Physics ECAT Pre Engineering Online Test

Sr	Questions	Answers Choice
1	Density of fluid is defined as:	A. Its volume to mass ratio B. Product of volume and mass C. Its mass of volume ratio D. None of these
2	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
3	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
4	The appearance of colours in the soap (or oil) film results from	A. Dispersion B. Interference C. Reflection D. Refraction
5	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
6	Examples of physical quantities are:	A. Length B. Color C. Effect of music D. All of these
7	Computer chips are made from	A. Conductors B. Semiconductors C. Insulators D. Both A and B
8	The inkjet printer ejects a thin stream of:	A. Water<o:p></o:p> B. Oil<o:p></o:p> C. Ink<o:p></o:p> D. Any of above<o:p></o:p> E. None of these<o:p></o:p>
9	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
10	Peak value of alternative current is:	A. one of its Instantaneous value B. Equal to its RMS value C. The same as its peak-to-peak value D. Both (B) and (C) E. None of these
11	The ability of the body to return to its original shape is called	A. deformation B. stretching C. compressing D. elasticity
12	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
13	The time required to complete on vibration is called	A. frequency B. total time C. time period D. velocity
14	When brakes are applied to a fast moving car, the passenger will be thrown:	A. Forward B. Backward C. Downward D. none of these
15	In an adiabatic expansion, the temperature of the gas	A. increases B. becomes zero C. decreases D. decreases rapidly
16	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	A. R/4 B. R/2 C. R D. Cannot be found with the given data
17	A full-scale deflection is obtained in a galvanometer with a current of few	A. ampere B. volts C. milliampere D. ohm
18	Electrons are	A. positive charged B. negatively charged C. massless D. neutral
19	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
20	When certain nucleus emits anα particle, its mass number:	A. Increases by one B. Decreases by one C. Remain same D. Decreases by four E. None of these
21	Which of the following phenomenon proves the particle nature of light	A. interference B. diffraction C. photoelectric effect D. none of these
22	Heavy water is made of one oxygen atom and two atoms of:	A. Protium B. Deuterium C. Tritium D. Any of these E. None of these
23	The product of force and time is called	A. acceleration B. linear momentum C. angular momentum D. impulse
24	Rate of decay is actually described by.	A. Half line B. Decay constant C. Mean life D. Total life E. None of these
25	A metastable stae:	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 10⁻⁸second E. Both (A) and (C)
26	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
27	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	A. m B. 2 m C. 4 m D. Infinity
28	The branch of physics which deals with the properties of fundamental particles is called:	A. High energy physics B. Molecular physics C. Astrophysics D. Space physics
29	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

	independent of the:	C. Path followed by the body D. Power
30	The efficiency of diesel engine is	A. 25% B. 25 - 30% C. 35% D. 35 - 40%
31	The energy of the 4th orbit in hydrogen atom is	A. 2.5 ev B. - 3.5 ev C. -0.85 ev D. -13.6 ev
32	Which waves are used in sonography?	A. Microwaves B. Infra red waved C. Sound waves D. Ultrasonic waves
33	In the equilibrium state, the potential difference between two ends of the conductor moving across a magnetic field is called:	A. Motion emf B. Electrostatic emf C. Induced emf D. Both A and B E. Both A and C
34	In the force applied to parallel to the direction of motion, then the work done is:	A. Positive B. Negative C. Zero D. None of these
35	Structure of the nucleus was explained by	A. J.J Thomson B. Bohr C. Millikan D. Rutherford
36	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	A. 1 : 2 B. 2 : 3 C. 3 : 4 D. 8 : 9
37	If a mass of 10 gm is suspended from a spring of k = 9.8 Nm^{-1}, then the extension will be:	A. 1 cm B. 1 m C. 10 mm D. None of these
38	Which of the following is most suitable as the core of transformer	A. Soft iron B. Alinco C. Steel D. None of these
39	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
40	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
41	A high temperature, the proportion of shorter wavelengths radiation, emitted by the body	A. decreases B. first increases then decreases C. increases D. any one of them
42	The electric intensity outside the two oppositely charged parallel metal plates is	A. Maximum B. Minimum C. Zero D. Infinite
43	Beta particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons
44	The vector is space has:	A. One Component B. Two Compnents C. Three Components D. Non of these
45	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
46	In radioactive decay, the new element which is formed due to the disintegration of original element is called	A. element B. daughter element C. parent element D. none of these

47	Radio telescope is used to gather information from	A. Earth B. Moon only C. Far side of the universe D. Sea water
48	A pair of quark and antiquark makes a:	A. Meson B. Baryon C. Proton D. Neutron E. None of these
49	Glycerin has viscosity _____ the viscosity of water:	A. More than B. Equal to C. Less than D. None of these
50	Energy required by an electron revolving in certain orbit to jump to an excited state is called:	A. Ionization energy B. Ionization potential C. Excitation energy D. Excitation potential E. None of these
51	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
52	Acceleration in a body is always produced in the direction of :	A. Velocity B. Weight C. Force D. Both B and C
53	The free electrons in metals:	A. Are in random motion and their speed depends upon temperature<o:p></o:p> B. Move in particular direction<o:p></o:p> C. Move with speed of light<o:p></o:p> D. Move such that their speed does not depend on their temperature<o:p> </o:p> E. None of these<o:p> </o:p>
54	Alternating current can induce voltage because it has a	A. High peak value B. Varying magnetic field C. Stronger field than direct curren D. Constant magnetic field
55	A 5 kg mass is falling freely, the force acting on, it will be	A. 19.6 N B. 9.8 N C. 5 N D. Zero
56	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
57	In a transistor, if the central region is n-type, then this type of transistor is known as	A. n-p-n transistor B. p-n-p transistor C. either of these D. none of these
58	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
59	Photoelectrons are emitted when ultraviolet light falls on:	A. Casium B. Silver C. Potassium D. Any of these E. None of these

		E. None of these
60	Rate of change of momentum is called	A. Impulse B. Force C. Torque D. Momentum
61	Chock consumes externally small	A. Charge B. Current C. Power D. Potential
62	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of them
63	An A.C varies as a function of	A. Current B. Voltage C. Time D. Charge
64	Taking the earth to be a spherical conductor of diameter 12.8 x 10^3km. Its capacity will be	A. 711μF B. 611μF C. 811μF D. 511μF
65	The direction of the linear momentum is the direction of	A. speed B. velocity C. weight D. none of them
66	For a fixed force, larger is the mass of a body the	A. greater is its acceleration B. smaller is its acceleration C. smaller is its weight D. zero is its acceleration
67	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
68	The work done by the system on its environment is considered as	A. positive B. negative C. zero D. any one of them
69	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
70	When current passes through a solenoid coil, it behaves like a	A. loop B. circle C. bar magnet D. none of these
71	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
72	The A.M. transmission frequency range from	A. 500-1000 KHz B. 540-1600 KHz C. 300-490 KHz D. 900-2040 KHz
73	Fraction of the decaying atoms per unit time is called	A. decay atom B. decay element C. decay constant D. decay
74	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

75	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
76	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
77	The band above the valence band is called	A. high energy band B. conduction band C. empty band D. none of them
78	At resonance, the phase angle for RLC series resonance circuit equals	A. 0° B. 90° C. 180° D. 270°
79	The term Brownian movement refers to	A. irregular motions of small particles suspended in a fluid B. convection currents in a liquid or gas C. convection currents in a gas but not in a liquid D. the stretching of a body beyond its elastic limit
80	Amplitude in SHM is equivalent to _____ in circular motion:	A. Diameter B. Radius C. Circumference D. None of these
81	Units of impedance are	A. Henry B. Ohms C. moh D. Watt
82	Particles have the mass smallest of following is	A. Electron B. Proton C. Neutron D. Quark
83	Surface tension of water is reduced by adding	A. Detergents B. Camphor C. Plastic D. Both A and B
84	The time rate of change of displacement is called:	A. Time B. Acceleration C. Speed D. Velocity
85	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
86	The closed loop gain of the inverting amplifier is written as	A. G = R₂/R₁ B. G = 1 + R₂/R₁ C. G = -R₂/R₁ D. G = 1 - R₂/R₁
87	The power of an electric generating station is expressed in:	A. Kilo Jule B. Kilowatt-hour C. Kilo watt D. Watt
88	In YDS experiment, fringe spacing means the distance between two consecutive ____fringes.	A. Bright B. Dark C. Any of A and B D. None of these
89	Speed of light in vacuum depends upon	A. Frequency B. Wavelength C. Amplitude D. None of these
90	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
91	The nuclei of an element having the same charge number but different mass numbers are called:	A. Isobars B. Isotopes C. Isomers

	numbers are called:	D. Isobaric E. Isothermal
92	The mass 'm' of a body moving at 0.8 c (whose rest mass is mo) becomes	A. 2 mo B. 1.67 mo C. 0.67 mo D. 2.67 mo
93	Viscosity is defined as	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
94	Referring to above figure, current in coil P falls from its maximum value to zero:	A. At the instant the switch is closed B. At the instant the switch is opened C. When switch is kept open D. When switch is kept closed E. None of these
95	The working of all DC electric meters (galvanometers, ammetersand voltmeters) depends upon	A. Heating effect of current B. Chemical effect of current C. Magnetic effect of current D. Electromagnetic effect of current
96	SI unit of impedance is	A. hertz B. henry C. ampere D. ohms
97	Heating effect caused by an electric circuit is written	A. H = I²Rt B. H = I²R C. H = IR²t D. H = IR²
98	Coulomb force, when any material medium is placed between two charges	A. Increases B. Decreases C. Remain unchanged D. None of these
99	'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
100	Davision and Germer performed experiment to verify	A. de-Brogile hypothesis B. theory of relativity C. Newton's law of gravitation D. Mass-energy relation
101	The waveform of alternating voltage is a:	A. Square B. Rectangular C. Saw-tooth D. Sinusoidal E. None of these
102	de-Broglies hypthesis was experimentally verified by	A. Maxwell B. Compton C. Einstein D. Davison and Germer
103	In an ideal gas, the molecules have:	A. Kinetic energy only B. Potential energy only C. Both KE and PE D. None of these
104	Inertia mass and gravitational mass are	A. opposite B. identical C. identical when there is no friction D. all of them
105	In case of point source of light, shape of wavefront is	A. Spherical B. Cylindrical C. Plane D. None of above
106	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
107	A body with frequency of would complete one vibration in:	A. f seconds B. 1/f seconds C. 1 second D. f²second
		A. 60<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial;

108	When the magnitude of two component vectors are equal to that of their resultant, then the angle between the components is:	background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 90<span style="font-size: 10.5pt; line-height: 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;">° C. 120<span style="font-size: 10.5pt; line-height: 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. 150<span style="font-size: 10.5pt; line-height: 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;">°
109	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°
110	For production of beats the two sources must have	A. Different frequencies and same amplitude B. Different frequencies C. Different frequencies, same amplitude and same phase D. Different frequencies and same phase
111	Max plank received the Nobel Prize in physics for his discovery of energy quanta in	A. 1900 B. 1906 C. 1912 D. 1918
112	Which of the following substances has got positive temperature coefficient of resistance?	A. Carbon B. Germanium C. Silicon D. Aluminium E. None of these
113	In the stress-strain graph, stress is increased linearly with strain until a point is reached, this point is known as	A. plastic limit B. plastic deformation C. proportional limit D. elastic behaviour
114	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
115	In a normal healthy person the value of diastolic pressure is	A. 75 - 80 torr B. 100 torr C. 120 torr D. none of them
116	A field free region is found:	A. <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">Near the outer surface of a hollow charged metal sphere<o:p></o:p> B. <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">In the interior of solid metal uncharged sphere<o:p></o:p> C. <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">In the interior of solid metal charged sphere<o:p></o:p> D. <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">Both (A) and (B)<o:p></o:p> E. <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">Both (A) and (C)<o:p></o:p></p>
117	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
118	A person starts his journey from a point 0, travels 4 Km SW, then 4 Km NW, and finally 4 Km north-east. At what distance is he now from point 0?	A. 0 Km B. 4 Km C. 8 Km D. 12 Km
119	The vertical component of velocity of a projectile during its motion is minimum	A. at the time of projection B. at the highest point C. just before hitting the plane of projection D. all of them
120	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
121	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
122	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)
123	10^6electrons are moving through a wire per second, the current developed is	A. 1.6 x 10⁻¹⁹ B. 1 A C. 1.6 x 10⁻¹⁵A D. 10⁶A
124	Which one of the following has larger value of relative permitivity $E_r$at room temperature?	A. Vaccum B. Air C. Glass D. Water
125	At low speeds, the drag force is	A. proportional to speed B. inversely proportional to speed C. not simply proportional to speed D. none of them
126	Energy is dissipated and consequently the energy mass system do not oscillate indefinitely because of	A. very small energy B. very large energy C. frictional forces D. acceleration due to gravity
127	1 gm-$cm^{-3}$is equal to:	A. 10³kg-m⁻³ B. 10⁻³kg-m⁻³ C. 1 kg-m⁻³ D. 10⁶kg-m⁻¹
128	If denotes the total number of molecules in cubic vessel such that m is mass of each milecule and l is length of each side of vessel, then mN/l^3gives the:	A. Force B. Density C. Work done D. Pressure
129	The distance covered by the wave during one period is called its:	A. Wave number B. Frequency C. Wavelength D. Time period
130	The inkjet printer eject a thin stream of:	A. Water B. Oil C. Ink D. Any above E. None of these
131	The relation between charge 'Q' and current 'I' is given by	A. Q = I/t B. Q = It C. Q = I²t D. Q = I²/t
132	If the length of the conductor is double and its cross sectional area is halved, its conductance will	A. Increase four fold B. Become one-fourth C. Become one-half D. Remains unchanged
		A. One dimension

