p>D. None of these</p>
1841	How is the image formed by a convex lens affected if the upper half of the lens is covered with a paper:	<p>A. The upper half of the image is cut off</p> <p>B. The brightness of the image is reduced</p> <p>C. The brightness of the image is increased</p> <p>D. No effect at all</p>

		<p>A. deformation</p> <p>B. stretching</p> <p>C. compressing</p> <p>D. elasticity</p>
1842	The ability of the body to return to its original shape is called	
1843	When a force of 0.5 N displaces a body through a distance of 2m in the direction of force, the work done is:	<p>A. 2 J</p> <p>B. 0.25 J</p> <p>C. 1 J</p> <p>D. 0.5 J</p>
1844	A lift is moving up with acceleration equal to 1/5 of that due to gravity. The apparent weight of a 60 kg man standing in lift is	<p>A. 60 kg wt</p> <p>B. 72 kg wt</p> <p>C. 48 kg wt</p> <p>D. Zero</p>
1845	A snooker ball moving with velocity V collides head on with another snooker ball of same mass at rest. If the collision is elastic, the velocity of second snooker ball is	<p>A. Zero</p> <p>B. Infinity</p> <p>C. V</p> <p>D. 2 V</p>
1846	In an A.C. circuit, a resistance of R ohm is connected in series with an inductance L. If phase angle between voltage and current be 45° . the value of inductive reactance will be	<p>A. R/4</p> <p>B. R/2</p> <p>C. R</p> <p>D. Cannot be found with the given data</p>
1847	A current flowing in an electrical component increase linearly from 0 to 5 A over 5 second s.The total charge flowing through the component over this duration is.	<p>A. 5 scoulombs</p> <p>B. 12.5 coulombs</p> <p>C. 10 coulombs</p> <p>D. 25 coulombs</p>
1848	Electric field strength is defined as	<p>A. Work done on unit charge</p> <p>B. Force exerted on unit charge</p> <p>C. Distance covered by unit charge</p> <p>D. Power exerted by unit charge</p> <p>E. None of these</p>
1849	If 250V is the RMS value of alternative voltage, then its peak value V_0 will be:	<p>A. 353.5V</p> <p>B. 250V</p> <p>C. 175V</p> <p>D. zero</p> <p>E. 400V</p>
1850	The bridge circuit of full wave rectification uses	<p>A. one diode</p> <p>B. two diode</p> <p>C. three diode</p> <p>D. four diode</p>
1851	Photoelectrons are emitted when ultraviolet light falls on:	<p>A. Casium</p> <p>B. Silver</p> <p>C. Potassium</p> <p>D. Any of these</p> <p>E. None of these</p>
1852	Direction of motion _____ in circular motion:	<p>A. Changes off and on</p> <p>B. Changes continuously</p> <p>C. Does not change</p> <p>D. None of them</p>
1853	If an amount of heat enters the system it could	<p>A. decrease the internal energy</p> <p>B. not change the internal energy</p> <p>C. increase the internal energy</p> <p>D. none of them</p>
1854	Referring to above figure, current in coil P falls from its maximum value to zero	<p>A. At the instant the switch is closed</p> <p>B. At the instant the switch is opened</p> <p>C. When switch is kept open</p> <p>D. When switch is kept closed</p> <p>E. None of these</p>
1855	For two resistance wires joined in parallel, the resultant resistance is 6/5 ohm. When one of the resistance wire breaks, the effective resistance becomes 2 ohm. The resistance of the broken wire is	<p>A. 3/5 ohm</p> <p>B. 2 ohm</p> <p>C. 6/5 ohm</p> <p>D. 3 ohm</p>
1856	A semi-conductor in its extremely pure form is known as	<p>A. extrinsic semi-conductor</p> <p>B. intrinsic semi-conductor</p> <p>C. either of them</p> <p>D. none of them</p>
1857	An object undergoes S.H.M has maximum acceleration when its displacement form the means position	<p>A. maximum</p> <p>B. zero</p> <p>C. half of the maximum value</p> <p>D. one third of the maximum value</p>
1858	The waves moving from a sitar to a listener in air are	<p>A. Longitudinal progressive</p> <p>B. Longitudinal stationary</p> <p>C. Transverse progressive</p> <p>D. Transverse stationarv</p>

1859	A solenoid is a coil of wire which is:	<p>A. Short, loosely wound, cylindrical</p> <p>B. Long, tightly wound, spherical</p> <p>C. Long, loosely wound, cylindrical</p> <p>D. Long, tightly wound, cylindrical</p> <p>E. None of these</p>
1860	The tidal energy is due to gravitational pull of :	<p>A. sun</p> <p>B. moon</p> <p>C. Mars</p> <p>D. None of these</p>
1861	Referring to the above figure, the binding energy per nucleon increases upto mass number equal to:	<p>A. 50</p> <p>B. 100</p> <p>C. 150</p> <p>D. 200</p> <p>E. 250</p>
1862	An inkjet printer uses in its operation:	<p>A. Neutrons only</p> <p>B. Mesons only</p> <p>C. Positrons and photons</p> <p>D. An electric charge</p> <p>E. None of these</p>
1863	The velocity of light in vacuum can be changed by changing	<p>A. Frequency</p> <p>B. Amplitude</p> <p>C. Wavelength</p> <p>D. None of these</p>
1864	In a transistor, if the central region is p-type then this type of transistor is known as	<p>A. p-n-p transistor</p> <p>B. n-p-n transistor</p> <p>C. either of these</p> <p>D. none of these</p>
1865	When a high energy photon interact with a metal, which of the following effect is most likely to be taken place	<p>A. pair production</p> <p>B. photoelectric effect</p> <p>C. Compton effect</p> <p>D. None of these</p>
1866	If 42 J heat is transferred to the system and the work done by the system is 32 J then what will be the change in internal energy	<p>A. 0 J</p> <p>B. 2 J</p> <p>C. 5 J</p> <p>D. 10 J</p>
1867	0.1 kg mass will be equivalent to the energy	<p>A. 9×10^{15} J</p> <p>B. 5×10^8 J</p> <p>C. 6×10^{16} J</p> <p>D. 9×10^{-16} J</p>
1868	10^6 electrons are moving through a wire per second, the current developed is	<p>A. 1.6×10^{-19}</p> <p>B. 1 A</p> <p>C. 1.6×10^{-15} A</p> <p>D. 10^6 A</p>

1869	The amount of energy equivalent to 1 a.m.u is	A. 9.315 Mev B. 93.15 Mev C. 931.5 Mev D. 2.22 Mev
1870	Huygen's principle states that	A. Light travels in straight line B. Light has dual nature C. Either of these D. None of these
1871	Crystalline solids are in the form of:	A. Metals B. Ionic Compounds C. Ceramics D. Both (A) and (B) E. All of these
1872	When the droplet moves with terminal velocity in a fluid, the net force acting on the droplet is:	A. $F - D - mg$ B. Zero C. $mg - F - D$ D. None of these
1873	If the objects of different masses move with the same velocity, then it is more difficult to stop the	A. lighter of the two B. massive of the two C. any one of them D. both of them
1874	A vector of magnitude 5 N is added to a vector of magnitude 8 N while the orientations are changeable. Range of their possible sum will be very from:	A. Zero to 3 N B. 1 N to 13 N C. 13 N to 3 N D. None of these
1875	A coil of constant area is placed in a constant magnetic field. An induced current is produced in the coil when:	A. The coil is distorted B. The coil is rotated C. The coil is neither distorted nor rotated D. Both A and B E. None of these
1876	The distance from eye to near point is taken as:	A. 10 cm B. 15 cm C. 20 cm D. 25 cm
1877	Power is a :	A. Vector quantity B. Base quantity C. Scalar quantity D. None of these
1878	In above figures, tell which set of graphs shows that a body is moving with uniform velocity:	A. (i) and (ii) B. (ii) and (iii) C. (iii) and (iv)
1879	In L.C.R series A.C. circuit, the phase angle between current and voltage is	A. Any angle between 0 and π B. π C. $\pi/2$ D. Any angle between 0 and π
1880	1 gm-cm ⁻³ is equal to:	A. 10 ³ kg-m ⁻³ B. 10 ⁻³ kg-m ⁻³ C. 1 kg-m ⁻³ D. 10 ⁶ kg-m ⁻¹
1881	When the surfaces are coated with a lubricant, then they	A. Stick to each other B. Slide upon each other C. Roll upon each other D. None of these
1882	Ethanol (alcohol) as a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
	A grating with high resolving power can distinguish	A. Larger B. Zero

1883	A grating with high resolving power can distinguish _____ difference in wavelengths :	<p>B. Zero</p> <p>C. None of these</p> <p>D. Smaller</p>
1884	The capacity of a parallel plat capacitor depends on the	<p>A. Type to metal used</p> <p>B. Thickness of plates</p> <p>C. Potential applied across the plates</p> <p>D. Separation between the plates</p>
1885	The nucleous of uranium -235 differs from a nucleous of a uranium -238 in that the later contains	<p>A. 3 more neutrons</p> <p>B. 3 more electrons</p> <p>C. 3 more protons</p> <p>D. 3 more ions</p>
1886	At a given instant, a photon moves in +x direction in a region where there magnetic field in -z direction. The magnetic force on the proton will be the:	<p>A. -y direction</p> <p>B. +y direction</p> <p>C. +z direction</p> <p>D. -z direction</p> <p>E. None of these</p>
1887	The substances which break just after the elastic limit is reached, are known as	<p>A. brittle substances</p> <p>B. ductile substances</p> <p>C. plastic substances</p> <p>D. elastic substances</p>
1888	A thermistor with negative temperature co-efficient is placed in a furnace. When temperature of furnace increases the resistance?	<p>A. Decrease</p> <p>B. Remain unchanged</p> <p>C. Increase</p> <p>D. None of above</p>
1889	Speed of Sound in vacuum is.	<p>A. 332 m sec -1</p> <p>B. 0. m sec-1</p> <p>C. 340 m sec-1</p> <p>D. 350 m sec-1</p>
1890	When a mass attached to a spring begins to move left or right from the equilibrium position, its P.E.:	<p>A. Increases</p> <p>B. Decreases</p> <p>C. Remains constant</p> <p>D. None of these</p>
1891	The volume of a gas will be double of what it is at 0°C (pressure remaining constant) at	<p>A. 546 K</p> <p>B. 273 K</p> <p>C. 546°C</p> <p>D. 273°C</p>
1892	The instantaneous acceleration of a body moving with constant speed in a circle:	<p>A. Remains constant</p> <p>B. Is called centripetal acceleration</p> <p>C. Tangential acceleration</p> <p>D. None of these</p>
1893	In metallic crystals which of the following thing remains constant	<p>A. amplitude of oscillations</p> <p>B. temperature of solid</p> <p>C. average atomic positions</p> <p>D. all of them</p>
1894	A capacitor of capacity 1 μ F is charged to 1 KV. The energy stored in J	<p>A. 5</p> <p>B. 0.5</p> <p>C. 0.005</p> <p>D. 50</p>
1895	A virtual image is formed when object is placed:	<p>A. Within focal length of a convex lens</p> <p>B. Near the focal point of a concave lens</p> <p>C. Both A and B</p> <p>D. Away from 2F of a convex lens</p>
1896	In an interference pattern of Young's Double Slit (YDS) experiment	<p>A. Bright fringes are wider than dark fringes</p> <p>B. Dark fringes are wider than bright fringes</p> <p>C. Both dark and bright fringes are of equal width</p> <p>D. Central fringes are wider than the outer fringes</p>
1897	The time period of pendulum, at center of earth.	<p>A. Zero</p> <p>B. Infinite</p> <p>C. Maximum</p> <p>D. Minimum</p>
1898	Which of the following is a state variable	<p>A. entropy</p> <p>B. pressure</p> <p>C. volume</p> <p>D. all of them</p>
1899	The work performed on an object does not depend on	<p>A. Force applied</p> <p>B. Angle at which force is inclined to the displacement</p> <p>C. Initial velocity of the object</p> <p>D. Displacement</p>
1900	In radioactive decay, the new element which is formed due to the disintegration of original element is called	<p>A. element</p> <p>B. daughter element</p> <p>C. parent element</p>