133	Circular motion is an example of motion in:	B. Two dimensions C. Three dimensions D. None of these
134	While describing the motion of a simple pendulum, the frictional effects are	A. taken into account B. completely ignored C. partially ignored D. none of them
135	When a fluid is in motion, its flow can be considered as	A. turbulent B. streamline C. either or them D. neither of them
136	A non-inertial frame of reference is that frame of reference in which	A. a = 0 B. a > 0 or a < 0 C. v = 0 D. none of them
137	In the formula R = N x m for diffraction grating, N denotes:	A. No. of lines/cm B. No. of lines/meter C. Total number of lines D. None of above
138	The useful unit of the angular displacement in SI unit is:	A. Degree B. Revolution C. Radian D. Metre
139	The liquid which conduct current is known as	A. heating effect B. chemical energy C. electrolyte D. ohm's law
140	When two protons are brought are brought closer potential energy of both of them:	A. Increases B. Decreases C. Remains same D. None of these
141	The behaviour of gases is well accounted by the kinetic theory based on	A. microscopic approach B. macroscopic approach C. both of them D. none of them
142	The Instantaneous value of alternative current maybe:	A. The same as its RMS value B. Greater than its Rms value C. The same as its peak value D. Any of these E. None of these
143	How much time, theα-particle more massive than an electron	A. 600 B. 7000 C. 5000 D. 15000
144	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
145	Which force is not a conservative force?	A. Frictional force B. Gravitational force C. Electric force D. Elastic spring force
146	The curve representing an isothermal process is called	A. adiabat B. isotherm C. fixed temperature D. none of them
147	When the pn-junction is connected reversed biased, its resistance is of the order of	A. few ohms B. few kilo-ohms C. few mega-ohms D. few mili-ohms
148	Consider two spheres A and B or radii ra and rb both concentric with point charge Q, If ra>rb 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 spohere B is greater
149	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
150	Different radioactive material have	A. same half lives B. different half lives C. same mean lives

		D. same total lives
151	Which of the following is an example of SHM(in ideal situations)	A. Motion of simple pendulum B. Motion of horizontal spring man system C. Motion of violin string D. All of these
152	Another mean of electric potential energy per unit charge is given by:	A. <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">Electric intensity<o:p></o:p> B. <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">Potential gradient<o:p></o:p> C. <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">Electric Flux<o:p></o:p> D. <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">Potential difference<o:p></o:p> E. <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">None of these<o:p></o:p>
153	The law of electromagnetic induction is related to:	A. Coulomb B. Ampere C. Faraday D. Lenz E. None of these
154	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
155	The SI unit of permitivity is	A. Nm²C² B. N⁻¹m⁻²C² C. NmC² D. Nm²C⁻¹
156	If a force of 0.05 N produces an elongation of 20 mm in 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
157	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
158	Wave length of that color as compared to that of violet color is:	A. Smaller B. Longer C. Equal D. None of these
159	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
160	A body with frequency would complete one vibration in:	A. f seconds B. 1/f seconds C. 1 second D. f²second
161	The electric lines of force are	A. Imaginary B. Physically existing everywhere C. Physically existing near the charge D. All of the above
162	Laplace formula is derived from	A. Isothermal change B. Adiabatic change C. Isobaric change D. None of these

163	In bringing an electron towards another electron, electrostatic potential energy of system	A. Decreases B. Increases C. Remains uncharged D. Becomes zero
164	The nature of thermal radiation is similar to:	A. Ultraviolet rays B. Light rays C. Both of them D. None of these
165	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
166	Distance traveled by a body falling from rest in the first, second and third second is in the ration of	A. 1 : 2 : 3 B. 1 : 3 : 5 C. 1 : 4 : 9 D. None of the above
167	The pattern of NaCl particles have a shape which is :	A. Cubic B. Body centred cubic C. Simple cubic D. face centred E. Both (A) and (C)
168	Ultraviolet region lies in _____ series	A. Layman B. Balmer C. P fund D. B racket
169	The range ofβ-particle in air is greater than that ofα-particle by	A. 1000 times B. 100 times C. 15 times D. 10 times
170	The decrease in velocity per unit time is called	A. deceleration B. acceleration C. uniform acceleration D. variable acceleration
171	When two protons are brought closer potential energy of both of them:	A. Increases B. Decreases C. Remains same D. None of these
172	Which one of the following is an example of resonance	A. swing B. tuning a radio C. microwave oven D. all of them
173	if the field is directed along the normal to the area, then flux is:	A. Maximum<o:p></o:p> B. Equal to zero<o:p></o:p> C. Equal to BA<o:p></o:p> D. Minimum<o:p></o:p> E. Both (A) and (C)<o:p></o:p>
174	Wave nature of particle was proposed by	A. Einstein B. Plank C. De-Brogile D. Max well
175	In equation F=ma, then mass 'm' is	A. rest mass B. variable mass C. inertial mass D. gravitational mass
		A. Two diodes conduct and two do not. B. One diode conduct and three do not.

176	In full wave rectification, simultaneous action is that:	C. Three diodes conduct and one does not. D. All the four diodes conduct E. None of these
177	At the present time, the main frontiers of fundamental science are	A. 2 B. 3 C. 4 D. 5
178	Sadi carnot described an ideal heat engine in	A. 1820 B. 1840 C. 1860 D. 1880
179	Centripetal force performs:	A. Maximum work B. Negative work C. Positive work D. None of these
180	All trigonometric functions (since, cosine tangent etc.) are positive in:	A. 1st Quadrant B. 2nd Quadrant C. 3rd Quadrant D. 4th Quadrant
181	Three resistors of resistance 2,3 and 6 ohms are connected in parallel, their equivalent resistance is	A. 11.0 ohm B. 1.0 ohm C. 7.0 ohm D. 3.0 ohm
182	When spectrum of hydrogen atom is taken in magnetic field, some new lines are created. This is called.	A. Resonance effect B. Stark effect C. Zeeman's effect D. Electric effect
183	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
184	If a simple pendulum is shifted from karachi to K-2 cliff, its time period	A. remains the same B. decreases C. increases D. none of them
185	Moment of linear momentum is called.	A. Moment arm B. Moment of inertia C. Inertia D. Angular momentum
186	What is the coefficient of mutual inductance, when the magnetic flux changes by 2 X 10^{-2}Wb, and change in current is 0.01 A?	A. 2 H B. 3 H C. 1/2 H D. Zero
187	The only significant motion possessed by the mono-atomic gas represented is:	A. Translatory B. Rotatory C. Vibratory D. None of these
188	Smaller the damping, the resonance will be	A. more flat B. more sharp C. both of them D. none of them
189	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	A. Moving forward and gaining speed B. Moving forward and losing speed C. Moving forward with uniform speed D. Moving backward with uniform speed
190	Diameter of the atom is of the order of	A. 10⁻¹⁰m B. 10⁻¹²m C. 10⁻¹⁵m D. 10⁻⁹m
191	On a cold morning a metal surface will fell 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
192	The smooth or steady streamline flow is known as	A. laminar flow B. turbulent flow C. both of them D. none of them
193	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

194	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
195	The area under line velocity-time graph is numerically equal to the	A. speed of the body B. acceleration of the body C. distance covered by the body D. none of them
196	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
197	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 maga ohms
198	The direction of the acceleration is the same as that of	A. speed B. velocity C. both of them D. none of them
199	Nucleon means:	A. Only electrons B. Only neutrons C. Only protons D. Both (A) and (C) E. Both (B) and (C)
200	The graphical representation of ohm's law is	A. hyperbola B. straight line C. ellipse D. parabola
201	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
202	SI unit of wave length is:	A. Kilometer B. Metre C. Centimetre D. Hertz
203	If a wave can be polarized, it must be	A. An electromagnetic wave B. A longitudinal wave C. A progressive wave D. A transverse wave
204	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)
205	The pointer of a magnetic compass:	A. Is affected only by permanent magnets<o:p></o:p> B. Align itself parallel to the applied magnetic field<o:p></o:p> C. Vibrates in the magnetic field of the current<o:p></o:p> D. Aligns itself perpendicular to the magnetic field<o:p></o:p> E. Both (C) and (D)
206	Fluid friction is _____ the friction between two solid surfaces:	A. Greater than B. Smaller than C. Equal to D. None of these
		A. Sound falling on it B. Current passing through it

207	The value of LDR depends upon intensity of:	C. Magnetic field surrounding it D. Light falling on it E. Non of these
208	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
209	In a three phase a.c generator if the first coil has a phase 0, then the other two coils will have phases	A. 90° - 120 ° B. 20° and 140 ° C. 120° and 240 ° D. 120° and 140 °
210	Wavelength of red colour as compared to that of violet colour is	A. Smaller B. Longer C. Equal D. None of these
211	The energy acquired by a mass of 1g moving with the speed of light is	A. 3 x 10⁸J B. 9 x 10¹³J C. 3 x 10¹³J D. 9 x 10¹⁶J
212	Energy is stored in the choke coil in the form of	A. Heat B. Magnetic energy C. Electric energy D. Electro-magnetic energy
213	The example of irreversible process is	A. slowly liquification B. slowly evaporation C. an explosion D. all of them
214	When thorium nucleus emits aβ-particle, the daughter nucleus is called:	A. Protactinium B. Actinium C. Uranium D. Radium E. Redon
215	The restoring force is _____ and opposite tot he applied force within _____	A. Equal, Elastic limit B. Different, The walls of the laboratory C. Different, Elastic limit D. None of these
216	The image of an object 5 mm length is only 1 cm high. The magnification produced by lens is:	A. 1 B. 0.2 C. 2 D. 0.1
217	INTELSAT operates at frequencies 4, 6, 11, 14 having unit of:	A. KHz B. MHz C. GHz D. BHz
218	Computer chips are made from:	A. Iron B. Silicon C. Helium D. Stontium E. Aluminium
219	A massive object falls through a fluid:	A. Faster B. Slower C. Slowest D. None
220	Two forces of 10N and 8N are applied simultaneously to a body. The maximum value of their resultant is:	A. 20 N B. -2 N C. 18 N D. 36 N
221	A change in position of a body from its initial position to its final position is known as	A. relative motion B. displacement C. distance D. acceleration
		A. same number of molecules

222	One mole of any substance contain	A. same number of molecules B. different number of molecules C. may be same or different D. none of them
223	When resistance of a current carrying wire increases due to rise in temperature, the drift velocity of electrons:	A. Decreases<o:p></o:p> B. Increases<o:p> </o:p> C. Remains the constant<o:p></o:p> D. Either of these<o:p> </o:p> E. None of these<o:p> </o:p>
224	There is present in paraffin a large amount of:	A. Nitrogen B. Hydrogen C. Carbon D. Baryllium E. Lithium
225	The velocity of sound in air not effected by changes in	A. Moisture contents in air B. Temperature of air C. The atmosphere pressure D. The composition of air
226	The electric field intensity at a point due to a point charge	A. Falls off inversely as the distance B. Falls off inversely as the square of distance C. Remains unchanged with distance D. Increase directly as square of distance
227	Which one the following gives three regions of electromagnetic spectrum in order of increasing wavelength?	A. Gamma rays, micro waves, visible light B. Radio waves, ultraviolet waves, X-rays C. Ultraviolet rays, infrared rays, micro waves D. Visible light, gamma rays, radio waves
228	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
229	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
230	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
231	The direction of velocity is along the direction of	A. distance B. displacement C. acceleration D. all of them
232	The basic circuit elements of A.C circuit are	A. Resistor B. Inductor C. Capacitor D. All the three
233	Crystal of germanium or silicon in its pure form at absolute zero acts as:	A. A conductor B. A semiconductor C. an insulator D. Both (A) and (C) E. Both (A) and (B)
234	The un-steady streamline flow is called	A. laminar flow B. turbulent flow C. both of them D. none of them
235	The resistivity of a substance depends upon the	A. length B. mass C. area

		D. temperature
236	Light year is a unit of	A. Time B. Distance C. Velocity D. Intensity of light
237	Electric field lines emerge from the charge in:	A. One dimension<o:p></o:p> B. Two dimensions<o:p></o:p> C. Three dimensions<o:p></o:p> D. Four dimensions<o:p></o:p> E. None of them<o:p></o:p>
238	0.1 kg mass will be equivalent to the energy	A. 9 x 10¹⁵J B. 5 x 10⁸J C. 6 x 10¹⁶J D. 9 x 10⁻¹⁶J
239	Free electrons are	A. tightly bound B. fixed C. loosely bound D. tightly fixed
240	The charge carriers in electrolyte are positive and negative	A. protons B. electrons C. ions D. none of these
241	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
242	According to the de-Brogile 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
243	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
244	When the source of light is at very large distance, the shape of wavefront is	A. Spherical B. Cylindrical C. Plane D. None of these
245	At resonance frequency the impedance of parallel resonance circuit is	A. Maximum B. Minimum C. Zero D. None of the above
246	The concept of direction and position are purely	A. absolute B. relative C. absolute or relative D. none of these
247	Improper biasing of a transistor circuit produces	A. Heavy loading of emitter current B. Distortion in the output signal C. Excessive heat at collector terminal D. Faulty location of load line
248	The SI unit of magnetic induction is tesla which is equal to	A. Newton/ampere-meter or N/A-m B. Newton/ampere²-meter or N/A²-m C. Newton/ampere²-meter² or N/A²-m² D. Newton/ampere²-meter²or N/A²-m²
		A. Positive work

249	If force and displacement are in opposite direction, the work done is taken as:	A. Positive work B. Negative work C. Zero work D. Infinite work
250	Watt x second is unit of:	A. Force B. Work C. Power D. None of these
251	An induced current can be produced by	A. Constant magnetic field B. Changing magnetic field C. Varying electric field D. Constant electric field E. None of these
252	The value of resistivity is the least for:	A. Copper B. Aluminimum C. Silver D. Tungsten E. Iron
253	The energy required to charge a capacitor of 5μF by connecting D.C. source of 20 KV is	A. 10 KJ B. 5 KJ C. 2 KJ D. 1 KJ
254	Charge on proton is	A. 1.59 x 10⁻⁹C B. 1.59 x 10⁻⁷C C. -1.59 x 10⁻¹⁹C D. 1.59 x 10⁻¹⁹C
255	When a mass 'm' is pulled slowly through a distance 'x_o' , the elastic potential energy of the spring would be	A. P.E=Kx²_o B. P.E= 1/2kx_o C. P.E=1/2Kx²_o D. P.E=Kx²_o
256	In the doping process, the ratio of the doping atoms to the semi conductor atom is	A. 1 to 10 B. 1 to 10³ C. 1 to 10⁶ D. 1 to 10⁹
257	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:	A. -y direction B. +y direction C. +z direction D. -z direction E. None of these
258	When the charged particle is projected at right angles to the field, then experienced by it will be:	A. Maximum B. Zero C. qvB D. Both (A) and (B) E. Both (A) and (C)
259	The mechanics, which deals with the objects moving with velocities approaching that of light is called:	A. Relativistic mechanics B. Wave mechanic C. Quantum mechanics D. Statics
260	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)
261	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
262	If the instantaneous velocity of a body does not change. the body is said to be moving with	A. average velocity B. uniform velocity C. instantaneous velocity D. variable velocity
263	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
264	Angular frequency 'w' is basically a characteristics of	A. linear motion B. circular motion C. both of them D. none of them
265	Which are not the elementary particles?	A. Photons B. Leptons C. Hadrons D. Quarks E. None of these