	disintegration of original element is called	C. parent element D. none of these
1901	First law of thermodynamics tells us that heat energy can be converted into equivalent amount of work, but it is silent about	A. how heat is absorbed B. how heat extracted C. how this conversion takes place D. none of them
1902	How much time, the α -particle more massive than an electron	A. 600 B. 7000 C. 5000 D. 15000
1903	As the bob of the pendulum moves to and fro which of the force is experienced by the bob	A. its weight B. tension in the string C. viscous drag force by air D. all of them
1904	When the object lies between F and 2F, the image formed by is formed at:	A. Real B. Virtual C. Diminished D. Erect
1905	Energy is stored in the choke coil in the form of	A. Heat B. Magnetic energy C. Electric energy D. Electro-magnetic energy
1906	One newton is a force that produces an acceleration of 0.5 m/sec^2 in a body of mass:	A. 2 kg B. 3 kg C. 4 kg D. 8 kg
1907	One coulomb per second is equal to	A. One volt B. One ampere C. One ohm D. One henry
1908	If we increase the length of a simple pendulum four times, its time period will become	A. 2 times B. 3 times C. 4 times D. 6 times
1909	The second law of thermodynamics is concerned with the circumstances in which	A. heat can be converted into work B. direction of flow of heat C. none of them D. both of them
1910	The useful unit of angular replacement in SI unit is:	A. Degree B. Revolution C. Radian D. Metre
1911	At resonance frequency the impedance of parallel resonance circuit is	A. Maximum B. Minimum C. Zero D. None of the above
1912	Diameter of the atom is of the order of	A. 10^{-10} m B. 10^{-12} m C. 10^{-15} m D. 10^{-9} m
1913	Acceleration of the mass at any instant is given by	A. $a = k/m \times$ B. $a = -m/k \times$ C. $a = -k/m \times$ D. $a = m/k \times$
1914	Max plank founded a mathematical model resulting in an equation that describes the shape of observed black body radiation curves exactly, in	A. 1890 B. 1895 C. 1900 D. 1905
1915	A pair of quark and antiquark makes a:	A. Meson B. Baryon C. Proton D. Neutron E. None of these

A. Constant magnetic field
 B. Constant magnetic field

1916	An induced current can be produced by:	<p>initial; background-origin: initial; background-clip: initial;">>Changing magnetic field</p> <p>C. ">Varying magnetic field</p> <p>D. ">Constant electric field</p> <p>E. ">None of these</p>
1917	The vertical component of velocity of a projectile during its motion is minimum	<p>A. at the time of projection</p> <p>B. at the highest point</p> <p>C. just before hitting the plane of projection</p> <p>D. all of them</p>
1918	A coil of constant area is placed in a constant magnetic field. An induced current is produced in the coil when	<p>A. The coil is distorted</p> <p>B. The coil is rotated</p> <p>C. The coil is neither distorted nor rotated</p> <p>D. Both A and B</p> <p>E. None of these</p>
1919	Tick the correct statement:	<p>A. <p class="MsoNormal">Both the potential and potential difference is scalars<o:p></o:p></p></p> <p>B. <p class="MsoNormal">Potential is a scalar but potential difference is a vector<o:p></o:p></p></p> <p>C. Both are vectors<p class="MsoNormal"><o:p></o:p></p></p> <p>D. <p class="MsoNormal">Potential is vector but potential difference is scalar<o:p></o:p></p></p> <p>E. <p class="MsoNormal">None of these<o:p></o:p></p></p>
1920	The basic circuit element in a d.c. circuit is a/an	<p>A. Inductor</p> <p>B. Resistor</p> <p>C. Capacitor</p> <p>D. Battery</p>
1921	The dimensions of viscosity are:	<p>A. $M^{2/3}L^{-1/3}T^{-2}$</p> <p>B. $M^{-1/3}L^{1/3}T^{-1}$</p> <p>C. $M^{-1/3}L^{1/3}T$</p> <p>D. $ML^{-1/3}T^{-1}$</p>
1922	Two water pipes of diameters 4 cm and 8 cm are connected with a supply line. The velocity of flow of water in the pipe 4 cm diameter is	<p>A. 1/4 times</p> <p>B. 4 times</p> <p>C. Twice</p> <p>D. 1/2 of 8 cm diameter pipe</p>
1923	Whenever a covalent bond breaks, it creates:	<p>A. An electron</p> <p>B. A hole</p> <p>C. An electron-hole pair</p> <p>D. A positron</p> <p>E. All of these</p>
		<p>A. volts</p> <p>B. ..."</p>

1924	The current is measured in	D. watt C. ampere D. ohm
1925	At high speed, fluid friction _____ and fuel consumption _____:	A. Increases, decreases B. Increases, increases C. Decreases, increases D. None of these
1926	According to the special theory of relativity	A. mass and energy are same entities B. mass and energy are same entities but interconvertible C. mass and energy are different entities but interconvertible D. mass and energy are different entities but non-interconvertible
1927	The number of input terminals of an op-amp is:	A. One B. Two C. Three D. Four E. None of these
1928	In rotational motion, analogue of force F is called:	A. Couple B. Torque C. Mass D. Moment of inertia
1929	In case of the three dimensional deformation, when volume is involved, the ratio of applied stress to volumetric strain is called	A. Young's modulus B. Bulk modulus C. Shear modulus D. all of them
1930	The mechanics, which deals with the objects moving with velocities approaching that of light is called	A. Relativistic mechanics B. Wave mechanics C. Quantum mechanics D. Statics
1931	Pair production takes place when energy of γ -ray photon is	A. equal to 1.02 MeV B. greater than 1.02 MeV C. less than 1.02 MeV D. none of these
1932	The magnetic field inside a solenoid can be increased by:	A. Increasing n B. Decreasing I C. Increasing I D. By using iron core within solenoid E. All correct except (B)
1933	Alternating current can not be measured by D.C. ammeter because	A. A.C. can not pass through D.C. Ammeter B. A.C. changes direction C. Average value of current for complete cycle is zero D. D.C. Ammeter will get damaged
1934	A body moves a distance of 10 m along a straight line under the action of a force of 5 N. If the work done is 25 J, the angle which force makes with the direction of motion of a body is:	A. 0° B. 30° C. 60° D. 90°
1935	Radio telescope is used to gather information from	A. Earth B. Moon only C. Far side of the universe D. Sea water
1936	A point on the rim of a wheel moves 0.2 m when the wheel turns through an angle of 14.3 degrees. The radius of the wheel is:	A. 0.05 m B. 0.08 m C. 0.8 m D. 0.008 m

1937	If the values of instantaneous and average velocities are equal, the body is said to be moving with	A. uniform acceleration B. uniform speed C. variable velocity D. uniform velocity
1938	When the object lies between F and 2F, the image formed by is formed at:	A. Virtual B. Diminished C. Erect D. Real
1939	γ -rays are	A. electrostatic waves B. electromagnetic waves C. heavy particles D. longitudinal waves
1940	The basic circuit element in A.C. circuits are:	A. Resistor and capacitor B. Resistor and Inductor C. Capacitor only D. Both (B) and (C) E. None of these
1941	The penetration power of β -particle is	A. zero B. less than α -particle C. equal to α -particle D. greater than α -particle
1942	When some compass needles are placed on a card board along a circle with the center at the wire, they will	A. <p>Point the direction of N-S</p> B. <p>Set themselves tangential to the circle</p> C. <p>Point in the direction of E-W</p> D. <p>None of these</p> E. <p>Point in direction of S-E</p>
1943	An A.C varies as a function of	A. Current B. Voltage C. Time D. Charge
1944	How much force is required to slide one layer of the liquid over the other layer is measured by	A. friction B. density C. viscosity D. resistivity
1945	Amplitude in SHM is equivalent to _____ in circular motion	A. Diameter B. Radius C. Circumference D. None of these
1946	Which one of the following Electro-magnetic wave have the highest frequency and shortest wave-length	A. X-rays B. Ultraviolet rays C. γ -rays D. Cosmic rays
1947	A car battery has e.m.f 12 volt and internal resistance 5×10^{-2} ohm. If it draws 60 ampere current, the terminal voltage of the battery will be	A. 5 volt B. 3 volt C. 15 volt D. 9 volt
1948	A body moving along the circumference of a circle of radius R completes one revolution. The radius of the covered path to the angle subtended at the center is:	A. Radius of the circle B. Twice the radius C. Thrice the radius D. None of these
1949	Electron gun consist of	A. three anodes B. heating cathode C. three anodes D. three anodes , heating cathode, grid

1950	The distance covered by a body in unit time is called.	A. Displacement B. speed C. Velocity D. Both B and C
1951	The chemical properties of an element depends upon the number of	A. electron B. position C. photons D. neutrons
1952	Split rings act as	A. Vibrator B. Resistor C. Motor D. Commulator
1953	Hydrogen atom with only one proton in its nucleus, and one electron in its orbit is called	A. deuteron B. deterium C. protium D. tritium
1954	The ratio of energy E to the corresponding frequency (f) of the radiation (emitted or absorbed) is called:	A. Wien's constant B. Stefen's constnat C. Planck's constant D. Boltzmann's constant E. None of these
1955	The fractional change in resistance per kelvin is known as	A. temperature coefficient B. resistance coefficient C. super temperature D. critical temperature
1956	The density of blood is nearly equal to that of	A. mercury B. sodium C. water D. honey
1957	The resistance of a conductor does not depend on its	A. mass B. resistivity C. length D. cross-sectional area
1958	If the flow is incompressible and the flow is steady then the mass of the fluid through the pipe	A. increases B. decreases C. becomes zero D. is conserved
1959	A digital system deals with quantities which has discrete values:	A. Two in number B. One in number C. Three in number D. Four in number E. None of these
1960	The Stephen-Boltzmann law for the black body radiation is given by	A. $E = T^{²}$ B. $E = -T^{²}$ C. $E = T^{⁴}$ D. $E = -T^{⁴}$
1961	The average of A.C. current and voltage over a complete cycle is	A. Maximum B. zero C. Neither zero nor maximum D. None of these
1962	When low energy photon interact with a metal,which of the following effect is likely to be taken place	A. pair production B. photoelectric C. Compton effect D. None of these
1963	Laplace formula is derived from	A. Isothermal change B. Adiabatic change C. Isobaric change D. None of these
1964	The vibratory or oscillatory motion of a body is	A. translatory motion B. back and forth motion about its mean position C. free all motion D. circular motion
1965	The existence of positron was predicted by Dirace in	A. 1920 B. 1925 C. 1930 D. 1928
1966	The voltage increases linearly with	A. time B. velocity C. acceleration D. torque
1967	The force experienced by an electron projected in a magnetic field B with a velocity V is given by	A. $F=e(V \times B)$ B. $F= -e(V \times B)$ C. $F= e(B \times V)$

	velocity v is given by	<p>C. $\Gamma = e(\mathbf{D} \times \mathbf{v})$</p> <p>D. Both a and c</p>
1968	Nuclei that have the same charge number but different mass number are called	<p>A. isotones</p> <p>B. isomers</p> <p>C. isotopes</p> <p>D. isobars</p>
1969	The passage of current is accompanied by a magnetic field in the surrounding space:	<p>A. Always accompanied</p> <p>B. Sometimes accompanied</p> <p>C. Never accompanied</p> <p>D. Any of above</p> <p>E. None of these</p>
1970	X-rays can penetrate in a solid matte through a distance of several:	<p>A. Kilo metres</p> <p>B. Metres</p> <p>C. Centimeters</p> <p>D. A few angstroms</p> <p>E. One micrometer</p>
1971	Two bodies of masses 1 kg and 5 kg are dropped gently form the top of a tower. A a point 20 cm from the ground both the bodies will have the same	<p>A. Momentum</p> <p>B. Kinetic energy</p> <p>C. Velocity</p> <p>D. Total energy</p>
1972	Braking radiation causes:	<p>A. Continuous spectrum</p> <p>B. Line Spectrum</p> <p>C. Band spectrum</p> <p>D. Discrete specturm</p> <p>E. All of these</p>
1973	A current of 1.6 A is passed through a solution of CuSO_4 . How many Cu^{2+} ions are liberated in one minute?	<p>A. 3×10^{20}</p> <p>B. 3×10^{10}</p> <p>C. 6×10^{20}</p> <p>D. 6×10^{10}</p>
1974	Blood pressure is measured in torr. Which of the following units could belong to torr?	<p>A. N m^{-1}</p> <p>B. N m^{-2}</p> <p>C. N m</p> <p>D. $\text{N}^{-1} \text{m}^{-2}$</p>
1975	Two samples A and B of a gas initially of the same temperature and pressure are compressed from a volume V to a volume $V/2$ such that A is compressed isothermally and B adiabatically. The final pressure	<p>A. A greater than than of B</p> <p>B. A is equal to that of B</p> <p>C. A is less than that of B</p> <p>D. A is twice the pressure of B</p>
1976	When the particles of the medium vibrate about their mean position, along the direction of the motion of waves, then the waves are called:	<p>A. Longitudinal waves</p> <p>B. Transverse waves</p> <p>C. Water waves</p> <p>D. Complex waves</p>
1977	Referring to above figure, due to change in current in the coil P, the change in magnetic flux	<p>A. Is associated with coil P</p> <p>B. Is associated with coil S</p> <p>C. Causes an induced current is coil S</p> <p>D. All of these</p> <p>E. None of these</p>
1978	Newton published laws of motion in his famous book "principia" in	<p>A. 1867</p> <p>B. 1667</p> <p>C. 1676</p> <p>D. 1687</p>
1979	According to the Max plank, energy is redialed or absorberd in	<p>A. discrete packets</p> <p>B. continuous waves</p> <p>C. either of them</p> <p>D. none of these</p>

A. Without any structure

1980	The word amorphous means:	<p>B. With definite structure</p> <p>C. Regular arrangement of molecules</p> <p>D. Both (B) and (C)</p> <p>E. None of these</p>
1981	In a transistor, if the central region is n-type, then this type of transistor is known as	<p>A. n-p-n transistor</p> <p>B. p-n-p transistor</p> <p>C. either of these</p> <p>D. none of these</p>
1982	The unit of spring constant is:	<p>A. J-sec</p> <p>B. Metre</p> <p>C. Nm^{-1}</p> <p>D. None of these</p>
1983	The general theory of relativity treats problems involving	<p>A. inertial frame of references</p> <p>B. accelerating frame of references</p> <p>C. both of these</p> <p>D. none of these</p>
1984	Referring to above figure, a changing current in coil P can be produced:	<p>A. At the instant the switch is closed</p> <p>B. At the instant the switch is opened</p> <p>C. With the help of rheostat</p> <p>D. All of these</p> <p>E. None of these</p>
1985	Which of the following type of force can do no work on the particle on which it acts:	<p>A. Frictional force</p> <p>B. Gravitational force</p> <p>C. Electric force</p> <p>D. Centripetal force</p>
1986	Relativistic mechanics is a branch of physics, which deal with the bodies moving with velocities:	<p>A. More than c</p> <p>B. Approaching c</p> <p>C. Equal to c</p> <p>D. Much less than c</p>
1987	The positive charge moving in one direction is equivalent in all external affects to a:	<p>A. Negative charge is moving in the same direction</p> <p>B. Positive charge is moving in the opposite direction</p> <p>C. Negative charge moving in the opposite direction</p> <p>D. Positive charges moving in the same direction</p> <p>E. None of these</p>
1988	In the region surrounding a current carrying wire:	<p>A. A magnetic field is setup</p> <p>B. The lines of force are elliptical</p> <p>C. Direction of lines of forces depends upon direction of current</p> <p>D. Both (A) and (C)</p>

		E. All of these
1989	The work done in moving a body between two points in a conservative field is independent of the	A. Direction B. Force applied C. Path followed by the body D. Power
1990	A voltmeter is used to measure the	A. potential difference B. current C. temperature D. resistance
1991	The value of the input resistance of OP-AMP is of the order of	A. few ohms B. few hundred ohms C. several kilo ohms D. several mega ohms
1992	Hold the solenoid in the right hand with fingers curling in the direction of current. The direction of the field will be given by:	A. <p class="MsoNormal" style="text-align:justify">Thumb</p> B. <p class="MsoNormal" style="text-align:justify">Curled fingers</p> C. <p class="MsoNormal" style="text-align:justify">Middle finger</p> D. <p class="MsoNormal" style="text-align:justify">Arm of right hand</p> E. <p class="MsoNormal" style="text-align:justify">None of these</p></p></p></p></p></p>
1993	If the distance between two charges is doubled, the force between them will become	A. Double B. Half C. Three times D. One fourth E. One third
1994	An electron of the hydrogen atom in the second orbit is called its:	A. Ground state B. Excited state C. Ionized state D. Any of these E. None of these
1995	On colliding in a closed container, the gas molecules	A. Transfer momentum to the walls B. Momentum becomes zero C. Move in opposite directions D. Perform Brownian motion
1996	Alternating current can induce voltage because it has a	A. High peak value B. Varying magnetic field C. Stronger field than direct current D. Constant magnetic field
1997	The fourth band is a:	A. Silver band B. Red band C. Gold band D. Either A or C E. Either A or B
1998	Substances which break just after the elastic limit is reached, are known as	A. brittle substances B. ductile substances C. plastic substances D. elastic substances
1999	The pointer of a magnetic compass:	A. <p class="MsoNormal" style="text-align:justify">Is affected only by permanent magnets</p> B. <p class="MsoNormal" style="text-align:justify">Align itself parallel to the applied magnetic field</p> C. <p class="MsoNormal" style="text-align:justify">Vibrates in the</p></p></p>

		<p>normal";"serif"; font-size: 16px;">magnetic field of the current</p></o:p></p> D. <p class="MsoNormal" style="text-align:justify">Aligns itself perpendicular to the magnetic field<o:p></o:p></p> E. Both (C) and (D)</p>
2000	The waves produced in a microwave oven have frequency	A. 2450 Hz B. 2450 K Hz C. 2450 M Hz D. 2450 G Hz
2001	the dilation of time applies to the timing processes which are:	A. Physical B. Chemical C. Biological D. All of these E. None of these
2002	The speed of the secondary wavelets as mentioned in Huygen's principle is _____ the speed of propagation of the wave itself	A. Equal to B. Greater than C. Smaller than D. None of these
2003	On heating, glass gradually softens into a paste like before it becomes a very viscous liquid at almost	A. 600<b style="color: rgb(34, 34, 34); font-family: sans-serif;">°C B. 7600<b style="color: rgb(34, 34, 34); font-family: sans-serif;">°C C. 800<b style="color: rgb(34, 34, 34); font-family: sans-serif;">°C D. 900<b style="color: rgb(34, 34, 34); font-family: sans-serif;">°C
2004	Formula for calculating moment of inertia of the bodies of one pair is same. Tick the answer.	A. Disc, sphere B. sphere, hoop C. Thin rod, hoop D. Hoop,disc
2005	Graph of Black body radiation is example of	A. Band spectra B. Continuo's spectra C. Line spectra D. All
2006	Due to the high value of the input resistance, practically, the value of the current which flows between the input terminals is	A. zero B. small C. large D. very large
2007	Least distance of distinct vision of an old man possibly becomes:	A. A little less than 25 cm B. A little more than 25 cm C. Much less than 25 cm D. None of these
2008	According to Rutherford atomic model, the positive charge in an atom	A. is concentrated at its centre B. is in the form of positive electron at same distance from its centre C. is spread uniformly through its volume D. none of these
2009	A body of mass 0.031 kg attached to one end of a spring of spring constant 0.3 N/m, then time period of spring mass system will be:	A. 1.5 sec B. 2.0 sec C. 2.3 sec D. 2.5 sec
2010	Circular motion is an example of motion in:	A. One dimension B. Two dimensions C. Three dimensions D. None of these
2011	The temperature at which the speed of sound becomes double as was at 27°C is	A. 273°C B. 0°C C. 927°C D. 1027°C
2012	Wave length of light, on the average, is given by:	A. 10⁻¹⁴_m B. 10⁻¹⁰_m C. 10<sup>-6</sup><sub>m</sub> D. 10⁻⁴_m
		A. <p class="MsoNormal">Equal</p> B. <p class="MsoNormal"><span style="font-family: "Times New Roman". serif; font-size:

2013	The value of relative permittivity of different dielectrics are:	<p>16px;">Different</p> C. <p class="MsoNormal">Greater than one</p> D. <p class="MsoNormal">Smaller than one</p> E. <p class="MsoNormal">Both (B) and (C)</o:p></o:p></p></p>
2014	Root out the conventional source of energy:	<p>A. Energy from biomass B. hydroelectric energy C. Geothermal energy D. None of these</p>
2015	The effect of friction between different layers of a flowing fluid is described in terms of	<p>A. motion of fluid B. nature of fluid C. colour of fluid D. viscosity of fluid</p>
2016	A mixture of two gases at constant temperature contains molecules of two kinds. The first kind of mass m_1 nd rms speed c_1 and the second molecule has mass m_2 and rms speed c_2 , the ration c_1/c_2 is.	<p>A. m_1/m_2 B. $[m_1/m_2]^{1/2}$ C. m_2/m_1 D. $[m_2/m_1]^{1/2}$</p>
2017	A mass of a liquid of density is mixed with an equal mass of another liquid of density 3. The density of the liquid mixture is.	<p>A. 1 B. $3/2$ p C. 2 D. 4</p>
2018	A non-inertial frame of reference is one, in which	<p>A. law of inertial is valid B. all laws of physics are the same in all frames C. $a \geq 0$ or $a \leq 0$ D. $a = 0$</p>
2019	Charge on proton is	<p>A. 1.59×10^{-9} C B. 1.59×10^{-7} C C. -1.59×10^{-19} C D. 1.59×10^{-19} C</p>
2020	A typical rocket consists of fuel	<p>A. more than 60% of launch mass B. less than 60% of launch mass C. less than 80% of launch mass D. more than 80% of launch mass</p>
2021	The substance in which atoms are so oriented that the field produced by spin and orbital motion of the electrons might add up to zero,are called	<p>A. diamagnetic substances B. ferromagnetic substances C. paramagnetic substances D. all of them</p>
2022	A uniform bar AE of weight 9 N is held horizontal by vertical forces. Two additional force act A and D as shown in figure. The points A,B,C,D and E are at equal intervals along the bar. At which point must vertical force of 6 N act to keep bar in equilibrium.	<p>A. Point D B. Point E C. Point C D. Point B</p>
2023	Marie curie and Pierre curie discovered:	<p>A. Uranium B. Polonium C. Radium D. Both (A) and (C) E. Plutonium</p>
2024	Which of the following is not an example of adiabatic process	<p>A. the rapid escape of air from a burst type B. the rapid expansion and compression of air through which a sound wave is passing C. cloud formation in the atmosphere D. none of them</p>
2025	The direction of the linear momentum is the direction of	<p>A. speed B. velocity C. weight D. none of them</p>
2026	As the water falls from the tap, the cross sectional area should decrease according to.	<p>A. Bernoulli equation B. Venture relation C. Equation of continuity D. None</p>
2027	How many isotopes of helium are present?	<p>A. 1 B. 2 C. 3 D. 4</p>
2028	The number of all the protons and neutrons in a nucleus is known as	<p>A. atomic number B. mass number C. charge number D. none of these</p>