		E. None of these
266	A body moving with uniform velocity has	A. positive acceleration B. negative acceleration C. infinite acceleration D. zero acceleration
267	Work done along a closed path in a gravitational field is:	A. Maximum B. Minimum C. Zero D. Unity
268	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
269	Shock absorber of the car is an example of	A. resonance B. forced oscillations C. interference D. damped oscillations
270	The device which allows only the flow of an A.C. through a circuit is	A. Capacitor B. Inductor C. D.C. motor D. Battery
271	The sources of magnetic field are	A. isolated magnetic poles B. charges at rest C. charges in motion D. none of these
272	Which of the following are the units of intensity of light	A. Pois B. Lux C. Siemen D. Candela
273	Maximum height of a bullet when fixed at 30 with horizontal is 11 m. Then height when it is fired at 60° is	A. 22 m B. 6 m C. 33 m D. 7.8 m
274	Above a certain velocity of a fluid is called	A. turbulent flow B. steady flow C. either of them D. both of them
275	Scalar product is also called:	A. Cross product B. Dot product C. Product scalar D. Product vector
276	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
277	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
278	Total number of base units are	A. Three B. Five C. Seven D. Nine
279	The emf is measured in:	A. Newton B. Volt C. J/C D. Both A and B E. Both B and C
280	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
281	The molecules or ions in a crystalline solids are	A. static B. not static C. randomly moving D. all of them
282	The figure 1.007276μ shows the mass of an:	A. Atom B. Positron C. Electron D. Neutron E. Proton

283	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
284	A railway engine (mass 10^4kg) 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
285	In metallic crystals which of the following thing remains constant	A. amplitude of oscillations B. temperature of solid C. average atomic positions D. all of them
286	The voltage increases linearly with	A. time B. velocity C. acceleration D. torque
287	Which quantity has different dimensions:	A. Work B. Pressure C. Energy D. Torque
288	The velocity of sound is greatest in	A. Water B. Air C. Vacuum D. Metal
289	The transitions of electrons in the hydrogen atom result in the emission of spectral lies in the:	A. Ultra red region B. Visible region C. Ultraviolet region D. Any of these E. None of these
290	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
291	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
292	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 velocity 5.31 x 10^{-7}m/sec. The units comes out to be:	A. 10⁻¹⁶N B. 10⁻¹⁴N C. 10⁻¹²N D. 10⁻¹⁰N
293	Angle between ray of light and the corresponding wavefront is	A. 0⁰ B. 60⁰ C. 90⁰ D. 120⁰
294	The equation of continuity is	A. A₁A_{2 = V} ₁V₂ B. A_{1/}_V_{1 = }A_{2/}V₂ C. _V_{1/}A_{1= }V_{2/}A₂ D. A₁_V_{1 = }A₂_V₂
295	The SI units of momentum is	A. kg m s⁻² B. kg ms C. kg m s² D. N-s
296	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
297	Calculate the amount of charge flowing in 2 minutes in a wire of resistance 10$\Omega$when a potential difference of 20 V is applied between its ends	A. 120 C B. 240 C C. 20 C D. 4 C
298	Two point charges A and B separated by a distance R attract each other with a force of 12 x 10^{-3}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
	If force and displacement are in opposite direction, the work done is taken	A. Positive work B. Negative work

299	If force and displacement are in opposite direction, the work done is taken as	B. Negative work C. Zero work D. Infinite work
300	Equal charges are given to two spheres of different radii. The potential will	A. Be more on the smaller sphere B. Be more on the bigger sphere C. Be equal on both the sphere D. Depend on the nature of the material of the sphere
301	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
302	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
303	The vector representation of force experience give the direction of	A. magnetic field B. current C. length of conductor D. force
304	The unit of resistance is	A. volt B. ampere C. ohm D. coat
305	The instantaneous velocity is define as the limiting value of $\Delta d/\Delta t$ on the time intervalΔt approaches to	A. zero B. maximum C. minimum D. infinity
306	A capacitor acts as an infinite resistance for	A. AC B. DC C. Both AC and DC D. Neither AC nor DC
307	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)
308	The value of the potential difference across the depletion region for the case of germanium is	A. 0.3 V B. 0.5 V C. 0.7 V D. 0.9 V
309	An alpha particle has a charge of	A. +2e B. -2e C. -e D. +3e
310	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
311	The ratio of the diameter of two convex lenses is _____-the ratio of their focal lengths:	A. Greater than B. Less than C. Equal to D. None of these
312	Maximum density of H_2O is at the temperature	A. 32°F B. 39.2°F C. 42°F D. 4°F
313	Distance covered by a freely falling body in 2 sec will be	A. 4.9 m B. 19.6 m C. 29.2 m D. 44.1 m
314	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 resolving 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
315	When the pn-junction is in reversed biased, current flows through the junction due to the	A. majority carriers B. minority carriers C. either of them D. none of them

316	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
317	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	A. magnetic flux B. magnetic induction C. magnetic field D. self inductance
318	When a nucleus emits an alpha particle, it atomic mass decreased by	A. 2 B. 1 C. 4 D. 3
319	Ohm established a relation between	A. voltage and resistance B. voltage and charge C. voltage and current D. voltage resistance and charge
320	The maximum stress that a material can withstand, is known as	A. plastic point B. elastic limit C. yield point D. ultimate tensile strength
321	Acceleration in a body is always produced in the directin of:	A. Velocity B. Weight C. Force D. Botha B and C
322	A particle of mass 0.5 g moving along x-axis is located of x_1= 15 m at t_1= 5s and x_2= 33 m at t_2= 13s its average velocity is	A. 6 m s⁻¹ B. 2.45 m s⁻¹ C. 2.25 m s⁻¹ D. 4.45 m s⁻¹
323	NmA^{-1} is commonly called:	A. Weber B. Apmere C. Guass D. Coulomb E. None of these
324	If the velocity time graph is a straight line parallel to the time-axis, then it means:	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 these
325	Silicon can be obtained from	A. Lead B. Uranium C. An isotope of oxygen D. Sand
326	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/p-1/f D. 1/p=1/f+1/q
327	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. 2 J B. 0.25 J C. 1 J D. 0.5 J
328	In case of planets, the necessary acceleration is provided by:	A. Gravitational force B. Coulomb force C. Frictional force D. None of these
329	Electromagnetic waves transport	A. Energy only B. Momentum only C. Both A and B D. None is correct
330	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
331	The electric field will be uniform	A. Near a positive point charge B. Near a negative point charge C. Between two oppositely charged parallel metal plates D. None of above
332	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

333	The value of relative permittivity of different dielectrics are	A. Equal B. Different C. Greater than one D. Smaller than one E. Both B and C
334	OP-AMP has the following input terminals	A. one B. two C. three D. four
335	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
336	The total reactance of a series RLC circuit at resonance is	A. zero B. Equal to the resistance C. Infinity D. Capacitive
337	In rotational motion, analogue of force F us called:	A. Couple B. Torque C. Mass D. Moment of intertia
338	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
339	Electromagnetic waves emitted by hot bodies are called:	A. Photoelectrons B. Alpha rays C. Thermal radiation D. None of these
340	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
341	The motion of molecules in gases is:	A. Orderly B. Random C. Circular D. All of these
342	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
343	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:	A. Same<o:p></o:p> B. Different<o:p></o:p> C. Opposite to each other<o:p></o:p> D. At 60º with each other<o:p></o:p> E. Both (B) and (C)<o:p></o:p>
344	The field around a moving charge is called	A. magnetic field B. conservative field C. non-conservative field D. none of these
345	The effect of friction between different layers of a flowing fluid is described in terms of	A. motion of fluid B. nature of fluid C. colour of fluid D. viscosity of fluid
346	In describing functions of digital systems, a closed switch will be shown as	A. 0 B. 1 C. low D. any one of these

347	The pattern of crystalline solid is:	A. One dimesional B. Two dimensional C. Three dimensional D. None of these E. Either (A) or (B)
348	The minimum wavelength of X-rays produced of 1KV potential difference is applied across the anode and cathode of the tube is	A. 1.24 x 10⁻¹⁰m B. 7.92 x 10⁻²⁰m C. 2.78 x 10⁻¹⁴m D. 3.88 x 10⁻¹¹m
349	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
350	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:	A. +5 x 10¹J B. +5 x 10²J C. +5 x 10³J D. +5 x 10⁴J
351	The chemical properties of an element depends upon the number of	A. electron B. position C. photons D. neutrons
352	Two point charge +3**µC and +8µC repel each other with a force of 40 N. If a charge of -5µC is added to each of them, then the force between then will become**	A. -10 N B. +10 N C. +20 N D. -20 N
353	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
354	Laser is a beam of:	A. Visible light B. Infra red light C. Ultra violet light D. Violet light only E. yellow light only
355	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	A. Zero B. F/2 C. F D. 2F
356	During the upward motion of the projectile, the vertical component of velocity.	A. Decreases B. Increases C. Remains constant D. None of these
357	A condenser of capacity 50µF is charged to 10 V.The energy stored is	A. 1.25 x 10⁻³J B. 3.75 x 10⁻³J C. 2.5 x 10⁻³J D. 5 x 10⁻³J
358	When the shear stress and shear stain are involved, then their ratio is called	A. Young's modulus B. Bulk modulus C. Shear modulus D. all of them
359	The most abundant isotope of neon is	A. neon-20 B. neon-21 C. neon-22 D. neon-23
360	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
361	The half life of radioactive substances depends upon	A. amount of substance B. energy of substance C. state of substance D. temperature of substance
362	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
363	Work is always done on a body when:	A. A force acts on it B. It moves through certain distance C. None of A or B is correct

		D. Both A and B is correct
364	When monochromatic light is allowed to fall on cathode, it begins to emit electrons, these electrons are called	A. thermoionic electrons B. free electrons C. photoelectrons D. slow electrons
365	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
366	The earth's potential and potential at infinity are taken:	A. Equal<o:p></o:p> B. <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">Zero<o:p></o:p> C. <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">First is greater than the second<o:p></o:p> D. <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">Second is greater than the first<o:p></o:p> E. <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">Both (A) and (B)<o:p></o:p>
367	Which one is related to angular motion:	A. Moment of a force B. Moment of inertia C. Moment of momentum D. None of these
368	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
369	The year when A.H. compton was awarded Nobel Prize is:	A. 1923 B. 1927 C. 1931 D. 1935 E. None of these
370	The R_1= infinity and R_2= 0, then the gain of non-inverting amplifier is	A. zero B. infinity C. one D. any one of these
371	The rectangular components of a vector are equal in magnitude when the vector makes and angle _____with their x-component:	A. 0<span style="font-size: 10.5pt; line-height: 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;">° B. 30<span style="font-size: 10.5pt; line-height: 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;">° C. 45<span style="font-size: 10.5pt; line-height: 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. 60<span style="font-size: 10.5pt; line-height: 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;">°
		A. Longitudinal wave

372	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
373	An Astronaut in space comes to know of an explosion on nearby planet. The astronaut came to know about this explosion becuase.	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
374	The terms phase difference and path difference are	A. Same B. Different C. Equal D. none of these
375	The dimension of linear inertia is:	A. MLT² B. ML⁰T⁻² C. ML⁰T⁰ D. MLT⁻¹
376	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
377	An object undergoes S.H.M has maximum acceleration when its displacement form the means position	A. maximum B. zero C. half of the maximum value D. one third of the maximum value
378	Electric lines of force	A. Intersect each other B. Are always parallel C. Are always anti-parallel D. Never intersect E. None of these
379	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
380	In the compton's effect, it is found that the wavelength of incident x-rays is	A. greater than the wavelength of scattered x-rays B. equal to the wavelength of scattered x-rays C. less than the wavelength of scattered x-rays D. any one of these
381	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
382	Since the absolute scale is independent of the property of the working substance, hence, can be applied at	A. very high temperature B. very low temperature C. any one of them D. none of them
383	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
384	Which is modified form of galvanometer	A. potentiometer B. battery C. voltmeter D. slide wire bridge
385	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	A. fx = fy B. fx=10 fy C. fx = 0.01 fy D. Cannot be determined
386	Direction of motion _____ in circular motion	A. Changes off and on B. Changes continuously C. Does not change D. None of them
387	Thermocouple is an arrangement of two different metals	A. To convert heat energy in to electrical energy B. To produce more heat C. To convert heat energy into chemical energy D. To convert electric energy in to heat energy
388	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

389	Decibel is unit of	A. Intensity of light B. x-ray radiation capacity C. sound loudness D. Energy of radiation
390	The mass of the nucleus is always less than the total man 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. man defect D. radioactivity
391	The third band of the colour code:	A. Gives the number of zeroes B. ls decimal multiplier C. Gives the resistance tolerance D. Gives the third digit E. Both (A) and (B)
392	Electron volt is the unit of.	A. Potential difference B. Energy C. Resistance D. Capacitance
393	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
394	The Nobel Prize on the explanation of photoelectric effect was awarded to:	A. Max. Planck B. Maxwell C. Bohr D. Rutherford E. None of these
395	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
396	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
397	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
398	During the free fall motion of an object, when its weight becomes equal to the drag force, then it will move with	A. maximum speed B. zero speed C. maximum speed D. none of them
399	The value of the Stephen's constant for black body radiations is given by	A. 5.6 x 10⁸Wm⁻²K⁻⁴ B. 5.67 x 10⁻⁸Wm⁻²K⁻⁴ C. 2.9 x 10⁻³mK D. 2.9 x 10³mK
400	In photoelectric effect the energy of ejected electrons depend on	A. The frequency B. The intensity C. Both frequency and intensity D. None of these
401	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<span style="font-size: 10.5pt; line-height: 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;">° B. 30<span style="font-size: 10.5pt; line-height: 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;">° C. 60<span style="font-size: 10.5pt; line-height: 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. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial;

		background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
402	Which of the following type 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
403	Two sources are said to be coherent if they have	A. Same amplitude B. Same wavelength C. Definite phase relation with each other D. None of them
404	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
405	When two spherical conducting balls at different potentials are joined by a metallic wire, after some time:	A. Both the conductors are at the same potential<o:p></o:p> B. Potential difference across the conductors remain constant<o:p></o:p> C. Potential difference across the conductors becomes zero<o:p></o:p> D. Both (A) and (B)<o:p></o:p> E. Both (A) and (C)<o:p></o:p>
406	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
407	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
408	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
409	The rate at which the free electrons pass through any section of a metallic wire from right to left is:	A. Greater than the speed at which they pass from left to right<o:p></o:p> B. Less than the speed at which they pass from left to right<o:p></o:p> C. The same speed at which they pass from left to right<o:p></o:p> D. Any of above<o:p></o:p> E. None of them<o:p></o:p>