2029	When a force of 0.5 N displaces a body through a distance of 2m in the direction of force, the work done is	A. 0.5 J B. 2 J C. 0.25 J D. 1 J
2030	Angular frequency 'w' is basically a characteristics of	A. linear motion B. circular motion C. both of them D. none of them
2031	When we consider the average velocity of a body, then the body is moving in	A. straight line B. curved path C. may be in a straight or curved path D. none of them
2032	The value of current at resonance in series LCR circuit is affected by the value	A. R only B. C only C. L only D. R, C and L
2033	After alpha decay the atomic number of the atom	A. increase by four B. decreases by two C. increases by two D. decrease by four
2034	One kilogram of different substances contain	A. same number of molecules B. different number of molecules C. may be same or different D. none of them
2035	A capacitor is charged with a battery and then it is disconnected. A slab of dielectric is now inserted between the plates, then	A. The charge in the plates reduces and potential difference increase B. Potential difference between the plates increase, stored energy decreases and charge remains the same C. Potential difference between the plates decreases and charge remains unchanged D. None of the above
2036	The induced current in the loop can be increased by:	A. Using a stronger magnetic field B. Moving the loop faster C. Replacing the loop by a coil of many turns D. All above E. Both (A) and (B)
2037	A particle moving uniformly along circle its projection along diameter performs	A. Linear motion B. Projectile motion C. SHM D. Rotatory motion
2038	The perpendicular distance from the axis of rotation to the line of action of force is called:	A. Moment arm B. Moment of a force C. Torque D. Non of these
2039	An object undergoes S.H.M has maximum speed when its displacement from the mean position is	A. maximum B. zero C. half of the maximum value D. one third of the maximum value
2040	A closed surface contains two equal and opposite charges. The net electric flux from the surface will be	A. Negative B. Positive C. Infinite D. Zero
2041	A monkey sits on the pan of spring scale kept in an elevator. The reading of the spring scale will be maximum when	A. Elevator is stationary B. Elevator cable breaks and it falls freely towards earth C. Elevator accelerates downwards D. Elevator accelerates upward
2042	The He-Ne laser discharge tube is filled with:	A. 85% He B. 15% He C. 50% He D. 60% He E. 85% Ne
2043	A signal is amplified at the output without any change of phase, if it is applied at the	A. inverting input B. non-inverting input C. at any of the input D. none of these
2044	Average value of A.C voltage during one cycle is	A. 1 B. Zero C. Maximum D. Variable
	A particle on the rim of a wheel moves 0.5 cm when the wheel turns through an	A. 0.05 m B. 0.25 m

2045	A point on the rim of a wheel moves 0.2 m where the wheel turns through an angle is 14.3 degrees. The radius of the wheel is:	B. 0.08 m C. 0.8 m D. 0.008 m
2046	Bernoulli's equation is based upon law of conversation	A. Mass B. Momentum C. Energy D. None of these
2047	For the normal operation of the transistor, its	A. emitter-base and collector base junctions are forward biased B. emitter-base junction is reversed biased and collector base junction is forward biased C. emitter-base junction is forward biased and collector-base junction is reverse biased D. any one of these
2048	Kirchhoff's first rule is also called:	A. Loop rule B. Thumb rule C. Point rule D. Right hand rule E. None of these
2049	The thermistors are usually made of	A. Metals with low temperature coefficient of resistivity B. Metals with high temperature coefficient of resistivity C. Metal oxides with high temperature coefficient of resistivity D. Semi conducting materials having low temperature coefficient of resistivity
2050	Stock's law holds for:	A. Motion through free space B. Motion through viscous medium C. Bodies of all shapes D. None of these
2051	The motion of a body in a straight line is the motion in	A. one dimension B. two dimension C. three dimension D. four dimension
2052	Zirconia is classified as:	A. Ceramic solid B. Ionic compound C. Metal D. Either (A) or (B) E. Either (B) or (C)
2053	The least distance of distinct vision is:	A. 10 cm B. 25 cm C. 50 cm D. 100 cm
2054	The consumption of energy by a 1000 watt heater in half an hour is:	A. 5 Kwh B. 0.5 Kwh C. 2.5 Kwh D. 3.2 Kwh
2055	The branch of physics, which deals with the structure and properties of solids is called:	A. Plasma physics B. Solid state physics C. Any of above D. Astro physics
2056	In a surface tension experiment with a capillary tube water rises up to 0.1 m. if the same experiment is repeated on an artificial satellite, which is revolving around the earth, water will rise in the capillary tube up to a height of	A. 0.1 m B. 0.2 m C. 0.98 m D. Full length of the capillary tube
2057	For an atom having atomic number 'Z' and atomic weight 'A', the number of neutrons in the nucleus is	A. A - Z B. A C. Z D. A + Z
2058	The fluid is incompressible, if its density is	A. zero B. constant C. very high D. very small

A. Shape of geometry of the closed surface

B. Charge enclosed

2059	The flux through a closed surface depends upon:	<p>C. Nature of the medium</p> <p>D. Both (A) and (B)</p> <p>E. Both (B) and (C)</p>
2060	Most of the electrons in the base of an NPN transistor flow	<p>A. Out of the base lead</p> <p>B. Into the collector</p> <p>C. Into the emit</p> <p>D. Into the base supply</p>
2061	The permeability of free space is measured in:	<p>A. Wb/Am</p> <p>B. Wb A/m</p> <p>C. Am/Wb</p> <p>D. m/Web A</p> <p>E. None of these</p>
2062	The rear wheels of an automobile are rotating with an angular velocity of 14 rev/sec which is reduced to 38 rad/sec in 5 second when brakes are applied. Its angular acceleration is:	<p>A. 5 rad/sec^2</p> <p>B. -10 rev/sec^2</p> <p>C. -10 rad/sec^2</p> <p>D. -5 rev/sec^2</p>
2063	Recently a complex crystalline structure known as Yttrium Barium Copper Oxide have been reported to become superconductor at	<p>A. 125 K</p> <p>B. 25 K</p> <p>C. 263 K</p> <p>D. 163 K</p>
2064	Tick the conservative force:	<p>A. tension in a string</p> <p>B. Air resistance</p> <p>C. Elastic spring force</p> <p>D. Frictional force</p>
2065	The vibrations of factory floor caused by the running of heavy machinery is an example of	<p>A. free vibration</p> <p>B. natural vibrations</p> <p>C. forced vibrations</p> <p>D. all of them</p>
2066	A particle of mass 0.5 g moving along x-axis is located of $x_1 = 15 \text{ m}$ at $t_1 = 5 \text{ s}$ and $x_2 = 33 \text{ m}$ at $t_2 = 13 \text{ s}$ its average velocity is	<p>A. 6 m s^{-1}</p> <p>B. 2.45 m s^{-1}</p> <p>C. 2.25 m s^{-1}</p> <p>D. 4.45 m s^{-1}</p>
2067	Force acting upon a charged particle kept between the plates of a charged condenser if F. IF one of the plates of the condenser is removed, force acting on the same will become	<p>A. Zero</p> <p>B. $F/2$</p> <p>C. F</p> <p>D. 2F</p>
2068	Light has:	<p>A. Wave nature</p> <p>B. Particle nature</p> <p>C. Dual nature</p> <p>D. None of these</p>
2069	The horizontal range of projectile, at a certain place, depends upon	<p>A. the mass of the projectile</p> <p>B. velocity of projection</p> <p>C. angle of projection</p> <p>D. angle as well as velocity of projection</p>
2070	The SI unit of spring constant is identical with that of	<p>A. Force</p> <p>B. Surface tension</p> <p>C. Pressure</p> <p>D. Loudness</p>
2071	Which of the following is scalar quantity?	<p>A. Electric potential</p> <p>B. Velocity</p> <p>C. Momentum</p> <p>D. Force</p>
2072	At ordinary temperature, an increase in temperature increases the conductivity of	<p>A. Conductor</p> <p>B. Semiconductor</p> <p>C. Insulator</p> <p>D. Alloy</p>
2073	Work done on a body by gravity in lifting it up to certain height is	<p>A. Maximum</p> <p>B. Minimum</p> <p>C. Zero</p> <p>D. Negative</p>

2074	Time period of a simple pendulum depends upon the	A. length of the pendulum B. acceleration due to gravity C. none of them D. both of them
2075	According to the special theory of relativity, time is	A. absolute quantity B. not absolute quantity C. constant quantity D. none of these
2076	Huygen's principles states that:	A. Light has dual nature B. Either of these C. None of these D. Light travels in straight line
2077	Two point charges A and B separated by a distance R attract each other with a force of $12 \times 10^{-3} \text{ N}$. The force between A and B when the charges on them are doubled and distance is halved	A. 1.92 N B. 19.2 N C. 12 N D. 0.192 N
2078	The half life of radium-226 is	A. 238 years B. 4.5×10^9 days C. 1620 years D. 332 years
2079	Smaller the damping, greater will be the	A. frequency B. wavelength C. amplitude D. none of them
2080	Radioactivity	A. is exhibited more by semiconductors in general B. is exhibited more by the element when they are coupled C. with other radioactive elements by a covalent bond D. is an atomic property of radioactive elements
2081	A body is floating in a liquid. The up thrust on the body is	A. Equal to weight of liquid displaced B. Zero C. Less than the weight of liquid displaced D. Weight of body-weight of liquid displaced
2082	In which of the following diodes when an electron combines with a hole during the forward biasing, photon of visible light is emitted.	A. photo diode B. light emitting diode C. photo voltaic cell D. all of them
2083	Physics details with the study of:	A. Matter B. Energy C. Both of them D. Human body
2084	Resolving power in mth order diffraction for grating is given by:	A. $R = N/m$ B. $R = m/N$ C. $R = N \times m$ D. None of these
2085	γ -rays behave like a particle because they explain the	A. Compton effect B. Photoelectric effect C. Pair-production D. all the above
2086	Which of the following phenomenon proves the particle nature of light	A. interference B. diffraction C. photoelectric effect D. none of these
2087	Neutron was discovered by:	A. Rutherford in 1920 B. Chadwick in 1922 C. Bohr in 1913 D. Compton in 1927 E. None of these
2088	In an experiment the uncertainty in the value of a resistor is 2% furthermore, the uncertainty in the potential difference across the same resistor is 1%. The uncertainty in the power loss in the resistor is.	A. Approximately 3% B. Approximately 5% C. Approximately 4% D. Approximately 6%
2089	A vector of magnitude 5 N is added to a vector of magnitude 8 N while the orientations are changeable. Range of their possible sum will be very from:	A. Zero to 3 N B. 1 N to 13 N C. 13 N to 3 N D. None of these
2090	A transistor has:	A. One region B. Two regions C. Three regions D. Four regions E. None is correct

2091	The direction of lines of force depends upon the direction of	<p>A. voltage</p> <p>B. current</p> <p>C. charges</p> <p>D. none of these</p>
2092	The lasing or active medium in He-Ne laser discharge tube is:	<p>A. Nitrogen</p> <p>B. Helium</p> <p>C. Hydrogen</p> <p>D. Neon</p> <p>E. None of these</p>
2093	Which one of the following is not a vector quantity?	<p>A. Kinetic energy</p> <p>B. Acceleration</p> <p>C. Momentum</p> <p>D. Force</p>
2094	The number of isotopes of hydrogen are	<p>A. 2</p> <p>B. 1</p> <p>C. 3</p> <p>D. 4</p>
2095	The charge carries in the electrolyte are:	<p>A. <p class="MsoNormal" style="text-align:justify">Positive ions</p></p> <p>B. <p class="MsoNormal" style="text-align:justify">Negative ions</p></p> <p>C. <p class="MsoNormal" style="text-align:justify">Either (A) or (B)</p></p> <p>D. <p class="MsoNormal" style="text-align:justify">Both (A) and (B)</p></p> <p>E. <p class="MsoNormal" style="text-align:justify">Neither (A) nor (B)</p></p>
2096	Practically the quantity v/c is always:	<p>A. less than one</p> <p>B. Equal to one</p> <p>C. Greater than one</p> <p>D. all of these</p> <p>E. None of these</p>
2097	Two vectors to be combined have magnitudes of 60 N and 35 N. Pick the possible answer:	<p>A. 100 N</p> <p>B. 70 N</p> <p>C. 20 N</p> <p>D. Zero</p>
2098	When two protons are brought are brought closer potential energy of both of them:	<p>A. Increases</p> <p>B. Decreases</p> <p>C. Remains same</p> <p>D. None of these</p>
2099	According to Stoke's law, drag force depends on	<p>A. Initial velocity</p> <p>B. Final velocity</p> <p>C. Terminal velocity</p> <p>D. Instantaneous velocity</p>
2100	Alfa particles are	<p>A. hydrogen nuclei</p> <p>B. helium nuclei</p> <p>C. electrons</p> <p>D. photons</p>
2101	A sinusoidally alternating voltage or current can be graphically represented by a:	<p>A. Vector</p> <p>B. Rotating vector</p> <p>C. Clockwise vector</p> <p>D. Anticlockwise voltage vector</p> <p>E. None of these</p>
2102	A flywheel accelerates from rest to an angular velocity of 7 rad/sec in 7 seconds. Its average acceleration will be:	<p>A. 49 rad/sec^2</p> <p>B. 1 rad/sec^2</p> <p>C. 0.16 rev/sec^2</p> <p>D. Both A and C</p> <p>E. Both B and C</p>
2103	There is present in paraffin a large amount of:	<p>A. Nitrogen</p> <p>B. Hydrogen</p> <p>C. Carbon</p> <p>D. Barvllium</p>

		E. Lithium
2104	The path described by a projectile is called its	A. orbit B. trajectory C. range D. distance
2105	The force which maintain the strict long-range order between atoms of a crystalline solid is the:	A. Nuclear force B. Cohesive force C. Adhesive force D. Coulomb force E. None of these
2106	In SHM, there is always a constant ratio between displacement if body and its:	A. Velocity B. Period C. Mass D. Acceleration
2107	In an ideal gas, the molecules have:	A. Kinetic energy only B. Potential energy only C. Both KE and PE D. None of these
2108	A line which represents the direction of travel of a wave is known as:	A. Spherical Wavefront B. Locus C. Ray D. Either B or C
2109	Such an inductor coil which does not consume energy and is often employed for controlling a.c. without consumption of energy is called	A. Choke B. impedance C. Semi-conductor D. None
2110	10 c.c. each of oxygen and hydrogen are kept in separate flasks. Then which of the following relations is correct?	A. Each have same number of molecules B. Don't have same number of molecules C. Can't be predicted D. None
2111	Particles have the mass smallest of following is	A. Electron B. Proton C. Neutron D. Quark
2112	A car is turning around a corner at 10 m/sec as it travels along an arc of a circle. If value of centripetal acceleration is 10 m/sec ² in this case, find radius of the circular path:	A. 1 m B. 5 m C. 10 m D. 15 m
2113	If the value of C in a series RLC circuit is increased, the resonant frequency	A. Is not affected B. Increase C. Remains the same D. Decreases
2114	Neon gas have three isotopes whose atomic numbers are	A. 20, 24 , 23 B. 20, 21 , 22 C. 20, 19 , 21 D. none of these
2115	In a voltmeter the conduction takes place due to	A. Electrons only B. Holes only C. Electrons and holes D. Electrons and ions
2116	When a conductor moved with its length parallel to the lines of magnetic fled:	A. An emf is induced across its ends B. Emf induced is similar to that of a battery C. Emf passes through the conductor D. Both A and B E. None of these
2117	The principle characteristics of an ideal standard are	A. Inaccessible and Invariable B. Accessible and Invariable C. Accessible and Variable D. None of these
2118	Every crystalline solid has	A. definite melting point B. different melting points C. may or may not be definite D. none of them
2119	.Depletion region contains:	A. Protons B. Positive ions C. Negative ions D. Both (B) and (C) E. Both (A) and (C)
2120	A water hose with an internal diameter of 20 mm at the outlet discharges 30 kg of water in 60 s. What is water speed at the outlet if density of water is 1000 kg/m ³ during its steady flow	A. 1.3 m/s B. 1.6 m/s C. 1.9 m/s D. 2.2 m/s

2121	The force exerted on a conductor of length L , carrying current I when placed in a magnetic field B is given by	A. $F = IB/L$ B. $F = L \times B/I$ C. $F = IL \times B$ D. $F = IL \cdot B$
2122	Vibratory motion is always under	A. Applied force B. Restoring force C. Periodic force D. Gravitational force
2123	During the upward motion of the projectile, the vertical component of velocity:	A. Decreases B. Increases C. Remains constant D. None of these
2124	Angle between the ray of light and the corresponding wavefront is:	A. 0° B. 60° C. 90° D. 120°
2125	Curie is a unit of	A. reluctance B. resistivity C. binding energy D. radioactivity
2126	Neutron was discovered by	A. Curie B. Roentgen C. Chadwick D. Rutherford
2127	A metastable state:	A. Is an excited state B. Is that in which excited electron is stable C. Is that in which excited electron is usually unstable D. Means a time interval of 10^{-8} second E. Both (A) and (C)
2128	If m is the mass of the gases ejected per second with velocity v relative to the rocket of mass M , then the acceleration of rocket is	A. $a = M/mv$ B. $a = mM/v$ C. $a = mv/M$ D. $a = v/mm$
2129	Work has the dimension as that of:	A. Torque B. Angular momentum C. Linear momentum D. Power
2130	The SI unit of magnetic induction is	A. Gauss B. Tesla C. Weber D. Weber^2
2131	If a gymnast sitting on a rotating stool with his arms outstretched, brings his arms towards the chest, then its angular velocity will	A. Increase B. Decrease C. Remain constant D. None of these
2132	SHM is type of _____ motion	A. Vibratory B. Linear C. Circular D. None
2133	Nucleus of a hydrogen atom may contain:	A. One neutron only B. Two protons and one neutron C. Two protons and two neutrons D. Any of above E. One proton only
		A. Tangential

2134	Centripetal acceleration is also called _____ acceleration:	B. Radial C. Angular D. None of them
2135	If the time period a simple pendulum is 2 s, its frequency would be	A. 2 Hz B. 1.5 Hz C. 1.0 Hz D. 0.5 Hz
2136	An emf is set up in a conductor when it:	A. Is kept in a magnetic field B. Is kept in an electric field C. Moves across a magnetic field D. Both A and B E. None of these
2137	The electric intensity at infinite distance from the point charge will be	A. Infinite B. Positive C. Zero D. Negative
2138	A body of mass 1.0 kg is falling with an acceleration of 10 m/s^2 . Its apparent weight will be ($g=10 \text{ m/s}^2$)	A. 1.0 kg wt B. 2.0 kg wt C. 0.5 kg wt D. Zero
2139	Bernoulli's equation is applicable for	A. turbulent flow B. streamline flow C. both (a) and (b) D. all kinds of flows
2140	The relation between the charge Q of a parallel plate capacitor and the P.D between its plates is	A. $Q=V/C$ B. $Q=C/V$ C. $Q=1/2CV$ D. $Q=CV$
2141	The maximum stress that a material can withstand, is known as	A. plastic point B. elastic limit C. yield point D. ultimate tensile strength
2142	When a body is performing S.H.M., its acceleration is	A. inversely proportional to the displacement B. directly proportional to the applied force C. directly proportional to the amplitude D. directly proportional to the displacement but in opposite direction
2143	Huygen principle is used to determine	A. Speed of light B. Location of wavefront C. About polarized and unpolarized light D. None of them
2144	A body of mass 5 kg is acted upon by a constant force of 20 n for 7 seconds. The total change in momentum will be:	A. 10 NS B. 100 NS C. 140 NS D. 200 NS
2145	The branch of physics which concerned with the ultimate particles of which the universe is composed is known as	A. SolidState physics B. Particle Physics C. Nuclear Physics D. Atomic Physics
2146	The machines which deals with the objects moving with velocities approaching that of light is called:	A. Relativistic mechanics B. Wave mechanics C. Quantum D. Statics mechanics
2147	The analysis of fluid motion becomes simplified by using	A. law of conservation B. law of conservation of energy C. both of them D. none of them
2148	A 2 kg block is held 1 m above floor for 50 seconds. The work done is:	A. Zero B. 10.2 J C. 100 J D. 980 J
2149	One coulomb of charge is created by	A. 10 electrons B. 1.6×10^{19} electrons C. 6.25×10^{18} electrons D. 6.25×10^{21} electrons
2150	If the amplitude of sound is doubled and the frequency reduced to one-fourth, the intensity of sound at the same point will be	A. Increasing by a factor of 2 B. Decreasing by a factor of 2 C. Decreasing by a factor of 4 D. Unchanged

A. Second
B. Metre

2151	The unit of decay constant is:	C. Hour D. Year E. Second ⁻¹
2152	The smallest three dimensional basic structure is called as:	A. An atom B. Unit cell C. Crystal lattice D. Polymer E. None of these
2153	By placing a dielectric in between the charges, the electrostatic force between them	A. Is always reduced B. Is always increased C. Is not affected D. Is increased one million times E. None of these
2154	The SI unit of strain is	A. N B. Dynes C. Pascal D. Dimensionless
2155	A 1000 Kg car travelling with a speed of 90 km/hr turns around a curve of radius 0.1 km. The necessary centripetal force comes out to be:	A. 8.1×10^7 N B. 625 N C. 6250 N D. None of these
2156	The locus of all the points in the same phase of vibration is called:	A. Wave packet B. Wave front C. Wave number D. None of them
2157	The modulus of elasticity can be written as	A. stress x strain B. strain/stress C. $\frac{1}{2}$ x stress x strain D. stress/strain
2158	When a body is pulled away from its rest or equilibrium position and then released, the body oscillates due to	A. applied force B. momentum C. restoring force D. none of them
2159	Find the total displacement of a body in 8 seconds starting from rest with an acceleration of 20 cm/s^2	A. 0.064 m B. 640 cm C. 64 cm D. 64 m
2160	If 'V' is the relativistic speed and 'C' is the speed of light then according to Einstien the factor V/C must always be	A. Equal to 1 B. Less than 1 C. Greater than 1 D. Infinity
2161	An electron is accelerated through a potential difference of 50v. its de-Broglie wavelength is	A. 1.66×10^{-29} m B. 1.74×10^{-10} cm C. 17.4×10^{-6} m D. 1.74×10^{-10} m
2162	The quantity having dimension of ML^2T^{-2} will earth is:	A. 80 sec B. 500 sec C. 1.802×10^4 sec D. Aerophysics
2163	As the current flows through the wire	A. It generates heat in the wire B. It produces sound in the wire C. Resistance of the wire decrease D. Voltage across the ends is the increase E. None of these
2164	The domains are of macroscopic size of the order of	A. centimeters B. meters C. millimeters D. nanometers
2165	Astrophysics is a branch of physics, which deals with:	A. Sub-atomic particles B. Stars and galaxies C. Light and sound D. Music
2166	When the total displacement is divided by total time taken, we get:	A. Velocity B. Average speed C. Average velocity D. None of these
2167	In gases, the charge carriers are:	A. Electrons B. Positive ions C. Negative ions D. Both A and C E. Both A and B