410	The size of the domain is such that they can contain	A. 10²to 10⁴atoms B. 10⁴ to 10⁸atoms C. 10⁸to 10¹²atoms D. 10¹²to 10¹⁶atoms
411	The maximum displacement of a body on either side of its equilibrium position is called	A. frequency B. amplitude C. displacement D. time period
412	1 J = _____?	A. 10⁷erges B. 10⁻⁷erges C. 10⁵erges D. 10⁻⁵erges
413	The electrical forces between the molecules of a liquid are	A. Repulsive B. Attractive C. Both A and B D. None
414	Silicon can be obtained from	A. Lead B. Uranium C. An isotope of oxygen D. Sand
415	Particles have the mass smallest of following is:	A. Electron B. Proton C. Neutron D. Quark
416	Which of the following is not thermo dynamical function?	A. Enthalpy B. Work done C. Gibb's energy D. Internal energy
417	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
418	The fourth band is a:	A. Silver band B. Red band C. Gold band D. Either A or C E. Either A or B
419	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
420	Angle between the ray of light and the corresponding wavefront is:	A. 0<span style="font-size: 10.5pt; line-height: 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;">° B. 60<span style="font-size: 10.5pt; line-height: 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;">° C. 90<span style="font-size: 10.5pt; line-height: 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. 120<span style="font-size: 10.5pt; line-height: 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;">°
421	Work done is maximum when angle between force and displacement is:	A. 0<span style="font-size: 10.5pt; line-height: 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;">° B. 90<span style="font-size: 10.5pt; line-height: 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;">° C. 180<span style="font-size: 10.5pt; line-height:

		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. None of these
422	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
423	Stoke;s law is not applicable when the speed of the object moving through a fluid is:	A. Zero B. Small C. Large D. None of these
424	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
425	The earth's potential is taken as	A. Negative B. Positive C. Zero D. Infinite
426	Ball pen functions on the principle of	A. Viscosity B. Boyle's law C. Gravitational force D. Surface tnesion
427	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
428	In a transistor, if the central region is p-type then this type of transistor is known as	A. p-n-p transistor B. n-p-n transistor C. either of these D. none of these
429	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	A. Same B. 2 times C. 4 times D. 8 times
430	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
431	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
432	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
433	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:	A. 60<span style="font-size: 10.5pt; line-height: 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;">° B. 90<span style="font-size: 10.5pt; line-height: 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;">° C. 30<span style="font-size: 10.5pt; line-height: 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. 0<span style="font-size: 10.5pt; line-height: 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;">°
		A. Greater than R

434	The impedance of RLC series resonance circuit at resonant frequency is	B. Equal to R C. Less than R D. None of these
435	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
436	Huygen's principles states that:	A. Light has dual nature B. Either of these C. None of these D. Light travels in straigth line
437	The ratio of velocity of sound in air at 4 atm pressure and that at 1 atm pressure would be	A. 1 : 2 B. 4 : 1 C. 1 : 4 D. 2 : 1
438	Compton studied the scattering of x-rays by loosely bound electrons from:	A. NaCl crystal B. Graphite crystal C. Zirconia D. Copper crystal E. None of these
439	What temperature is the same on Celsius scale as well as on Fahrenheit scale?	A. 32°C B. -32°C C. -40°C D. -212°C
440	Self inducede e.m.f. is also called	A. Motional e.m.f. B. Thermistor C. Electrostatic induction D. Back e.m.f
441	The charge carries in the electrolyte are:	A. Positive ions<o:p></o:p> B. Negative ions<o:p></o:p> C. Either (A) or (B)<o:p></o:p> D. Both (A) and (B)<o:p></o:p> E. Neither (A) nor (B)<o:p></o:p>
442	Gaussian surface is always:	A. Rectangular B. Spherical C. Cylinder D. Box shape E. Any of these
443	The consumption of energy by a 1000 watt heter in half an hour is:	A. 5 Kwh B. 0.5 Kwh C. 2.5 Kwh D. 3.2 Kwh
444	One coulomb of charge is created by	A. 10 electrons B. 1.6 x 10⁻¹⁹electrons C. 6.25 x 10¹⁸electrons D. 6.25 x 10²¹electrons
445	Satellites are held in orbits around Earth by its:	A. Gravitational field B. Magnetic field C. Own orbital motion D. Own spin motion
446	The shortest distance between two points directed from its initial point to final point is called:	A. Velocity B. Displacement C. Speed

	final point is called.	C. Speed D. Distance
447	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
448	Charge to mass ratio (e/m) of an electron is given by the relation	A. e/m = 2V/Br² B. e/m = 2V/B²r C. e/m = 2V/B²r² D. e/m = V/2B²r²
449	When some compass needles are placed on a card board along a circle with the center at the wire, they will	A. Point the direction of N-S<o:p></o:p> B. Set themselves tangential to the circle<o:p></o:p> C. Point in the direction of E-W<o:p></o:p> D. None of these<o:p></o:p> E. Point in direction of S-E
450	In an inelastic collision between two bodies, following is reserved.	A. Energy B. Both A and B C. Momentum D. None
451	In the phenomenon of hysteresis	A. magnetism leads the magnetising current B. magnetism lags behind the magnetising current C. meganetism goes along the magnetising current D. none of them
452	The magnetic force exerted on an electron moving with velocity 'v' at right angle to the magnetic field is given by	A. F=eVB B. F=e²V/B C. F=e/VB D. F=B²/ev
453	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	A. 1 : 2 B. 2 : 1 C. 1 : 4 D. 4 : 1
454	A meter wire carraying a current of 2A is at right angle to the uniform magnetic field of 0.5 Weber/m^2The force on the wire is	A. 5N B. 4N C. 1.5N D. 6N
455	A solar cell converts energy of the Sun into:	A. Heat energy B. Magnetic energy C. Light energy D. Sound energy
456	The number of different crystals systems based on the geometrical arrangement of their atoms and the resultant geometrical structure are	A. 5 B. 7 C. 9 D. 14
457	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
458	When platinum wire is heated, then at the temperature of 500 ^oC, it becomes:	A. Yellow B. Orange red C. Dull red D. White E. Cherry red
459	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
460	Nucleus of a hydrogen atom may contain:	A. One neutron only B. Two protons and one neutron C. Two protons and two neutrons

		D. Aany of above E. One proton only
461	A stone is tied to the end of a 20 cm along string is whirled in a horizontal circle. if centripetal acceleration is 9.8 m/sec^2, then its angular velocity in rad/sec is:	A. 22/7 B. 7 C. 14 D. 21
462	From sand, we get a material used for construction with the motion of bodies under the action of forces is called:	A. Optics B. Mechanics C. Thermodynamics D. Astrophysics
463	Velocity of particle executing SHM will be maximum at	A. Extreme position B. Mean position C. b/w mean and extreme D. None
464	The materials in which valence electrons are bound very tightly to their atoms and are not free, are known as	A. conductors B. insulators C. semi-conductors D. all of them
465	Monochromatic light means waves of:	A. Same frequency B. Same colour C. Same wavelength D. All of them
466	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
467	Internal energy is the sum of all the forms of	A. K.E B. P.E C. both of them D. none of them
468	The basic circuit element in a d.c. circuit is a/an	A. Inductor B. Resistor C. Capacitor D. Battery
469	The existence of position was predicted by Dirace in	A. 1920 B. 1925 C. 1930 D. 1928
470	An object thrown upward with an initial velocity at certain angle with the horizontal and moving freely under the action of gravity is called	A. a rocket B. an aeroplane C. a projectile D. a ballon
471	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
472	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
473	Which of the following forces is responsible for SHM	A. Applied force B. Restoring force C. Fractional force D. Elastic force
474	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	A. -q B. +q C. -2q D. +4q
475	The unit of magnetic flux is	A. Weber-m² B. Weber-m³ C. Henry D. Weber
476	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
477	The photon of radio-waves has energy of about	A. 1 Me V B. 1 Ke v C. 10-10</sup> v

		C. 10⁻¹⁰e v D. 10¹⁰e v
478	The collision in which KE is conserved but momentum is not conserved is called:	A. Elastic collision B. Inelastic collision C. any these D. None of these
479	magnetic field is a:	A. Vector quantity<o:p></o:p> B. Scalar quantity<o:p></o:p> C. Scalar as well as scalar quantity<o:p></o:p> D. Any of (A) or (B)<o:p></o:p> E. Neither (A) nor (B)
480	Compton shift refers to:	A. Photon B. Meson C. Proton D. Positron E. Both (B) and (D)
481	Electric field lines emerge from the charges in	A. One dimension B. Two dimensions C. Three dimensions D. Four dimensions E. None of these
482	Electron volt is the unit of	A. Potential difference B. Energy C. Resistance D. Capacitance
483	Direction of motion _____ in circular motion	A. Changes off and on B. Changes continously C. Does not change D. None of them
484	A circuit has a resistance of 11Ωan inductive reactance of 25Ωand 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	A. 11 B. 15 C. 18 D. 20
485	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
486	R.M.S velocity of a particle is V at pressure P. If pressure increases by two times, then R.M.S velocity becomes	A. 2V B. 3V C. 0.5V D. V
487	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
488	Aerodynamics is a branch of:	A. Hydrodynamics B. Thermodynamics C. Both of them D. Statics
489	Which of the following quantity for particle executing SHM is non-zero at mean position	A. Force B. Acceleration C. Velocity D. Displacement
490	The Boltzman constant has the value	A. 1.38 x 10⁻²³JK⁻¹ B. 1.28 x 10⁻²³JK⁻¹ C. 1.38 x 10⁻²⁶JK⁻¹ D. 1.28 x 10⁻²⁶JK⁻¹
491	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
492	When a body is vibrating, the displacement from mean position:	A. Increases with time B. Decreases with time C. Changes with time D. None of these
493	When temperature increase, the frequency of a tuning fork	A. Increases B. Decreases C. Remains same D. Increase or decreases depending on the material
494	In order to make a voltmeter, high resistance is connected with galvanometer, in	A. perpendicular B. may be paralled or pendicular C. series D. none of these
495	When a mass attached to a spring begins to move left or right from the equilibrium position, its P.E.:	A. Increases B. Decreases C. Remains constant D. None of these
496	A diode which can turn its current ON and OFF in nono seconds is called:	A. LED B. Photodiode C. An ordinary diode. D. Both (A) and (B) E. Both (B) and (C)
497	The number of protons inside a nucleus is called	A. mass number B. atomic weight C. atomic number D. none of these
498	The gavanometer 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
499	When a platinum wire is heated, it appears dull red at about	A. 500°C B. 900°C C. 1100°C D. 1300°C
500	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
501	The least distance of distinct vision is:	A. 10 cm B. 25 cm C. 50 cm D. 100 cm
502	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
503	The restoring force is always directed towards:	A. Rest position B. Equilibrium position C. Mean position D. All of them
504	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
505	The counter, which also provides the power to the G.M. tube is called:	A. Thin mica window B. thin glass window C. Airy window D. Wooden window E. None of these
506	Through which character we can distinguish the light waves from sound waves	A. Interference B. Refraction C. Polarization D. Reflection
507	The sum of positive and negative peak values is called:	A. Instantaneous value B. Peak value C. Rms valuie D. Peak-to peak-value E. None of these
		A. First

508	A dirty carpet is to be cleaned by heating. This is an accordance with____ law of motion:	B. Second C. Third D. None of these
509	At the starting point of the free fall motion of an object, its acceleration will be	A. maximum B. minimum C. zero D. none of them
510	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
511	An electric field is generated along the wire when:	A. Its resistance is very high<o:p></o:p> B. A constant potential is maintained across the wire<o:p></o:p> C. Net current through the wire is zero<o:p></o:p> D. A constant potential difference is maintained across the wire<o:p></o:p> E. Either (A) or (D) <o:p></o:p>
512	The expression F x t is called impulse if the time 't' is	A. zero B. very large C. very small D. infinite
513	The first shell near the neucles is	A. L-shell B. X-shell C. N-shell D. M-shell
514	The wave form of S.H.M will be	A. square wave B. sine wave C. rectified wave D. saw-tooth wave
515	Electromagnetic waves transport:	A. Energy only B. Momentum only C. Both A and B are correct D. None of is correct
516	The concept of electric field theory was introduced by	A. Michael Faraday B. Newton C. Dalton D. Kepler E. Einstein
517	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
518	The waves moving from a sitar to a listener in air are	A. Longitudinal progressive B. Longitudinal stationary C. Transverse progressive D. Transverse stationary
519	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
520	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
521	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

		D. None of the above
522	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
523	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
524	Fluids resist force, This property is called	A. Stiffness B. Strength C. Ductility D. Elasticity
525	β-particles are easily deflected by collisions than heavy	A. α-particles B. β-particles C. γ-particles D. none of these
526	If the distance between the plates of a parallel plate condenser of capacity 10μF is doubled then new capacity will be	A. 5μF B. 20μF C. 10μF D. 15μF
527	Three resistance 500,500 and 50 ohms are connected in series across 555 volts mains. The current flowing through them will be	A. 0.52 A B. 1 mA C. 0.7 mA D. 1.4 A
528	The conventional current is the name given to current due to flow of:	A. Positrons B. Positive charges<o:p></o:p> C. Negative charges<o:p></o:p> D. Both (A) and (C)<o:p></o:p> E. None of these<o:p></o:p>
529	Magnetic effect at a point caused due to flow a current depend upon the	A. Quantity of current B. Distance from current C. Both the quantity of current and distance from current element D. None of the all
530	When there is no internal frictional forces between the adjacent layers of fluid, then the fluid is called	A. incompressible B. compressible C. viscous D. non viscous
		A. 90<span style="font-size: 10.5pt; line-height: 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;">° to the axis of rotation B. 30<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial;

531	Conventionally the angular velocity is directed to an angle of:	background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° to the axis of rotation C. 0<span style="font-size: 10.5pt; line-height: 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;">° to the axis of rotation D. None of the above
532	If the velocity of the body decreases non-uniformly then the slope of the velocity-time graph will have	A. different values B. same values C. zero valves D. constant valves
533	The force experienced by an electron projected in a magnetic field B with a velocity V is given by	A. F=e(V x B) B. F= -e(V x B) C. F= e(B x V) D. Both a and c
534	For Protium, the mass defect is:	A. Infinite B. Zero C. Very large D. A few grams E. None of these
535	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
536	What is another name for laminar flow?	A. streamline B. unsteady flow C. turbulent flow D. both (a) and (b)
537	Ethanol (alcohol) as a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
538	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
539	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=P/V<1/2mv²> B. P=2N/V<1/2mv²> C. P=2/3N/V<1/2mv²> D. P=2/3N/V<mv²>
540	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 C. Relative motion of the loop and magnet D. Any one of above E. All above
541	A body is thrown from a height h with speed u, it hits the ground with speed V	A. The value of V is maximum if the body is thrown vertically downward B. The value of V is maximum if the body is thrown vertically upwards C. The value of V is minimum if the body is thrown horizontally D. The value of V does not depend on the direction of which it is thrown
542	The ratio of the size of the image to that of object is called:	A. Focal length B. Aperture C. Linear magnification D. Principal axis
543	Longitudinal waves are also called:	A. Congressional waves B. Transverse waves C. Radio waves D. None of them
544	In the force applied is parallel to the direction of motion, then work done is:	A. Maximum B. Minimum C. Zero D. None of these
545	Boyle's law is applicable in	A. Isochoric process B. Isothermal process C. Isobaric process D. Isotonic process
		A. Roentgen rays

546	X-ray are also known as	B. Maxwell rays C. Plank range D. Einstein rays
547	The body will move with terminal velocity when it acquires	A. minimum speed B. zero speed C. maximum speed D. none of them
548	.Depletion region contains:	A. Protons B. Positive ions C. Negative ions D. Both (B) and (C) E. Both (A) and (C)
549	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
550	For addition and subtraction purposes, absolute uncertainties are:	A. Added B. Subtracted C. Multipiled D. Divided
551	The string of a simple pendulum should be:	A. Heavy B. Extensible C. In-extensible D. None of these
552	X-rays can penetrate in a solid matte through a distance of several:	A. Kilo metres B. Metres C. Centimeters D. A few angstroms E. One micrometer
553	A shunt resistance parallel to the galvanometer is used to convert it into	A. avometer B. millimeter C. voltmeter D. none of these
554	Work is always done on a body when:	A. A force acts on it B. It moves through certain distance C. None of A and B is correct D. Both A and B is correct
555	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
556	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
557	The unit of induced emf is:	A. Volt B. Nm/As C. Joule coul⁻¹ D. Both A and C E. All of these
558	Speed of light in vacuum depends upon:	A. Frequency B. Wavelength C. Amplitude D. None of these
559	The projectile attains maximum horizontal range when it is projected at an angle of	A. 30° B. 45° C. 60° D. 75°
560	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
561	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
562	In case of destructive interference of two waves, the amplitude of the	A. Greater than B. Smaller than

	resultant wave will be ____ either of the waves:	C. Equal to D. None of these
563	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	A. 3/5 ohm B. 2 ohm C. 6/5 ohm D. 3 ohm
564	X-rays produced in a tube operating at 10^5V. The speed of X-rays produced is	A. 3 x 10⁸m/s B. 3.1 x 10⁸m/s C. 2.8 x 10⁸m/s D. 1.88 x 10⁸m/s
565	SI Unit of work is	A. Nm⁻¹ B. Joule C. Nms D. Both a and b
566	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
567	In a three phase a.c. generator, there are	A. 2 coils B. 3 coils C. 1 coild D. No coil
568	The electric field lines start from:	A. Positive charge B. Negative charge C. Either A and B D. Neutron E. An atom
569	The velocity gained by the fluid in falling through the distance ($h_{1 - h2}$) under the action of gravity is equal to the speed of the action of gravity is equal to the speed of the	A. orifices B. efflux C. fluid D. none of them
570	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
571	In gases, the charge carries are:	A. Electrons<o:p></o:p> B. Positive ions<o:p></o:p> C. Negative ions<o:p></o:p> D. Both (A) and (C)<o:p></o:p> E. Both (A) and (B)<o:p></o:p>
572	The root mean square voltage for alternating current is	D. All of these
573	The galvanometer can be made sensitive if the value of the factor C/BAN is	A. constant B. small C. large D. none of these
574	The contrast in the fringes in an interference pattern depends upon	A. Fringe width B. Relative difference intensities of the two sources C. Distance between the slits D. Wavelength
575	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

576	When two protons are brought closer potential energy of both of them:	A. Increases B. Decreases C. Remains same D. None of these
577	The S.I unit of frequency is	A. Vibrations s⁻² B. Ms⁻¹ C. Hertz D. s⁻¹
578	The distance covered by the wave in one second is:	A. Wave number B. Wave length C. Frequency D. Wave speed
579	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
580	The unit of conductance is	A. ohm B. meter C. mho D. ohm-meter
581	At a certain instant a stationary transverse wave is found to have maximum kinetic energy. The appearance of string of that instant is	A. Sinusoidal shape with amplitude A/3 B. Sinusoidal shape with amplitude A/2 C. Sinusoidal shape with amplitude A D. Straight line
582	When you drop a ball it acceleerates at 9.8 m/sex. If you instead throw it downward then it accelerates immediately after leaving your hand assuming no air resistance.	A. 9.8 B. More than 9.8 C. Less than 9.8 D. Depending throwing speed
583	In a charged capacitor the energy is stored in	A. Both in positive and negative charges B. Positive charges C. The edges of the capacitor plates D. The electric field between the plates
584	Which of the following is not a unit of power:	A. J-sec B. Watt C. N m/sec D. Horsepower
585	In 1932 Chadwick discovered	A. proton B. neutron C. photon D. electron
586	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
587	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)
588	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
589	The energy stored int he water of the dam is:	A. Electric energy B. Kinetic energy C. Potential energy D. None of these
590	To display a digit of EIGHT, the number of ON LED'S are:	A. Two B. Three C. Five D. Seven E. Eight
591	Transformer is used to	A. Increase alternating current B. Increase d.c voltage C. Increase & Decrease emf D. All answers are right
592	The velocity of sound at same temperature is maximum in	A. H₂ B. N₂ C. O₂ D. NH₃

593	Two forces of 10 N and 8 N are applied simultaneously to a body. the maximum value of their resultant is:	A. 2 N B. - 2 N C. 18 N D. 36 N
594	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
595	Slope of velocity-time graph represents:	A. Acceleration B. Speed C. Torque D. Work
596	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
597	Which of the following is a state variable	A. entropy B. pressure C. volume D. all of them
598	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
599	Which one of the least multiple:	A. Pico B. Femto C. Nano D. Atto
600	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	A. 0.4 A B. 11.4 A C. 9.8 A D. 10.6 A
601	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
602	Work is a scalar product of	A. Force, Velocity B. Velocity, Displacement C. Force, Displacement D. Force, Momentum
603	In a cubic crystal, All solids meet at:	A. 60^o B. 90^o C. 109^o D. 30^o E. 10^o
604	The time interval during which the Voltage source changes its polarity once is known as:	A. Time period T B. Half the time period C. Quarter the time period D. Two third of the time period E. None of these
605	The idea of quantization of energy was proposed by:	A. Einstein B. Max.Planck C. Maxwell D. Bohr E. Rutherford
606	The CRO deflects the beam of electrons, when they passes through uniform	A. electric field B. gravitational field C. magnetic flax D. magnetic field
607	Work done on a body by gravity in lifting it up to certain height is	A. Maximum B. Minimum C. Zero D. Negative
608	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
609	The information from far side of the universe are gathered by	A. Radio telescope B. Microscope C. Telescope D. Spectro scpe

610	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
611	Most ideal gas at room temperature is.	A. CO2 B. SO2 C. NH3 D. H2
612	The lasing or active medium in He-Ne laser discharge tube is:	A. Nitrogen B. Helium C. Hydrogen D. Neon E. None of these
613	For measuring large currents, an ordinary galvanometer cannot be used without proper, then both relates with each other as	A. modification B. voltage C. current D. resistance
614	When certain area A is held parallel to the field lines, then:	A. No lines cross this area<o:p></o:p> B. Maximum lines pass through this area<o:p></o:p> C. The number of lines are between zero and maximum<o:p></o:p> D. Both (A) and (B) correct<o:p></o:p> E. None of these<o:p></o:p>
615	If a vector lies in second quadrant, than B_x and B_y are:	A. -,+ B. +,- C. +,+ D. -,-
616	Work done is lowering the bucket into the well is:	A. Zero B. Positive C. Negative D. None of these
617	Unit vector is used to specify:	A. Magnitude of a vector B. Dimensions of a vector C. Direction of a vector D. Position of a vector
618	In thermodynamics, internal energy is the function of	A. temperature B. pressure C. state D. none of them
619	The number of vibrating body at any instant from its equilibrium position is called	A. displacement B. frequency C. amplitude D. time period
620	The horizontal range of projectile, at a certain place, depends upon	A. the mass of the projectile B. velocity of projection C. angle of projection D. angle as well as velocity of projection
621	Radioactivity was discovered by	A. Rutherford B. Henri Becqureal C. Maxwell D. James Chadwick
		A. Attach to individual atoms<o:p></o:p> B. Not attached to individual atoms<o:p></o:p> C.

622	In a metal, the valence electrons are:	C. Free to move within the metal<o:p></o:p> D. Both (A) and (C)<o:p></o:p> E. Both (B) and (C)<o:p></o:p>
623	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_B= I_E C. I_C+ I_B= I_E D. I_B+ I_E= I_C
624	Static electricity is produced by the transfer of:	A. Electrons B. Protons C. One fluid D. Two fluid E. None of these
625	In a capacitive circuit	A. Current leads voltage by phase ofπ/2 B. Voltage leads current by phase ofπ/2 C. Current and voltage are in same phase D. Sometime current and sometime voltage leads
626	The vector in space has:	A. One component B. Two components C. Three components D. None of these
627	A device used to measure the speed of liquid flow is known as	A. barometer B. speedometer C. sphygmomanometer D. venture-meter
628	The resistance of an incandescent lamp is	A. Smaller when switched on B. Greater when switched off C. The same whether it is switch off or switch on D. Greater when switched on
629	The conduction band in a solid	A. may be empty B. cannot be empty C. should be filed D. all of them
630	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 X 10⁸m/sec D. Both A and C E. Both B and C
631	The law of conservation of energy gives us	A. equation of continuity B. Bernoulli's theorem C. both of them D. none of them
632	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
633	Resolving power in mth order diffraction for grating is given by:	A. R = N x m B. None of these C. R = m/N D. R = N/m
634	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
635	Amplitude is the displacement of the vibrating body from:	A. One extreme position to the other extreme position B. Mean position any one extreme position C. Both A and B are correct

		D. None of these
636	The magnetic field in the middle of a solenoid due to current is	A. weak B. strong and uniform C. none-uniform D. zero
637	Conversion of alternating current into direct current is called	A. amplification B. rectification C. conduction D. polarization
638	Tick the series which lies in the visible region:	A. Lyman series B. Balmer series C. Paschen series D. Brackett series E. P fund series
639	Tick the conservative force:	A. tension in a string B. Air resistance C. Elastic spring force D. Frictional force
640	Radioactivity was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. All of them E. None of these
641	The concept of entropy was introduced into the study of thermodynamics in	A. 1856 B. 1865 C. 1656 D. 1685
642	Converse of pair production is known as	A. Compton effect B. annihilation of matter C. photoelectric effect D. none of these
643	Which of the following does not exhibit S.H.M?	A. a plucked violin string B. a mass attached to a spring C. a train shunting between two terminals D. a simple pendulum
644	An induced current can be produced by:	A. <span style="font-size: 10.5pt; line-height: 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;">Constant magnetic field B. <span style="font-size: 10.5pt; line-height: 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;">Changing magnetic field C. <span style="font-size: 10.5pt; line-height: 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;">Varying magnetic field D. <span style="font-size: 10.5pt; line-height: 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;">Constant electric field E. <span style="font-size: 10.5pt; line-height: 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;">None of these
645	To sources are said to be coherent if they have:	A. Same amplitude B. Same wavelength C. Definite phase relation with each other D. None of them
646	The smallest three dimensional basic structure is called as:	A. An atom B. Unit cell C. Crystal lattice D. Polymer E. None of these
647	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
648	No spark plug is needed in	A. petrol engine B. diesel engine C. both of them D. none of them
649	Viscosity of water is _____ that of air but ___ that of plasma.	A. More, more B. Less, more C. Less, less D. More, less
650	Which of the following is scalar quantity?	A. Electric potential B. Velocity C. Momentum D. Force
651	The internal energy of a system does not depend upon the	A. initial state of the system B. final state of the system C. path D. none of them
652	If R is gas constant for 1 gram mole, $C_p$and $C_v$are specific heat for a solid then	A. C_p- C_v= R B. C_p- C_{v < R} C. C_p- C_{v = 0} D. C_p- C_{v > R}
653	By CAT scans, we can detect the density difference of the order of:	A. 1% B. 20% C. 30% D. 50% E. 70%
654	The graph showing the variation of displacement with time is a	A. Sine curve B. Straight line C. Parabola D. None of these
655	Which quantity has the same dimension as that of impulse?	A. KE B. Power C. Momentum D. Work
656	Which of the following is a characteristic of an ideal fluid?	A. it is non-viscous B. it is incompressible C. it's motion is steady D. all of the above
657	Aerodynamics is a branch of	A. Hydrodynamics B. Thermodynamics C. Both of them D. Statics
658	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
659	Acceleration of a body is negative if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
660	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
661	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
662	γ-rays are	A. electrostatic waves B. electromagnetic waves C. heavy particles D. longitudinal waves
663	In vibrational motion(SHM)	A. P.E remains conserved B. Average K.E remain constant C. Neither P.E nor K.E remains constant D. Total energy remains constant
	A stone is dropped from rest from the top of a tower 19.6 m high. The	A. 9.8 m B. 14.7 m

664	distance traveled during the last second of its fall is (giving g=9.8 m/s^s)	B. 14.7 m C. 4.9 m D. 19.6 m
665	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
666	1 amu is equal to	A. 1.66 x 10⁻²⁴kg B. 1.66 x 10⁻¹⁹kg C. 1.66 x 10⁻³⁴kg D. 1.66 x 10⁻²⁷kg
667	Every crystalline solid has	A. definite melting point B. different melting points C. may or may not be definite D. none of them
668	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?	A. 60 W bulb B. 100 W bulb C. Both equally D. None of these
669	When a nucleus emits an alpha particles, its charge number decreases by	A. 3 B. 2 C. 6 D. 5
670	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
671	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.
672	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
673	A carnot cycle consists of	A. One step B. two step C. three steps D. four steps
674	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
675	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 wavelenth D. Low frequency E. Both (B) and (C)
676	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
677	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
678	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
679	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
680	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:	A. 0.05 m B. 0.08 m C. 0.8 m D. 0.008 m
681	Velocity of sound in vacuum (in m/s) is	A. 330 B. 1000 C. 156 D. 0