2168	When a platinum wire is heated, it appears orange red at	<p>A. 500°C</p> <p>B. 900°C</p> <p>C. 1100°C</p> <p>D. 1300°C</p>
2169	In a container having water filled up to a height h, a hole is made in the bottom. The velocity of water flowing out of the hole is	<p>A. Independent of h</p> <p>B. Proportional to $h^{1/2}$</p> <p>C. Proportional to h</p> <p>D. Proportional to h^2</p>
2170	Which one of the following phenomenon cannot be explained on the bases of Huygen's theory	<p>A. Refraction</p> <p>B. Reflection</p> <p>C. Diffraction</p> <p>D. Formation of spectrum</p>
2171	Swimming becomes possible because of _____ law of motion.	<p>A. First</p> <p>B. Second</p> <p>C. Third</p> <p>D. None of these</p>
2172	Units of impedance are	<p>A. Henry</p> <p>B. Ohms</p> <p>C. moh</p> <p>D. Watt</p>
2173	Which of the following is an example of a S.H.M?	<p>A. motion of a projectile</p> <p>B. motion of a train along a circular path</p> <p>C. motion of swing</p> <p>D. electrons revolving sound the nucleus</p>
2174	If we draw a graph between d(along x-axis) and F (along y-axis) and get a straight line horizontal to x-axis then area under this straight line represents:	<p>A. Power</p> <p>B. Work</p> <p>C. Pressure</p> <p>D. None of these</p>
2175	A particle is moving along a circular path with uniform speed. Its projection will execute _____ along the _____ of the circle:	<p>A. Circular motion, circumference</p> <p>B. Vibrator, chord</p> <p>C. SHM, diameter</p> <p>D. SHM, circumference</p>
2176	The dimension of linear inertia is:	<p>A. MLT^2</p> <p>B. ML^0T^{-2}</p> <p>C. ML^0T^0</p> <p>D. MLT^{-1}</p>
2177	Amount of heat required to raise the temperature of a body through 1 K is called its	<p>A. Specific heat</p> <p>B. Water equivalent</p> <p>C. Thermal capacity</p> <p>D. Entropy</p>
2178	During the nuclear changes, the law/s of conservation that hold/s are that of:	<p>A. Charge</p> <p>B. energy</p> <p>C. Momentum</p> <p>D. Mass</p> <p>E. All of these</p>
2179	Two sources are said to be coherent if they have	<p>A. Same amplitude</p> <p>B. Same wavelength</p> <p>C. Definite phase relation with each other</p> <p>D. None of them</p>
2180	Diameter of the nucleus s of the order of	<p>A. 10^{-10}m</p> <p>B. 10^{-12}m</p> <p>C. 10^{-15}m</p> <p>D. 10^{-18}m</p>
2181	In magnet-coil experiment, emf can be produced by:	<p>A. Keeping the coil stationary and moving the magnet</p> <p>B. Keeping the magnet stationary and moving the coil</p> <p>C. Relative motion of the loop and magnet</p> <p>D. Any one of above</p> <p>E. All above</p>
2182	A body with frequency of would complete one vibration in:	<p>A. f seconds</p> <p>B. $1/f$ seconds</p> <p>C. 1 second</p> <p>D. f^2 second</p>
2183	With the propagation of a longitudinal wave through a material medium, the quantities transmitted in the propagation direction are	<p>A. Energy, momentum and mass</p> <p>B. Energy</p> <p>C. Energy and mass</p> <p>D. Energy and linear momentum</p>
		<p>A. If the body is not moving the acceleration is necessarily zero</p> <p>B. If the body is slowing, the retardation is negative</p>

2184	For a moving body, at any instant of time	C. If the body is slowing, the distance is negative D. If displacement, velocity and acceleration at that instant are known, we can find the displacement at any given time in future
2185	A cold soft drink is kept on the balance. When the cap is opened, then the weight	A. Increases B. Decreases C. First increases, then decreases D. Remains same
2186	Instead of moving the coil towards a magnet, the magnet is moved towards the coil with the same speed. The galvanometer shows current	A. Of same magnitude in the same direction B. Of different magnitude in the same direction C. Of same magnitude but in opposite direction D. Of different magnitude in the opposite direction E. None of these
2187	In order to make a voltmeter, high resistance is connected with galvanometer, in	A. perpendicular B. may be paralalled or pendicular C. series D. none of these
2188	A particle of mass 5.0 mg moves with a speed of 8.0 m/s. Its de-Broglie wavelength is	A. 1.66 m B. 1.66×10^{-10} m C. 1.66×10^{-29} cm D. 1.66×10^{-29} m
2189	You have 20 capacitors available with you, each of 15 F, You need a capacitor of around 1F in a circuit. You can achieve this value by connecting	A. 15 capacitors in parallel B. 15 capacitors in series C. 20 Capacitors in series D. 20 Capacitors in parallel
2190	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of them
2191	Transformer is used to	A. Increase alternating current B. Increase d.c voltage C. Increase & Decrease emf D. All answers are right
2192	Two projectiles are fired from the same point with the same speed at angles of projection 60° and 30° respectively. Which one of the following is true?	A. Their range will be same B. Their maximum height will be same C. Their landing velocity will be same D. Their time of flight will be same
2193	Brownian motion increases due to	A. Increase in size of Brownian particle B. Increase in temperature of medium C. Increase in density of medium D. Increase in viscosity of medium
2194	The special theory of relativity treats problems involving	A. inertial frame of references B. accelerating frame of references C. both of these D. none of these
2195	A 220 V, 50 Hz. A.C. source is connected to an inductance of 0.2 H and a resistance of 20 ohm in series. What is the current in the circuit?	A. 10 A B. 5 A C. 33.3 A D. 3.33 A
2196	A solar cell is made from:	A. Iron B. Silicon C. Germanium D. Copper
2197	If a force of 0.05 N produces an elongation of 20 mm in a string, then its spring constant will be:	A. 250 N m^{-1} B. 25 N m^{-1} C. 2.5 N m^{-1} D. None of these
2198	During the projectile motion, the horizontal component of velocity	A. changes with time B. remains constant C. becomes zero D. decreases with time
2199	If x-component of a vector is -3 N and y-component is 3 N, then angle of resultant vector will x-axis is:	A. 45° B. 315° C. 135°

		107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 225°
2200	Which of the following is not an example of inertial frame	A. a body placed on the surface of earth B. a body placed in a car moving with uniform velocity C. a body placed in a car moving with same acceleration D. none of these
2201	A car moves for half of its time at 80 km/h and rest half of time at 40 km/h, The total distance covered is 60 km. What is the average speed of the car?	A. 60 km/hr B. 80 km/hr C. 120 km/hr D. 180 km/hr
2202	When a transistor is used as a switch the circuit in which the current is to be switched OFF and ON, is connected between the	A. base and emitter B. collector and emitter C. base and collector D. any one of these
2203	Under the elastic region, the deformation produced in the material, the deformation produced in the material will be	A. permanent B. temporary C. either of them D. none of them
2204	According to the second law, which is must to produce work	A. a source contains a large amount of heat energy B. two sources at the same temperature C. two sources at the different temperatures D. a source contains a small amount of energy
2205	The value of the metastable state for Neon is	A. 20.66eV B. 20.61eV C. 19.23eV D. 18.70eV
2206	Which of the following can become a good temporarily magnet	A. iron B. steel C. both of them D. none of them
2207	The nature of thermal radiation is similar to:	A. Ultraviolet rays B. Light rays C. Both of them D. None of these
2208	Distance to nearest galaxy from earth is	A. 10^{10} m B. 10^{15} m C. 10^{40} m D. 10^{30} m
2209	The induced current in a conductor depends upon:	A. Resistance of the loop B. Speed with which the conductor moves C. Any of these D. Both (A) and (B) E. None of these
2210	What is the coefficient of mutual inductance, when the magnetic flux changes by 2×10^{-2} Wb, and change in current is 0.01 A?	A. 2 H B. 3 H C. 1/2 H D. Zero
2211	The velocity of sound in air depends upon	A. Density and elasticity of gas B. Pressure C. Wavelength D. Amplitude and frequency of sound
2212	When two waves with same frequency and constant phase difference interfere	A. There is a gain of energy B. There is a loss of energy C. The energy is redistributed and the distribution changes with time D. The energy is redistributed and the distribution remains constant with time
2213	Moment of linear momentum is called.	A. Moment arm B. Moment of inertia C. Inertia D. Angular momentum
2214	Force is a:	A. Scalar quantity B. Base quantity C. Derived quantity

		<p>C. Correct quantity</p> <p>D. None of these</p>
2215	Which one of the least multiple:	<p>A. Pico</p> <p>B. Femto</p> <p>C. Nano</p> <p>D. Atto</p>
2216	Mathematical manipulation of the two quantized states can be best carried if they are represented by	<p>A. high - low</p> <p>B. yes - no</p> <p>C. on - off</p> <p>D. 0 - 1</p>
2217	Which is modified form of galvanometer	<p>A. potentiometer</p> <p>B. battery</p> <p>C. voltmeter</p> <p>D. slide wire bridge</p>
2218	Capacitance of two or more capacitors	<p>A. Increases in series combination</p> <p>B. Increases in parallel combination</p> <p>C. Remains unchanged</p> <p>D. None of the above</p>
2219	Amorphous solids are also called as	<p>A. crystalline solids</p> <p>B. polymeric solids</p> <p>C. glassy solids</p> <p>D. any one of them</p>
2220	When two protons are brought closer potential energy of both of them:	<p>A. Increases</p> <p>B. Decreases</p> <p>C. Remains same</p> <p>D. None of these</p>
2221	With the help of 50 K v electron microscope, a resolution of	<p>A. 0.5 to 1 m to possible</p> <p>B. 1 m to 10 m is possible</p> <p>C. 0.5 to 1 nm is possible</p> <p>D. 1 to 10 nm is possible</p>
2222	The behaviour of gases is well accounted by the kinetic theory based on	<p>A. microscopic approach</p> <p>B. macroscopic approach</p> <p>C. both of them</p> <p>D. none of them</p>
2223	The root mean square voltage for alternating current is	<p>D. All of these</p>
2224	The direction of vector in space is specified by:	<p>A. One angle</p> <p>B. Two angles</p> <p>C. Three angles</p> <p>D. None of above</p>
2225	The product of the pressure and volume of an ideal gas is	<p>A. A constant</p> <p>B. Approximately equal to the universal gas constant</p> <p>C. Directly proportional to its temperature</p> <p>D. Inversely proportional to its temperature</p>
2226	Free oscillations are always produced by:	<p>A. An applied force</p> <p>B. Gravitational force</p> <p>C. Restoring force and inertia</p> <p>D. Inertia only</p>
2227	If the volume of the gas is to be increased by 4 times, then	<p>A. Temperature and pressure must be doubled</p> <p>B. At constant P the temperature must be increased by 4 times</p> <p>C. At constant T the pressure must be increased by four times</p> <p>D. It cannot be increased</p>
2228	Fluorescent screen is a screen where visible spot	<p>A. vanishes</p> <p>B. is made</p> <p>C. becomes small and large</p> <p>D. none of these</p>
2229	When a body is vibrating, the displacement from mean position:	<p>A. Increases with time</p> <p>B. Decreases with time</p> <p>C. Changes with time</p> <p>D. None of these</p>
2230	The displacement of body executing SHM is	<p>A. $x \sin \omega t$</p> <p>B. $x \cos \omega t$</p> <p>C. $x \sin^2 \omega t$</p> <p>D. Both A, B</p>
2231	In series RC circuit when $R = X_C$, then the phase angle is	<p>A. 0°</p> <p>B. 90°</p> <p>C. 70°</p> <p>D. 45°</p>

2232	Amplitude in SHM is equivalent to _____ in circular motion:	<p>A. Diameter</p> <p>B. Radius</p> <p>C. Circumference</p> <p>D. None of these</p>
2233	Absolute motion cannot be detected	<p>A. in its own frame of references</p> <p>B. in a different frame of references</p> <p>C. both in its frame and different frame of references</p> <p>D. none of these</p>
2234	The size of the image is maximum when its distance from the magnifying glass is:	<p>A. 0.10 m</p> <p>B. 0.15 m</p> <p>C. 0.20 m</p> <p>D. 0.25 m</p>
2235	A circuit has a resistance of 11Ω an inductive reactance of 25Ω and a capacitance reactance of 18Ω . It is connected to an a.c. source of 200 V and 50 Hz. The current through the circuit (in amperes) is	<p>A. 11</p> <p>B. 15</p> <p>C. 18</p> <p>D. 20</p>
2236	The density of water is 10^3kg/m^3 . The water pressure on a submarine is $2.0 \times 10^7\text{N/m}^2$. The depth of the submarine below the surface of the water, in meters, is approximately	<p>A. 200 m</p> <p>B. 11000 m</p> <p>C. 2000 m</p> <p>D. 8000 m</p>
2237	If force and displacement are in opposite direction, the work done is taken as	<p>A. Positive work</p> <p>B. Negative work</p> <p>C. Zero work</p> <p>D. Infinite work</p>
2238	The electric flux through any surface depends upon:	<p>A. Intensity of electric field</p> <p>B. Area of the surface</p> <p>C. Angle between intensity and area</p> <p>D. All of these</p> <p>E. None of these</p>
2239	By which velocity a ball be projected vertically so that the distance covered by it in 5th seconds is twice the distance it covers in its 6th second ($g=10\text{m/s}^2$)	<p>A. 58.8 m/s</p> <p>B. 49 m/s</p> <p>C. 65 m/s</p> <p>D. 19.6 m/s</p>
2240	A full-scale deflection is obtained in a galvanometer with a current of few	<p>A. ampere</p> <p>B. volts</p> <p>C. milliampere</p> <p>D. ohm</p>
2241	A stone is tied to the end of a 20 cm long string is whirled in a horizontal circle. if centripetal acceleration is 9.8 m/sec^2 , then its angular velocity in rad/sec is:	<p>A. 22/7</p> <p>B. 7</p> <p>C. 14</p> <p>D. 21</p>
2242	For a given angle of projection, if the time of flight of a projectile is doubled, the horizontal range will increases to	<p>A. Four times</p> <p>B. Thrice</p> <p>C. Once</p> <p>D. Twice</p>
2243	The contrast in the fringes in an interference pattern depends upon	<p>A. Fringe width</p> <p>B. Relative difference intensities of the two sources</p> <p>C. Distance between the slits</p> <p>D. Wavelength</p>
2244	The entire wave form of sinusoidal voltage is actually a set of all the:	<p>A. Positive maximum value + V_{max} and negative maximum value $-V_{\text{max}}$</p> <p>B. Positive maximum value + V_{max} and zero</p> <p>C. Zero and negative maximum value $-V_{\text{max}}$</p> <p>D. Any of these</p> <p>E. None of these</p>
		<p>A. Plastic</p> <p>B. Synthetic rubbers</p>