682	Static electricity is produced by the transfer of:	A. Electrons<o:p></o:p> B. Protons<o:p></o:p> C. One fluid<o:p></o:p> D. Two fluids<o:p></o:p> E. None of these<o:p></o:p>
683	A particle having the mass of electron and charge of a proton is called a	A. photon B. position C. antiproton D. antineutrino
684	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
685	Braking radiation causes:	A. Continuous spectrum B. Line Spectrum C. Band spectrum D. Discrete specturm E. All of these
686	Which of the following pairs does not have identical dimensions?	A. Torque and energy B. Energy and work C. Momentum and impulse D. Mass and moment of inertia
687	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
688	To designate the voltage as low or 0 by a logic gate, the specified minimum value is:	A. 0.2 volt B. 0.8 volt C. 0 volt D. 2.0 volt E. 5.0 volt
689	Angular momentum is a:	A. vector quantity B. Imaginary quantity C. Complex Quantity D. Scalar Quantity
690	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:	A. 5 rad/sec² B. -10 rev/sec² C. -10 rad/sec² D. -5 rev/sec²
691	When a wave is travels from one place to another, it transfers:	A. Matter B. Energy C. Momentum D. Both B and C
692	The product of force and time is called change in:	A. Momentum B. Impulse C. Force D. Both a and b
693	The resistance offered by a fluid to a solid moving inside it is called:	A. Drag force B. Surface force C. Viscosity D. None of these
694	A particle is moving in a straight line with velocity v = (4-t2) where t is the time from fixed point then acceleration of the particle after 4 sec is.	A. -8 m/sec2 B. -4 m/sec C. -8 m/sec D. - 4 m /sec2
695	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
696	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:	A. 38 m/sec B. 3.8 m/sec C. 0.6 m/sec D. None of these
697	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 card are:	A. Stationary waves B. Transverse waves C. Both of these D. None of these
698	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
699	SHM is type of _____ motion	A. Vibratory B. Linear C. Circular D. None
700	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
701	A current carrying write 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. Note move at all C. Rotate anti-clock wise D. Move towards magnetic north
702	For a moving body, at any instant of time	A. If the body is not moving the acceleration is necessarily zero B. If the body is slowing, the retardation is negative 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
703	A car battery has e.m.f 12 volt and internal resistance 5 x 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
704	Ultra-violet rays differ from X-rays in that they	A. Cannot be diffracted B. Cannot be polarized C. Have a lower frequency D. Are deviated when they pass through a magnetic field
705	Silicon can be obtained from:	A. Lead B. Uranium C. An isotope of oxygen D. Sand
706	Electric field strength is defined as	A. Work done on unit charge B. Force exerted on unit charge C. Distance covered by unit charge D. Power exerted by unit charge E. None of these
707	The number of "Earth stations" which transmit signals to satellites and receive signals from them are:	A. 3 B. 24 C. 126 D. 200
708	The phase angle of a series RLC circuit at resonance is	A. 180° B. 90° C. 0° D. None of the these
709	A train of 150 m length is going towards north direction at a speed of 10 ms^{-1}. A parrot files 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
710	There is no way to detect:	A. Absolute uniform motion B. Accelerated motion C. State rest D. State of motion E. None of these
		A. Pfund series B. Brackett series

711	Tick the series which lie/s in. the infra-red region.	B. Brackett series C. Paschen series D. All of these E. None of these
712	The charge per unit time through any cross-section of a conductor is called	A. capacitance B. electric power C. current D. potential difference
713	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)
714	The value for systolic blood pressure for a normal healthy person is	A. 140 torr B. 80 torr C. 90 torr D. 120 torr
715	The L-C parallel circuit the capacitor draws a	A. leading current B. lagging current C. main current D. none of these
716	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
717	The inside cavity of the black body is	A. painted white B. painted silver C. blackened with soot D. painted red
718	An important part of inkjet printer is:	A. <span 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">Toner B. Drum<o:p></o:p> C. Deflection plates<o:p></o:p> D. Heated roles<o:p></o:p> E. None of these<o:p></o:p>
719	Neutron was discovered in	A. 1915 B. 1920 C. 1925 D. 1932
720	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
721	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
722	The weight 'mg' of the bob is resolved into	A. one component B. two components C. three components D. four components
723	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)	A. Q/4πr² B. 2Q/4πr² C. Q.d D. Zero

724	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
725	Hotness and coldness of an object is represented in terms:	A. Heat B. Temperature C. Chemical energy D. None of these
726	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
727	The SI unit of charge is	A. Ampere B. Watt C. Coulomb D. Volt E. Joule
728	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
729	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.	A. 1 B. 3/2 p C. 2 D. 4
730	The electrons occupying the conduction band are known as	A. conduction electrons B. free electrons C. both of them D. none of them
731	An electron is accelerated through a potential difference of 50v. its de-Brogile wavelength is	A. 1.66 x 10⁻²⁹m B. 1.74 x 10⁻¹⁰cm C. 17.4 x 10⁻⁶m D. 1.74 x 10⁻¹⁰m
732	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:	A. 0.5 m/sec² B. 5 m/sec² C. 1.5 m/sec² D. 9.8 m/sec²
733	The restoring force always directed towards the	A. extreme position B. mean position C. both of them D. none of them
734	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	A. 50 m/s B. 20 m/s C. 40 cm/s D. 5 cm/s
735	The henry is the unit for	A. Resistance B. Magnetic flux C. Magnetic field D. Inductance
736	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
737	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
738	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
739	At what temperature the adiabatic change is equivalent to the isothermal change?	A. Zero degree Celsius B. Zero Kelvin C. Critical temperature D. Above critical temperature
740	Alfa , beta and gamma rays are emitted from a radio-active substance	A. spontaneously B. when it is heated C. when it is exposed to light D. When it interacts with the other particle

741	The length of a metallic rod is 5 meter at 100°C. The coefficient of cubical expansion of the metal will be	A. 2.0 x 10⁻⁵/°C B. 4.0x10⁻⁵/°C C. 6.0x10⁻⁵/°C D. 2.33x10⁻⁵/°C
742	The unit of flux density is also given by	A. Weber/m²or Wb . m⁻² B. Weber/mor Wb . m C. Weber/mor Wb . m⁻¹ D. Weber or Wb
743	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
744	In an adiabatic process the work is done at the expense of the	A. energy supplied to the system B. energy gained from the surroundings C. internal energy D. none of them
745	The damping depends upon the	A. amplitude B. sharpness C. both of them D. none of them
746	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
747	Blood pressure is measured by the instrument	A. stethoscope B. sphygmomanometer C. barometer D. none of them
748	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
749	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
750	Huygen's principle states that	A. Light travels in straight line B. Light has dual nature C. Either of these D. None of these
751	Resistance of a conductor depends upon	A. the quantity of current passing through it B. the voltage applied between its end C. its dimensions, physical state and nature of its material D. all of the above
752	In case of an ideal gas, the P.E associated with its molecule is	A. maximum B. zero C. minimum D. not fixed
753	The terminal velocity of a small size spherical body of radius R moving in a fluid varies as	A. R B. R² C. 1/R D. (1/R)²
754	Magnetic lines of force:	A. Cannot intersect at all<o:p></o:p> B. Intersect at infinity<o:p></o:p> C. Intersect within magnet<o:p></o:p> D.

		Intersect at Neutral Point<o:p></o:p></p> E. None of these
755	_____ 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
756	Which quantity has different dimension:	A. Work B. Pressure C. Energy D. Torque
757	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:	A. Power B. Work C. Pressure D. None of these
758	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<span style="font-size: 10.5pt; line-height: 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;">° B. 90<span style="font-size: 10.5pt; line-height: 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;">° C. 30<span style="font-size: 10.5pt; line-height: 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. 0<span style="font-size: 10.5pt; line-height: 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;">°
759	If the distance between two charges is doubled,the force between them will become:	A. Double B. Half C. One third D. One fourth
760	A body walks to his school at a distance of 6 km with a speed of 2.5 km/h and walks back with a constant speed of 5 km/h. His average speed for round trip expressed in km/h is	A. 24/13 B. 10/3 C. 3 D. 4,8
761	A ten ohm electric heater operates on a 110 V line. Calculate the rate at which it develops heat in watts	A. 1310 W B. 670 W C. 810 W D. 1210 W
762	Angular velocity is a:	A. Scalar quantity B. Vector quantity C. Complex quantity D. None of these
763	Two satellites are to be launched into space from the surface of eatth satellite 1 has mass 10 kg and volume 1500 cm3. While satellite 2 has mass 5 kg and volume 1000 m3. Assume the required escape velocities of satellite 1 and satellite 2 are v 1 and v2 , respectively. The relation between v1 and v2 is.	A. Relation depends on the launch B. V1>V2 C. V1 = V2 D. V1 <V2
764	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. 40

		Ω
765	Hertz is unit of:	A. Time period B. Displacement C. Amplitude D. Frequency
766	The time period of pendulums of different lengths would be	A. same B. different C. both of them D. none of them
767	The mass of the object is a quantities measure of its	A. speed B. velocity C. acceleration D. inertia
768	It 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°
769	The path followed by the projectile is known as:	A. Cycle B. Hyperbola C. Trajectory D. Route
770	If the external driving force is periodic with a period compareable to the natural period of the oscillator, then we get	A. diffraction B. beat C. interference D. resonance
771	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.	A. The average velocity and the instantaneous velocity of C are equal B. The relation depends upon the mass of the toy car C. The average velocity is greater than the instantaneous velocity at C equal D. The instantaneous velocity at C is greater than the average velocity.
772	Drag force increases if speed of the object moving through the fluid:	A. Increases B. Decreases C. Remains constant D. None of these
773	Moment of inertia depends upon:	A. Mass B. Selection of axis of rotation C. Both of them D. None of these
774	The three equation of motions are useful only for	A. linear motion with increasing acceleration B. line motion with uniform acceleration C. linear motion with zero acceleration D. linear motion with varying acceleration
775	In the theory of dimensional analysis, heat may be properly represented by:	A. ML²T⁻² B. MT⁻² C. ML⁻¹T⁻¹ D. None of these
776	The SI unit of magnetic flux is.	A. weber B. Nm⁻¹A⁻¹ C. tesla D. gauss
777	The special theory of relativity is based on the	A. one postulate B. two postulates C. three postulates D. four postulates
778	The reverse saturation current in a PN junction diode is only due to	A. Majority carriers B. Minority Carriers C. Acceptor ions D. Donor ions
779	A body absorbs heat a constant temperature , then this phenomenon will be.	A. Melting point B. Evaporation C. Boiling point D. Both A and B
780	According to the law of conservation of linear momentum, the total linear momentum of an isolated system	A. increases B. decreases with time C. remains constant D. none of them

781	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
782	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
783	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
784	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	A. 1/4 times B. 4 times C. Twice D. 1/2 of 8 cm diameter pipe
785	The number of all the protons and neutrons in a nucleus is known as	A. atomic number B. mass number C. charge number D. none of these
786	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
787	The density of water is $10^3 kg/m^3$. The water pressure on a submarine is $2.0 \times 10^7 N/m^2$. The depth of the submarine below the surface of the water, in maters, is approximately	A. 200 m B. 11000 m C. 2000 m D. 8000 m
788	Electrolysis is the study of conduction of electricity through:	A. Solids B. Liquids C. Gases D. Plasma
789	Position was discovered by Carl Anderson in	A. 1920 B. 1925 C. 1928 D. 1932
790	Astrophysics is a branch of physics, which deals with:	A. Sub-atomic particles B. Stars and galaxies C. Light and sound D. Music
791	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
792	Transverse waves can be set up:	A. Solids B. Liquids C. Gases D. All of them
793	Balmer series was identified in:	A. 1685 B. 1785 C. 1885 D. 1985 E. 1585
794	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
795	The electric flux is linked with a surface will be maximum when	A. The surface is held parallel to the electric field B. The surface is held perpendicular to the electric field C. The surface makes an angle of 45° with the electric field D. All of the above
796	If the object and its image are located at a distance of 5 cm from the focus of a convex lens, the focus length of the lens will be:	A. 5 cm B. 10 cm C. 20 cm D. 25 cm
		A. 10 m/sec2

797	A body is moving with constant velocity of 10 m/sec in the north east direction. Then its acceleration will be:	B. 20 m/sec2 C. 30 m/sec2 D. Zero
798	The concept of field theory was put forward by	A. Franklin B. Kepler C. Oersted D. Michael Faraday
799	It is customary represent a current flowing towards the reader by a symbol	A. (x) B. (+) C. (.) D. (-) E. (÷) <o:p></o:p>
800	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	A. 2.2 henry B. 1.6 henry C. 0.22 henry D. 0.16 henry
801	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
802	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
803	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
804	transverse wave motion is possible in:	A. Air B. A mixture of NH₃and O₂ C. Strings D. All of these
805	The volume of universal gas constant R is:	A. 8.314 J/K mole K B. 8314 J/K mole K C. 8.314 J/mole K D. None of these
806	For inducting 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
807	In the region surrounding a current carrying wire:	A. A magnetic field is setup <o:p></o:p> B. The lines of force are elliptical<o:p></o:p> C. Direction of lines of forces depends upon direction of current<o:p></o:p> D. Both (A) and (C)<o:p></o:p> E. All of these
808	The magnitude of induced emf depends upon the:	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
		A. Static

809	Which of the following friction is self-adjusting force.	B. Dynamic C. Limiting D. Sliding
810	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 x 10⁻¹⁷J C. 100 eV D. 1.6 x 10⁻¹⁷eV
811	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
812	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
813	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
814	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
815	A flywheel accelerates from rest to an angular velocity of 7 rad/sec in 7 seconds. Its average acceleration will be:	A. 49 rad/sec² B. 1 rad/sec² C. 0.16 rev/sec² D. Both A and C E. Both B and C
816	Current is measured in	A. volts B. watt C. ohm D. ampere
817	In a resonance situation the amplitude of the motion may become extra ordinarily large, if	A. the driving force is large B. the driving force is zero C. the driving force may be feeble D. all of them
818	The combined effect of resistance and reactance in a.c. circuit is called	A. conductance B. resistance C. impedance D. choke
819	The magnitude of the resultant of two forces may be increased by:	A. Increasing the angle between them B. Decreasing the angle between them C. Drawing a triangle to represent them D. None of these
820	All the valence electrons present in a crystal of silicon are bound in their orbits by	A. Ionic bond B. covalent bond C. Molecular bond D. Both (A) and (B) E. Both (B) and (C)
821	Tick the correct statement:	A. <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">Both the potential and potential difference is scalars<o:p></o:p> B. <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">Potential is a scalar but potential difference is a vector<o:p></o:p> C. Both are vectors <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"><o:p></o:p> D. <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">Potential is vector but potential difference is scalar<o:p></o:p> E. <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">None of these<o:p></o:p>
822	According to Einstein, with the great increase in the speed of the body the relativistic length of the body	A. Remains constant B. Decreases C. Increases D. Reduces to zero
823	When two objects come to common temperature, the body is said to be in:	A. Static equilibrium B. Dynamic equilibrium C. Thermal equilibrium D. None of these
824	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
825	Which one is not produced by sound waves in air?	A. Polarization B. Diffraction C. Refraction D. Reflection
826	Which of the following is not an example of adiabatic process	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
827	Which one is conservative force	A. Electric force B. Frictional force C. Normal force D. Air resistance
828	Two dissimilar metals joined at their ends kept at constant temperature constitute:	A. Cell<o:p></o:p> B. Voltmeter<o:p></o:p> C. Thermocouple<o:p></o:p> D. Potentiometer<o:p></o:p> E. None of these
829	The SI unit of strain is	A. N B. Dynes C. Pascal D. Dimensionless
830	When a source of light isat very large distance,the shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
831	The current is measured in	A. volts B. watt C. ampere D. ohm
832	The ultimate source of money sources of energy is:	A. Sun B. Air C. Water D. Petroleum
833	Three resistors of resistance R each are combined in various ways. Which of the following cannot be obtained?	A. 3RΩ B. 2R/4Ω C. R/3Ω

		D. 2R/3Ω
834	From the theory of relativity, momentum p of the photon is related to energy as	A. p = hfc B. p = hf/c C. p = f(hc,f) D. p = cf/h
835	Matter is made up of very tiny particles called	A. Atoms B. Molecules C. Ions D. None of these
836	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
837	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)
838	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
839	When body moves with increasing acceleration, its velocity time graph is a	A. straight line B. horizontal straight line C. vertical straight line D. curve
840	Centripetal acceleration is also called _____ acceleration:	A. Tangential B. Radial C. Angular D. None of them
841	Root out the conventional source of energy:	A. Energy from blomass B. hydroelectric energy C. Geothermal energy D. None of these
842	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
843	Which of the following has a great concentration of impurity	A. base B. emitter C. collector D. none of these
844	Which branch of physics deals with the structure and properties of solids	A. Atomic Physics B. Plasma Physics C. Molecular Physics D. Solid state physics
845	When body moves along a circular path with constant speed, it has an acceleration, which is always directed;	A. Along the tangent B. Towards the centre C. Away from the centre D. None of them
846	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
847	The value of relative permittivity of different dielectrics are:	A. Equal B. Different C. Greater than one D. Smaller than one E. Both (B) and (C)</o:p></o:p>

848	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	A. 17 m/s B. 33 m/s C. 17.5 m/s D. none
849	A resistance used in voltmeter is called	A. shunt resistance B. high resistance C. low resistance D. zero resistance
850	When two spherical conducting balls at different potentials are joined by metallic wire, the current starts:	A. Decreasing from zero to maximum<o:p></o:p> B. Increasing from zero to maximum<o:p></o:p> C. Decreasing from maximum to zero<o:p></o:p> D. Increasing from maximum to zero<o:p></o:p> E. Both (A) and (D) <o:p></o:p>
851	The effects of bends in a wire on its electrical resistance are:	A. Zero<o:p></o:p> B. Much larger<o:p></o:p> C. Larger<o:p></o:p> D. Smaller<o:p></o:p> E. None of these<o:p></o:p>
852	Addition of 2.189 kg, 0.089 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
853	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
854	The distance travelled byα-particle in a medium before coming to rest, is called	A. range ofγ-particle B. range of neutrons C. range of particle D. none of these
855	With the increase of temperature viscosity	A. Increase B. Decrease C. Remains same D. Doubles
		A. positive B. negative

856	The r.m.s value of a.c. current is always	B. negative C. zero D. all of these
857	The peak value of alternating voltage is given by	
858	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
859	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:	A. Also 20° <o:p></o:p> B. 70° <o:p></o:p> C. 90° <o:p></o:p> D. 180° <o:p></o:p> E. None of these
860	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:	A. 22/7 B. 7 C. 14 D. 21
861	On the compression stroke of the petrol engine, the inlet value is closed and the mixture is compressed	A. adiabatically B. isothermally C. isochorcally D. isobarically
862	A body is dropped from a tower with zero velocity, reaches ground in 4s. The height of the tower is about	A. 80 m B. 20 m C. 160 m D. 40 m
863	If time period of a pendulum is doubled by increasing its length, then its frequency will	A. Also be doubled B. Become half C. Become one fourth D. Becomes four times
864	Energy is not carried by	A. Transverse progressive waves B. Longitudinal vibration C. Stationary waves D. Electromagnetic
865	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
866	The unit of work in CGS system is	A. Joule B. Erg C. Dyne D. Watt
867	A process which can be retraced in exactly reverse order, without producing any change in the surroundings is called	A. reversible process B. irreversible process C. any one of them D. none of them
868	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
869	The ohm's is defined as	A. 1 ampere / 1 volts B. 1 coulomb / 1 volt C. 1 volt / 1

		C. 1 volt / 1 ampere D. 1 volt / 1 coulomb
870	When transistors are used in digital circuits they usually operate in the	A. Active region B. Breakdown region C. Saturation and cutoff regions D. Linear region
871	The example/s of non-electrical energy to electrical is/are:	A. Chemical energy<o:p></o:p> B. Mechanical energy<o:p></o:p> C. Heat energy<o:p></o:p> D. Both (A) and (B)<o:p></o:p> E. All of these<o:p></o:p>
872	A dimension stands for the _____ nature of certain physical quantity.	A. super B. Quantitative C. Qualitative D. Both B and C
873	Which of the following can become a good temporarily magnet	A. iron B. steel C. both of them D. none of them
874	Most practical applications of electricity involve	A. Charges at rest B. Charges in motion C. Electrons at rest D. Atoms in motion E. Molecules in motion
875	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
876	Which one of the following is not a vector quantity?	A. Kinetic energy B. Acceleration C. Momentum D. Force
877	The branch of physics which is mainly concerned with the motion of bodies under the action of forces is called:	A. Optics B. Mechanics C. Thermodynamics D. Astro physics
878	The nucleus/nuclei of hydrogen is/are:	A. Proton B. Deuteron C. Triton D. All of these E. None of these
879	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
880	The principle characteristics of an ideal standard are	A. Inaccessible and Invariable B. Accessible and Invariable C. Accessible and Variable D. None of these
881	Polymeric solids have	A. low specific gravity B. high specific gravity C. either of them D. none of them
882	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

883	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
884	When two objects are rubbed together, their internal energy	A. remains same B. decreases C. remains the same then decreases D. increases
885	The velocity of falling raindrop attains limited value because of	A. Up trust of air B. Viscous force exerted by air C. Surface tension effect D. Air currents atmosphere
886	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
887	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
888	If the waves produced in a microwave oven are of wave-length 12 cm, then their frequency will be:	A. 2500 MHz B. 0.25 MHz C. 2500 KHz D. None of these
889	Si units of time period is	A. second B. hertz C. revolution D. vibration/sec
890	The maximum value of drag forcer on an object is 9.8 N . What will be the value of its mass?	A. 9.8 Kg B. 2 kg C. 4 Kg D. 1 Kg
891	An important part of photocopier is:	A. Toner cartridge<o:p></o:p> B. Deflection plates <o:p></o:p> C. Charging electrode<o:p></o:p> D. Print head<o:p></o:p> E. None of these<o:p></o:p>
892	The life time of metastable state is equal to	A. Life time of excited state B. Greater than by excited state C. Zero D. Less than by excited state
893	Which of the following theory completely explain the three types of materials	A. Bohr model of electron distribution B. Rutherford atomic model C. Pauli's exclusion principle D. energy band theory
894	Arsenic, antimony and phosphorus are the elements from	A. third group B. fourth group C. fifth group D. none of them
895	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
896	In the expression of force experienced by electron, the direction of both v and B are	A. parallel B. zero C. perpendicular D. none of them

897	The entity which measures the quantity of motion in a body is called	A. force B. energy C. momentum D. power
898	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
899	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
900	If the mass of the simple pendulum becomes double, its time period	A. increase B. decreases C. remains constant D. none of them
901	During each cycle, alternating voltage reaches a peak value	A. One time B. Two times C. Four times D. A number of times depending on the frequency
902	A beam of electrons is provided by an	A. electron gun B. Suppray C. Injection D. None of these
903	When angular acceleration is positive, the body rotates:	A. Slower B. Slowest C. Faster D. None of these
904	According to the electromagnetic wave theory of light, increasing the intensity of incident light should increase the	A. number of photoelectrons B. size of the photoelectrons C. charge on photoelectrons D. K.E of photoelectrons
905	A coil of constant area is placed in a constant magnetic field. An include current is produced in the coil when:	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
906	An electron of charge e coulomb passes through a potential difference of V volts its energy in joules will be	A. V/e B. eV C. e/V D. V
907	Root out of the conventional source of energy:	A. Energy from biomass B. Hydroelectric energy C. Geothermal energy D. None of these
908	The example of reversible process is	A. an explosion B. changes occur suddenly C. slow compression of a gas D. all of them
909	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
910	CT scanning is the abbreviated name of	A. Computed Technology B. Computed Technique C. Computed Technology D. Computerized Technique
911	The displacement of body executing SHM is	A. x_ocoswt B. x_osinwt C. x_osin²wt D. Both A, B
912	The direction of a vector in space requires:	A. X-axis B. X and Y-axes C. XYZ axes D. Y and Z-axes
913	Such oscillations in which the amplitude decreases steadily with time, are called	A. resonance B. force oscillations C. large oscillations D. damped oscillations
	If the stress increased beyond the elastic limit of the material, the	A. permanent B. temporary

914	if the stress increased beyond the elastic limit of the material, the deformation produced in the material will be	B. temporary C. either of them D. none of them
915	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
916	One electron volt is equal to	A. 1.6 x 1019eV B. 6.25 x 1018 eV C. 1.6 x 1018 eV D. 6.25 x 1019eV
917	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
918	The velocity of light in vacuum can be changed by changing	A. Frequency B. Amplitude C. Wavelength D. None of these
919	Light year is a unit of:	A. Time B. Distance C. Velocity D. Intensity of light
920	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
921	A field in which the work done in moving a body along closed path is zero is called	A. Nuclear Field B. Conservative field C. Gravitational field D. Non-conservative field
922	When radioactive nucleus emits aβ-particle, the proton-neutron ratio	A. decrease B. increase C. same D. none of these
923	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:	A. 38 m/sec B. 3.8 m/sec C. 0.6 m/sec D. None of these
924	Substances that flow easily have	A. large coefficient of viscosity B. small coefficient of viscosity C. either of them D. none of them
925	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
926	At ordinary temperature, an increase in temperature increases the conductivity of	A. Conductor B. Semiconductor C. Insulator D. Alloy
927	The positive charge moving in one direction is equivalent in all external affects to a:	A. Negative charge is moving in the same direction<o:p></o:p> B. Positive charge is moving in the opposite direction<o:p></o:p> C. Negative charge moving in the opposite direction<o:p></o:p> D. Positive charges moving in the same direction<o:p></o:p> E. <span style="font-size:12.0pt; line-height:107%;font-

		family:"Times New Roman","serif"">None of these<o:p></o:p></p>
928	If the value of galvanometer constant k = C/BAN is made small, the galvanometer can be made	A. Sensitive B. Accurate C. Stable D. None of these
929	A voltmeter is used to measure the	A. potential difference B. current C. temperature D. resistance
930	When a body moves along a circular path with constant speed, it has an acceleration, which is always directed	A. Along the tangent B. Towards the centre C. Away from the centre D. None of them
931	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
932	Which of these is not a radiation detector	A. Wilson cloud chamber B. cyclotron acceleration C. Geiger Miller counter D. solid state detector
933	Momentum is a parameter associated with	A. wave motion B. particle motion C. neither wave nor particle motion D. none of these
934	Kirchhoff's first rule is also called:	A. Loop rule B. Thumb rule C. Point rule D. Right hand rule E. None of these
935	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
936	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
937	If one volt is needed to cause a current of one ampere to flow in a conductor, its resistance is	A. one ohm B. one joule C. one volt D. one ampere
938	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
939	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
940	The natural arrangement of colours in the spectrum of white light spectrum is	A. VIBGYOR B. ROYBGIV C. ROYBIGV D. BIGROYV E. None of these
941	In solids, only following type/s of wave can travel:	A. Transverse B. Longitudinal C. Both A and B D. None of them
942	Electron is a particle whose mass is:	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
943	An ordinary glass gradually softens into a 'paste -like' state before it becomes a very viscous liquid. It happens almost at:	A. 800^oC B. 500^oC C. 300^oC D. 100^oC E. None of these
944	A semi-conductor in its extremely pure form is known as	A. extrinsic semi-conductor B. intrinsic semi-conductor

944	A semi-conductor in its extremely pure form is known as	C. either of them D. none of them
945	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:	A. +5 X 10¹J B. +5 X 10²J C. +5 X 10³J D. +5 X 10⁴J
946	Physical quantities are often divided into _____ categories	A. 3 B. 2 C. 9 D. 5
947	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
948	Mathematical manipulation of the two quantized states can be best carried if they are represented by	A. high - low B. yes - no C. on - off D. 0 - 1
949	A sinusoidally alternating voltage or current can be graphically represented by a:	A. Vector B. Rotating vector C. Clockwise vector D. Anticlockwise voltage vector E. None of these
950	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
951	The waves produced in a microwave oven have frequency	A. 2450 Hz B. 2450 K Hz C. 2450 M Hz D. 2450 G Hz
952	A resistance used in galvanometer to make it voltmeter is called	A. shunt resistance B. high resistance C. zero resistance D. none of these
953	Which one of the following waves belongs to electromagnetic spectrum	A. Radio and TV waves B. Radar waves C. Micro waves D. All of them
954	Which one of the following is dimensionless:	A. Acceleration B. Velocity C. Density D. Angle
955	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	A. rotatory motion B. motion under gravity C. angular motion D. simple harmonic motion
956	Magnetic flux passing through a element whose vector area makes an angle0^{o} with lines of magnetic force is:	A. BACosΘ <o:p></o:p> B. Zero C. BA D. BA sin<span 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">Θ E. None of these
957	The change of order of vectors in a dot product of two vectors:	A. Changes its value B. Doesn't change it's value C. Changes the direction product quantity D. None of these
958	Lead, copper and wrought iron are examples of	A. brittle substances B. ductile substances C. plastic substances D. elastic substances
959	Centripetal force for electron is given by	A. mv²/ r B. mv / r²