2245	Examples of polymeric substances are:	C. Zirconia D. All of these E. Both (A) and (B)
2246	At the present time, the main frontiers of fundamental science are	A. 2 B. 3 C. 4 D. 5
2247	An important part of inkjet printer is:	A. toner<="" span><br="" style='font-size:12.0pt;line-height:107%; font-family:"Times New Roman";"serif";mso-fareast-font-family:Calibri; mso-fareast-theme-font:minor-latin;mso-ansi-language:EN-US;mso-fareast-language: EN-US;mso-bidi-language:AR-SA'> B. drum<o:p><="" o:p><="" p><br="" span><="" style='font-size:12.0pt;line-height:107%; font-family: "Times New Roman";"serif";'> C. deflection="" o:p><="" p><br="" plates<o:p><="" span><="" style='font-size:12.0pt;line-height:107%; font-family: "Times New Roman";"serif";'> D. heated="" o:p><="" p><br="" roles<o:p><="" span><="" style='font-size:12.0pt;line-height:107%; font-family: "Times New Roman";"serif";'> E. none="" o:p><="" of="" p><="" span><="" style='font-size:12.0pt;line-height:107%; font-family: "Times New Roman";"serif";' td="" these<o:p><="">
2248	Unless stated otherwise, when we speak of A.C. meter reading, we usually mean:	A. Peak value B. RMS value C. Instantaneous value D. Peak-to-peak value E. Both (A) and (C)
2249	The body of physics involves	A. Structure of space and time B. Interaction of electromagnetic radiation with matter C. Both of them D. Chemical Changes
2250	The sources of magnetic field are	A. isolated magnetic poles B. charges at rest C. charges in motion D. none of these
2251	The short distance between two points direction from its initial point to final point is called:	A. Velocity B. Displacement C. Speed D. Distance
2252	The L-C parallel circuit the capacitor draws a	A. leading current B. lagging current C. main current D. none of these
2253	Body which falls freely under gravity provides good example of motion under:	A. Uniform acceleration B. Non-uniform acceleration C. Uniform velocity D. None of these
2254	Which one is conservative force	A. Electric force B. Frictional force C. Normal force D. Air resistance
2255	If work is done at the rate of 2 k j per second, then total work done is half an hour will be:	A. 0.5 Kwn B. 2 Kwh C. 1 Kwh D. None of these
2256	The wave nature of light was proposed by:	A. Newton B. Thomas Young C. Huygen D. None of these
2257	Torque is also called:	A. Momentum B. Linear inertia C. Moment of a force D. Mass
2258	Melting point of ice	A. Increases with increasing pressure B. Decreases with increasing pressure C. Is independent of pressure D. Is proportional to pressure

A. 75 - 80 torr

2259	In a normal healthy person the value of diastolic pressure is	<p>A. 80 torr</p> <p>B. 100 torr</p> <p>C. 120 torr</p> <p>D. none of them</p>
2260	In helium Neon Laser Neon = 15% and Helium = 85% used. The lasing gas this unit is	<p>A. Helium</p> <p>B. Neon</p> <p>C. Both</p> <p>D. None of these</p>
2261	The _____ viscous the medium is _____, is the value of terminal velocity of the droplet:	<p>A. More, lesser</p> <p>B. Lesser, more</p> <p>C. Both A and B</p> <p>D. Lesser, lesser</p>
2262	The reactance of a coil when used in the domestic A.C. power supply (220 volts, 50 cycles per second) is 50 ohms. The inductance of the coil is nearly	<p>A. 2.2 henry</p> <p>B. 1.6 henry</p> <p>C. 0.22 henry</p> <p>D. 0.16 henry</p>
2263	Ohm is the unit of	<p>A. current</p> <p>B. capacitance</p> <p>C. energy</p> <p>D. resistance</p>
2264	When two spherical conducting balls at different potentials are joined by metallic wire, the current starts:	<p>A. Decreasing from zero to maximum</p> <p>B. Increasing from zero to maximum</p> <p>C. Decreasing from maximum to zero</p> <p>D. Increasing from maximum to zero</p> <p>E. Both (A) and (D)</p>
2265	In case of destructive interference of two waves, the amplitude of the resultant wave will be _____ either of the waves.	<p>A. Greater than</p> <p>B. Smaller than</p> <p>C. Equal to</p> <p>D. None of these</p>
2266	Newton's first law is also called:	<p>A. Law of torque</p> <p>B. Law of force</p> <p>C. Law of inertia</p> <p>D. None of these</p>
2267	The term Brownian movement refers to	<p>A. irregular motions of small particles suspended in a fluid</p> <p>B. convection currents in a liquid or gas</p> <p>C. convection currents in a gas but not in a liquid</p> <p>D. the stretching of a body beyond its elastic limit</p>
2268	The body will move with terminal velocity when it acquires	<p>A. minimum speed</p> <p>B. zero speed</p> <p>C. maximum speed</p> <p>D. none of them</p>
2269	A certain force gives an acceleration of 2 m/sec ² to a body if mass 5 kg. The same force would give a 29 kg object an acceleration of:	<p>A. 0.5 m/sec²</p> <p>B. 5 m/sec²</p> <p>C. 1.5 m/sec²</p> <p>D. 9.8 m/sec²</p>
2270	N s m ⁻² is unit of:	<p>A. Drag force</p> <p>B. Pressure</p> <p>C. Surface tension</p> <p>D. Coefficient of viscosity</p>
2271	Generally a temperature scale is established by	<p>A. one fixed point</p> <p>B. two fixed point</p> <p>C. three fixed point</p> <p>D. four fixed point</p>

2272	OP-AMP has the following input terminals	<p>A. one</p> <p>B. two</p> <p>C. three</p> <p>D. four</p>
2273	A field is uniform and much stronger:	<p>A. <p class="MsoNormal" style="text-align:justify">Inside a long solenoid<o:p></o:p></p></p> <p>B. <p class="MsoNormal" style="text-align:justify">Outside a long solenoid<o:p></o:p></p></p> <p>C. <p class="MsoNormal" style="text-align:justify">At the end of a long solenoid<o:p></o:p></p></p> <p>D. <p class="MsoNormal" style="text-align:justify">At the central point of long solenoid<o:p></o:p></p></p> <p>E. <p class="MsoNormal" style="text-align:justify">None of these<o:p></o:p></p></p>
2274	In photoelectric effect the energy of ejected electrons depend on	<p>A. The frequency</p> <p>B. The intensity</p> <p>C. Both frequency and intensity</p> <p>D. None of these</p>
2275	A force of 50 dynes is acted on a body of mass 5 g which is at rest, for an interval of 3 seconds, then impulse is	<p>A. $0.15 \times 10^{-3} \text{Ns}$</p> <p>B. $0.98 \times 10^{-3} \text{Ns}$</p> <p>C. $1.5 \times 10^{-3} \text{Ns}$</p> <p>D. $2.5 \times 10^{-3} \text{Ns}$</p>
2276	Most practical application of electricity involve	<p>A. <p class="MsoNormal" style="text-align:justify">Charges at the rest<o:p></o:p></p></p> <p>B. <p class="MsoNormal" style="text-align:justify">Charges in the motion<o:p></o:p></p></p> <p>C. <p class="MsoNormal" style="text-align:justify">Electrons at rest<o:p></o:p></p></p> <p>D. <p class="MsoNormal" style="text-align:justify">Atoms in motion<o:p></o:p></p></p> <p>E. <p class="MsoNormal" style="text-align:justify">Molecules in motion<o:p></o:p></p></p>
2277	A point charge Q is placed at the mid-point of a line joining two charges. 4q and q. if the net force on charge q is zero. then Q must be equal to	<p>A. -q</p> <p>B. +q</p> <p>C. -2q</p> <p>D. +4q</p>
2278	Energy is dissipated and consequently the energy mass system do not oscillate indefinitely because of	<p>A. very small energy</p> <p>B. very large energy</p> <p>C. frictional forces</p> <p>D. acceleration due to gravity</p>
2279	Binding energy per nucleus is	<p>A. greater for heavy nucleus</p> <p>B. least for heavy nucleus</p> <p>C. greatest for light nuclei</p> <p>D. decreases for medium weight niclei</p>
2280	Method "lamp and scale arrangement" used to measure the	<p>A. angle of deflection</p> <p>B. restoring torque</p> <p>C. magnetic field strength</p> <p>D. current</p>
2281	Choose the set of physical quantities, which have both numerical and	<p>A. Velocity, mass</p> <p>B. Speed, acceleration</p>

2281	directional properties:	C. acceleration weight D. Distance, force
2282	Distance covered during one vibration of an oscillating body in terms of amplitude A is:	A. A B. 2 A C. 3 A D. 4 A
2283	The system international (SI) is built from _____ kind of unites	A. Two B. Three C. Four D. Five
2284	In the formula $P = N_0KT$, N_0 denotes:	A. Number of molecules per unit per volume B. Number of moles C. Number of molecules D. None of these
2285	When a shell explodes in mid-air, its fragments fly off in	A. only one direction B. in two direction C. different directions D. a particular direction
2286	The mass 'm' of a body moving at 0.8 c (whose rest mass is m_0) becomes	A. 2 m_0 B. 1.67 m_0 C. 0.67 m_0 D. 2.67 m_0
2287	A two Kg block is held 1 m above the floor for 50 seconds, the work done is:	A. Zero B. 10.2 J C. 100 J D. 980 J
2288	Rate of flow can be expressed in	A. litre/sec B. litre-sec C. sec/litre D. sec/litre-m
2289	Nucleus consists of	A. proton and neutron B. protons and electron C. electron and neutron D. protons only
2290	Wavelength of light, on the average, is given by	A. 10^{-14} m B. 10^{-10} m C. 10^{-6} m D. 10^{-4} m
2291	Consider a photon of continuous X-ray and a photon of characteristics X-ray of same wavelength. Which of the following is/are different for the two photons	A. Frequency B. Penetrating power C. Energy D. Method of creation
2292	The S.I unit of frequency is	A. Vibrations s^{-2} B. Ms $^{-1}$ C. Hertz D. s $^{-1}$
2293	The speed of sound in a medium depends on	A. The elastic property but not on the inertia property B. The inertia property but not on the elastic property C. The elastic property as well as the inertia property D. Neither the elastic property nor the inertia property
2294	If the velocity time graph is a straight line parallel to time-axis, then it means that:	A. The body is moving with uniform velocity B. The body is moving with uniform acceleration C. The body is at rest D. None of above
2295	Current, voltage, resistance measuring circuit is connected with the galvanometer with the help of switch, known as	A. ON switch B. off switch C. function switch D. none of these
2296	Pressure applied at any point of gas at rest is transmitted equally to all parts of the gas. This is the statement of:	A. Newton's second law B. Pascal's law C. Carnot theorem D. Second law of thermodynamics
2297	Suppose the water flows out from a pipe at 3 kg s^{-1} and its velocity changes from 5 m s^{-1} to zero on striking the wall, then the force exerted by water on wall will be	A. 5 N B. 10 N C. 15 N D. 20 N
2298	When a silicon crystal is doped with a pentavalent element, then the atom of the pentavalent element is known as	A. acceptor B. donor C. either of them D. none of them

2299	S.I. unit of planks constant is	<p>A. $J \cdot s^{-1}$</p> <p>B. $J \cdot s$</p> <p>C. $J \cdot s^{-2}$</p> <p>D. $J \cdot s^2$</p>
2300	The vibratory motion of a body whose magnitude of acceleration is directly proportional to the magnitude of its displacement and is always directed towards the equilibrium position is called	<p>A. rotatory motion</p> <p>B. motion under gravity</p> <p>C. angular motion</p> <p>D. simple harmonic motion</p>
2301	Which of the following pairs does not have identical dimensions?	<p>A. Torque and energy</p> <p>B. Energy and work</p> <p>C. Momentum and impulse</p> <p>D. Mass and moment of inertia</p>
2302	According to the electromagnetic wave theory of light, increasing the intensity of incident light should increase the	<p>A. number of photoelectrons</p> <p>B. size of the photoelectrons</p> <p>C. charge on photoelectrons</p> <p>D. K.E of photoelectrons</p>
2303	The terminal velocity of a small size spherical body of radius R moving in a fluid varies as	<p>A. R</p> <p>B. R^2</p> <p>C. $1/R$</p> <p>D. $(1/R)^2$</p>
2304	Field lines are closer to each other in the region where the field is	<p>A. Stronger</p> <p>B. Weaker</p> <p>C. Much weaker</p> <p>D. Absent</p> <p>E. None of these</p>
2305	A massive object falls through a fluid:	<p>A. Faster</p> <p>B. Slower</p> <p>C. Slowest</p> <p>D. None</p>
2306	An eV is unit of:	<p>A. $\langle p \text{ class="MsoNormal" \rangle \langle span \text{ style="font-size: 12.0pt; line-height: 107%; font-family: \"Times New Roman\", \"\serif\"; mso-fareast-font-family: \"Times New Roman\"; mso-fareast-theme-font: minor-fareast} \rangle \text{Potential} \langle o:p \rangle \langle /o:p \rangle \langle /span \rangle \langle /p \rangle$</p> <p>B. $\langle p \text{ class="MsoNormal" \rangle \langle span \text{ style="font-size: 12.0pt; line-height: 107%; font-family: \"Times New Roman\", \"\serif\"; mso-fareast-font-family: \"Times New Roman\"; mso-fareast-theme-font: minor-fareast} \rangle \text{Energy} \langle o:p \rangle \langle /o:p \rangle \langle /span \rangle \langle /p \rangle$</p> <p>C. $\langle p \text{ class="MsoNormal" \rangle \langle span \text{ style="font-size: 12.0pt; line-height: 107%; font-family: \"Times New Roman\", \"\serif\"; mso-fareast-font-family: \"Times New Roman\"; mso-fareast-theme-font: minor-fareast} \rangle \text{Work} \langle o:p \rangle \langle /o:p \rangle \langle /span \rangle \langle /p \rangle$</p> <p>D. $\langle p \text{ class="MsoNormal" \rangle \langle span \text{ style="font-family: \"Times New Roman\", serif; font-size: 12pt;"} \rangle \text{Power} \langle /span \rangle \langle /p \rangle$</p> <p>E. $\langle p \text{ class="MsoNormal" \rangle \langle span \text{ style="font-size: 12pt; line-height: 107%; font-family: \"Times New Roman\", serif;"} \rangle \text{Both (B) and (C)} \langle b \rangle \langle o:p \rangle \langle /o:p \rangle \langle /b \rangle \langle /span \rangle \langle /p \rangle$</p>
2307	In the formula for finding the speed of waves in the spring, unit of m in Sln units is:	<p>A. kg</p> <p>B. kg-meter</p> <p>C. kg/meter</p> <p>D. Meter/kg</p>
2308	Ultra-violet rays differ from X-rays in that they	<p>A. Cannot be diffracted</p> <p>B. Cannot be polarized</p> <p>C. Have a lower frequency</p> <p>D. Are deviated when they pass through a magnetic field</p>
2309	Internal friction of fluid is called	<p>A. Surface tension</p> <p>B. Viscosity</p> <p>C. Resistance</p> <p>D. Cohesive force</p>
2310	In free space, the speed of electromagnetic waves is	<p>A. $3 \times 10^8 \text{ ms}^{-1}$</p> <p>B. $3 \times 10^6 \text{ ms}^{-1}$</p> <p>C. $4 \times 10^7 \text{ ms}^{-1}$</p> <p>D. $3 \times 10^9 \text{ ms}^{-1}$</p>
2311	For an atom having atomic number Z and atomic weight A, the number of electron in an atoms	<p>A. A - Z</p> <p>B. A + Z</p> <p>C. Z</p> <p>D. A</p>
		A. 45

2312	An vector of 10 N makes an angle of 45° with x-axis. Angle between its rectangular components with be:	<p>font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°</p> <p>B. 90°</p> <p>C. 135°</p> <p>D. Zero</p>
2313	Of the following, the option _____ reminds of longitudinal waves.	<p>A. Sound waves</p> <p>B. Heat waves</p> <p>C. Electromagnetic waves</p> <p>D. Light waves</p>
2314	Energy required by an electron revolving in certain orbit to jump to an excited state is called:	<p>A. Ionization energy</p> <p>B. Ionization potential</p> <p>C. Excitation energy</p> <p>D. Excitation potential</p> <p>E. None of these</p>
2315	The weight 'mg' of the bob is resolved into	<p>A. one component</p> <p>B. two components</p> <p>C. three components</p> <p>D. four components</p>
2316	When a bicycle is in motion but not pedaled, the force of friction exerted by the ground on the two wheels is such that it acts	<p>A. In the backward direction on the front wheel and in the forward direction on the rear wheel</p> <p>B. In the forwards directions on the front wheel and in the backward direction on the rear wheel</p> <p>C. In the forward direction on both the wheels</p> <p>D. In the backward direction on both the wheels</p>
2317	The only significant motion possessed by the mono-atomic gas represented is:	<p>A. Translatory</p> <p>B. Rotatory</p> <p>C. Vibratory</p> <p>D. None of these</p>
2318	The distance travelled by α -particle in a medium before coming to rest, is called	<p>A. range of α-particle</p> <p>B. range of neutrons</p> <p>C. range of particle</p> <p>D. none of these</p>
2319	One newton is a force that produces an acceleration of 0.5 m/sec ² in a body of mass:	<p>A. 2 Kg</p> <p>B. 3 Kg</p> <p>C. 4 Kg</p> <p>D. 8 Kg</p>
2320	The collision in which KE is conserved but momentum is not conserved is called:	<p>A. Elastic collision</p> <p>B. Inelastic collision</p> <p>C. any these</p> <p>D. None of these</p>
2321	Gas constant per molecule is called:	<p>A. Universal gas constant</p> <p>B. Stefan's constant</p> <p>C. Boltzmann constant</p> <p>D. Gravitation constant</p>
2322	Which one the following gives three regions of electromagnetic spectrum in order of increasing wavelength?	<p>A. Gamma rays, micro waves, visible light</p> <p>B. Radio waves, ultraviolet waves, X-rays</p> <p>C. Ultraviolet rays, infrared rays, micro waves</p> <p>D. Visible light, gamma rays, radio waves</p>
2323	Swimming is based on the principle of	<p>A. Newton's 1st law</p> <p>B. Newton's 2nd law</p> <p>C. Newton's 3rd law</p> <p>D. All</p>
2324	A process which can be retraced in exactly reverse order, without producing any change in the surroundings is called	<p>A. reversible process</p> <p>B. irreversible process</p> <p>C. any one of them</p> <p>D. none of them</p>
2325	When temperature increase, the frequency of a tuning fork	<p>A. Increases</p> <p>B. Decreases</p> <p>C. Remains same</p> <p>D. Increase or decreases depending on the material</p>

2326	'K' is the proportionality constant of force experienced by conductor. What is the value of 'K' in SI units?	A. 0 B. 1 C. 0.5 D. -1
2327	The damping depends upon the	A. amplitude B. sharpness C. both of them D. none of them
2328	The highest value reached by voltage or current in one cycle is called	A. root means square value B. peak value C. peak to peak value D. instantaneous value
2329	The error may occur due to:	A. Negligence B. Faulty apparatus C. Inappropriate method D. all of these
2330	Generally a temperature scale is established by using certain physical properties of a material which varies	A. nonlinearly with temperature B. linearly with temperature C. either of them D. none of them
2331	The product of cross-sectional area of the pipe and the fluid speed at any pint along the pipe is	A. very high B. very low C. constant D. zero
2332	Work is a Quantity	A. Vector B. Scalar C. Non-physical D. None of these
2333	The percentage of available heat energy converted into work by a petrol engine is roughly	A. 35 % B. 40 % C. 35 to 40 % D. 25 %
2334	A conducting wire is drawn to double its length. Final resistivity of the material will be	A. Double of the original one B. Half of the original one C. One fourth of the original one D. Same as original one
2335	X-ray are also known as	A. Roentgen rays B. Maxwell rays C. Plank range D. Einstein rays
2336	Carnot heat engine only used	A. isothermal processes B. adiabatic processes C. both of them D. none of them
2337	To see the minor details of the object by microscope, it should have:	A. High magnifying power B. High resolving power C. Am objective of larger focal length D. None of these
2338	A sheet of aluminium foil of negligible thickness is introduced between the plates of a capacitor. The capacitance of the capacitor	A. Increases B. Decreases C. Remain unchanged D. Becomes infinite
2339	Light appears to travel in straight line because	A. It is not absorbed by the atmosphere B. It is refracted by the atmosphere C. Its wavelength is very small D. Its velocity is very large
2340	The Einstein's changes in length, mass and time are not observed in common life because	A. We dont observer then seriously B. The masses are too large C. Their speed is too small than the speed of right D. All of the above
2341	If $F=0.04\text{ N}$ and $X=4\text{ cm}$ then $K=$	A. 1 Nm^{-1} B. 2 Nm^{-1} C. 3 Nm^{-1} D. 4 Nm^{-1}
2342	A particle having the mass of electron and charge of a proton is called a	A. photon B. positron C. antiproton D. antineutrino
2343	Work done is maximum when angle between force and displacement is	A. 0° B. 90° C. 180° D. ...

		D. None of these
2344	The force applied on unit area to produce any change in the shape, volume or length of a body is known as	A. strain B. elasticity C. stretching D. stress
2345	In equation $F=ma$, then mass 'm' is	A. rest mass B. variable mass C. inertial mass D. gravitational mass
2346	Electromagnetic -radiation means:	A. Photons B. protons C. Electrons D. Mesons E. None of these
2347	One complete round trip of the body about its mean position is called	A. displacement B. vibration C. a complete motion D. an acceleration
2348	When half of the cycle of a body executing S.H.M is completed, then the phase of the vibration will be	A. 45° B. 90° C. 135° D. 180°
2349	Acceleration of a body at any particular instant during its motion is known as	A. average acceleration B. uniform acceleration C. instantaneous acceleration D. all of them
2350	When a nucleus emits an alpha particle, its atomic mass decreased by	A. 2 B. 1 C. 4 D. 3
2351	When a vector is multiplied by a negative number, its direction:	A. Remains the same B. Changes C. Changes by 180° D. None of these
2352	The unit of intensity of electric field is	A. newton/coulomb B. joule/coulomb C. volt x metre D. newton/metre
2353	The ratio of the r.m.s value of the applied voltage to the r.m.s value of resulting a.c. is	A. Impedance B. Inductance C. Reactance D. Resistance
2354	When force and displacement are perpendicular to each other then work is equal to	A. Unity B. Infinity C. Zero D. -Fd
2355	When velocity of moving body is doubled, the quantity which is also doubled is its:	A. K.E. B. Acceleration C. Momentum D. P.E.
2356	The frequency of free vibrations is known as	A. free frequency B. forced frequency C. natural frequency D. un-natural frequency
2357	The absolute temperature of the triple point of water is	A. 100°C B. 4°C C. 373 K D. 273.16 K