		C. mv²/ r D. mr²/ v
960	Tick the one which is not polymer solid:	A. Zirconia B. Polythene C. Nylon D. Synthetic rubber E. None of these
961	Avo-meter is used of measure the	A. current, voltage B. voltage, resistance C. resistance, current D. current, voltage and resistance
962	The magnitude of chemical Effects depends upon:	A. Nature of liquid<o:p></o:p> B. Quantity of Electricity passed through the liquid<o:p></o:p> C. Color of the liquid<o:p></o:p> D. Both (A) and (C) <o:p></o:p> E. Both (A) and (B)<o:p></o:p>
963	The number of LED'S needed to display all the digits is:	A. Four B. Five C. Nine D. Six E. Seven
964	The electrode connected with the positive terminal of the current source is called	A. cathode B. anode C. electrolyte D. position
965	When an electron is accelerated through a P.D. of an one volt, it will acquire energy equal to	A. One joule B. One erg C. One electron volt D. None of these
966	Photoelectric effect takes place with a photon of:	A. Very high energy B. Very low energy C. Low energy D. High energy E. None of these
967	The isotope/s of hydrogen is /are:	A. Protium B. Deuterium C. Tritium D. Both (A) and (B) E. All of these
968	Power is a :	A. Vector quantity B. Base quantity C. Scalar quantity D. None of these
969	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
970	Weber is a unit of	A. magnetic flux B. magnetic filed intensity C. magnetic induction D. magnetic flux density
971	The motion of a projectile is	A. one dimension B. two dimension C. three dimension D. all of them
		A. 10⁻³¹gm B. 10⁻²⁷kg

972	Mass of proton is of order of	B. 10⁻²⁷kg C. 10⁻²⁴gm D. 10⁺²⁷kg
973	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
974	The field in which work done is moving body between two points depends upon the path followed is called:	A. Conservative filed B. Non-conservative field C. Electric field D. None of these
975	Rice takes longest to cook	A. In a submarine 100 m below the surface of the sea B. At sea level C. At Murree D. At Mount Everest
976	In series RC circuit when $R=X_C$, then the phase angle is	A. 0° B. 90° C. 70° D. 45°
977	Work done by the force of friction is always	A. Positive B. Zero C. Negative D. Maximum
978	When a position comes close to an electron they annihilate into photons such that	A. each photon has energy 0.51 Me v B. each photon has energy 1.02 Me v C. each photon has energy 0.25 Me v D. none of these
979	The instantaneous acceleration of a body moving with constant speed in a circle:	A. Remains constant B. Is called centripetal acceleration C. Tangential acceleration D. None of these
980	In a transistor, the central region is called	A. collector B. emitter C. base D. none of them
981	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	A. 1/3 V B. 2/3 V C. 3/2 V D. 3V
982	Rate of flow can be expressed in	A. litre/sec B. litre-sec C. sec/litre D. sec/litre-m
983	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
984	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
985	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
986	Binding energy per nucleus is	A. greater for heavy nucleus B. least for heavy nucleus C. greatest for light nuclei D. decreases for medium weight niclei
987	The displacement coincides with the path of the motion when a body moves is a	A. curved line B. straight line C. may be curved or straight D. none of them
988	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

	secondary, if voltage in primary is 30 V.	C. 30 V D. 300 V
989	A certain force gives an acceleration of 2 m/sec2 to a body if mass 5 kg. The same force would give a 29 kg object an acceleration of:	A. 0.5 m/sec2 B. 5 m/sec2 C. 1.5 m/sec2 D. 9.8 m/sec2
990	Which one of the following causes production of heat when current is set up in a wire?	A. Fall of electrons from higher orbits to lower orbits B. Inter-atomic collisions C. Inter-electron collisions D. Collisions of conduction electron with atoms
991	Proton was discovered by Rutherford in	A. 1915 B. 1906 C. 1910 D. 1920
992	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
993	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	A. R/2 B. P C. 2P D. Depending on the relative mass of the gases
994	Conversion of A.C. into D.C. is called:	A. Reftification B. Amplification C. Electric induction D. Magnetic induction E. None of these
995	Good absorbers of heat are	A. Poor emitters B. Non emitters C. Good emitters D. Highly polarized
996	The product of the pressure and volume of an ideal gas is	A. A constant B. Approximately equal to the universal gas constant C. Directly proportional to its temperature D. Inversely proportional to its temperature
997	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
998	Truth of kinetic energy is confirmed by:	A. Diffusion of gases B. Brownian motion C. Both A and B D. None of these
999	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
1000	An A.C. voltage is applied across the inductor. When the frequency of the voltage is increased, the current	A. Decreases B. Increases C. Does not change D. Momentarily goes to zero
1001	Newton's first law is also called:	A. Law of torque B. Law of force C. Law of inertia D. None of these
1002	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)
1003	The curve representing an adiabatic process is called	A. isotherm B. adiabat C. adiable D. none of them
		A. Its shaft to revolve<o:p></o:p> B. Its brushes to rotate<o:p></o:p>

1004	The current that flows through the coil of a motor causes:	C. Motor to move<o:p></o:p> D. Its shafts to rotate<o:p></o:p> E. None of these<o:p></o:p>
1005	The linear momentum of the body is defined as	A. p=ma B. p=1/2ma C. p=mv D. p=1/2mv
1006	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	A. Quadratic equation B. Equation of discontinuity C. Equation of continuity D. None of the above
1007	For a parallel resonant circuit at resonance, current from supply is	A. minimum B. maximum C. zero D. none of these
1008	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
1009	Selenium is:	A. An insulator<o:p></o:p> B. A conductor<o:p></o:p> C. Insulator in the dark and becomes conductor when exposed to light<o:p></o:p> D. Conductor in the dark only<o:p></o:p> E. None of these<o:p></o:p>
1010	The types of mechanical energy is/are:	A. Kinetic energy B. Potential energy C. Both of these D. None of these
1011	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
1012	A body of mass 5 kg is acted upon by a total change n momentum will be:	A. 10 NS B. 100 NS C. 140 NS D. 200 NS
1013	The penetration power ofβ-particle is	A. zero B. less thanα-particle C. equal toα-particle D. greater thanα-particle
1014	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.	A. 5 scoulombs B. 12.5 coulombs C. 10 coulombs D. 25 coulombs
		A. less than the external atmospheric pressure

1015	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 atmosphericpressure D. none of them
1016	The half life of uranium-238 is	A. 6.2 x 10⁹years B. 4.5 x 10⁹days C. 4.5 x 10⁹years D. 1.3 x 10⁶years
1017	Work-energy principle states that work done on the body by applied force is equal to change in:	A. Potential energy B. Kinetic nergy C. Linear momentum D. None of these
1018	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
1019	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
1020	The material in the form of wire or rod or plate which leads the current into or cut of the electrolyte is known as	A. voltmeters B. resistance C. electrode D. current
1021	A swing has	A. one natural frequency B. two natural frequencies C. three natural frequencies D. four natural frequencies
1022	When a body is moves along a circular path with constant speed, it has an acceleration, which is always directed:	A. Along the tangent B. Toward the centre C. Away from the centre D. None of them
1023	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
1024	The system international (SI) is built from _____ kind of unites	A. Two B. Three C. Four D. Five
1025	The power factor of resonant series circuit is	A. 1 B. 0 C. -1 D. 0.5
1026	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%
1027	The Stephen-Boltzmann law for the black body radiation is given by	A. E = T² B. E = -T² C. E = T⁴ D. E = -T⁴
1028	The doped semi-conductor materials are known as	A. intrinsic semi-conductor B. extrinsic semi-conductor C. either of them D. none of them
1029	An induced current can be produced by:	A. Constant magnetic field B. Changing magnetic field C. Varying magnetic feild D. Constant electric field E. None of these
1030	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
1031	Parallel vectors of same magnitudes:	A. Are equal B. Are unequal C. When added give the some equal to zero D. Give the answer equal to zero
		A. 2nd quadrant

1032	Cosine of an angle is positive in:	B. 3rd quadrant C. 4th quadrant D. All of these
1033	The magnitude of alternative voltage V:	A. Always increase B. Always decrease C. Remains constant D. Does not remain constant E. None of these
1034	Relativistic mechanics is a branch of physics, which deal with the bodies moving with velocities:	A. More then c B. Approaching c C. Equal to c D. Much less than x
1035	Crystalline solids are in the form of:	A. Metals B. Ionic Compounds C. Ceramics D. Both (A) and (B) E. All of these
1036	The electric field lines start from	A. Positive charge B. Negative charge C. Either A or B D. Neutron E. An atom
1037	One radian is equal to:	A. 30.3° B. 45.3° C. 50.3° D. 57.3°
1038	The holes created in the L and M shells are occupied by transitions of:	A. Electrons from lower states B. Electrons from higher state C. Positrons from higher states D. Electrons from K shell E. Both (A) and (B)
1039	Practically the quantity v/c is always:	A. less than one B. Equal to one C. Greater then one D. all of these E. None of these
1040	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
1041	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
1042	In case of point, source of light shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
1043	The bonding between the semi-conductor materials is	A. covalent B. ionic C. either of them D. none of them
1044	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
1045	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)
1046	Tesla is the unit of	A. Magnetic induction or flux density B. Magnetic flux C. Self inductance D. None of these
1047	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	A. 3 s B. 5 s C. 7 s D. 9 s
1048	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

1049	Blood is an	A. Compressible fluid B. incompressible fluid C. hard D. none of them
1050	An emf is set up in a conductor when it:	A. is kept in a magnetic field B. is kept in a electric field C. Move across a magnetic field D. Both (A) and (B) E. None of these
1051	A resonance curve for RLC series circuit is a plot of frequency versus	A. Voltage B. Current C. Impedance D. Reactance
1052	A field is uniform and much stronger:	A. Inside a long solenoid<o:p></o:p> B. Outside a long solenoid<o:p></o:p> C. At the end of a long solenoid<o:p></o:p> D. At the central point of long solenoid<o:p></o:p> E. None of these<o:p></o:p>
1053	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
1054	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
1055	Motional emf is called motional:	A. Electromagnetic force and is measured in newtons B. Electromotive force and is measured in volt C. Electromotive force and is measured in newtons D. Electromagnetic force and is measured in volts E. None of these
1056	Most practical application of electricity involve	A. Charges at the rest<o:p></o:p> B. Charges in the motion<o:p></o:p> C. Electrons at rest<o:p></o:p> D. Atoms in motion<o:p></o:p> E. Molecules in motion<o:p></o:p>
		A. Always accompanied<o:p></o:p>

1057	The passage of current is accompanied by a magnetic field in the surrounding space:	B. Sometimes accompanied<o:p></o:p> C. Never accompanied<o:p></o:p> D. Any of above <o:p></o:p> E. None of these<o:p></o:p>
1058	According to Stoke's law, drag force depends on	A. Initial velocity B. Final velocity C. Terminal velocity D. Instantaneous velocity
1059	The whole shape of the black body spectrum for all wavelengths was explained by the formula proposed by	A. Max plank B. Newton C. Einstein D. J.J. Thomson
1060	A mass difference of 0.0012 u is equivalent to and energy of:	A. 0.5 Me V B. 1.13 MeV C. 5.13 MeV D. 1.13 keV E. 1.13 eV
1061	The substances in which, atom are so oriented that their fields support each other and the atoms behave like tiny magnets, are called	A. diamagnetic substances B. ferromagnetic substances C. paramagnetic substances D. all of them
1062	A high concentration of red blood cells increases its viscosity from	A. 3 - 5 times that of mercury B. 5 - 8 times that of mercury C. 3 - 5 times that of water D. 5 - 8 times that of water
1063	A hole in p-type my be due to:	A. Trivalent impurity B. Breking of some covalent bond C. Pentavalent impurity D. Germanium E. Either (A) or (B)
1064	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
1065	A boy pulls a toy car through a distance of 5 m by applying a force of 0.5 N, which makes and 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
1066	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
1067	Specific heat at constant pressure is greater than the specific heat at constant volume because	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
1068	The electric field, magnetic field and the direction of their propagation are mutually	A. perpendicular B. parallel C. none of these
		A. Always accompanied<o:p></o:p> B. Sometimes

1069	The passage of current is accompanied by a magnetic field in the surrounding space:	accompanied<o:p></o:p> C. Never accompanied<o:p></o:p> D. Any of above <o:p></o:p> E. None of these<o:p></o:p>
1070	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	A. 0.32 A B. 0.16 A C. 0.48 A D. 0.80 A
1071	Waves transport energy	A. without transport energy B. with matter C. both of them D. none of them
1072	Unit of viscosity is:	A. Kg m⁻¹sec⁻¹ B. N s m⁻² C. J s m⁻³ D. All of these
1073	When the velocity of a liquid flowing steadily in a tube increases, its pressure?	A. Decreases B. Increases C. Remains same D. Zero
1074	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
1075	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
1076	The unit of spring constant is	A. J-sec B. Metre C. Nm⁻¹ D. None of these
1077	The application of Bernoulli's equation is	A. Torricelli's theorem B. Venture relation C. Binomial theorem D. Both a and b
1078	In a Milikian's oil drop experiment the charge on an oil drop is calculated to be 6.35×10^{-19}C. The number of excess electrons on the drop is	A. 3.9 B. 4 C. 4.2 D. 6
1079	At O° K which of the following properties of a gas will be zero?	A. Kinetic energy B. Potential energy C. Vibrational energy D. Density
1080	How many number of anodes used in electron gun	A. one B. two C. three D. six
1081	Adiabatic change occurs when the gas	A. expands B. compressed C. expands or compressed D. expands or compressed rapidly
1082	An vector of 10 N makes an angle of 45° with x-axis. Angle between its	A. 45<span style="font-size: 10.5pt; line-height: 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;">° B. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial;

1082	rectangular components with be:	background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 135<span style="font-size: 10.5pt; line-height: 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. Zero
1083	In stationary waves	A. Energy is uniformly distributed B. Energy is minimum at nodes and maximum at antinodes C. Energy is maximum at nodes and minimum at antidotes D. Alternating maximum and minimum energy producing at nodes and antinodes
1084	Monochromatic light means wave of	A. Same frequency B. Same colour C. Same Wavelength D. All of them
1085	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
1086	The value of the metastable state for Neon is	A. 20.66eV B. 20.61eV C. 19.23eV D. 18.70eV
1087	According to the Max plank, energy is redialed or absorbed in	A. discrete packets B. continuous waves C. either of them D. none of these
1088	In a straight current carrying conductor, the direction of magnetic field can be found by	A. right hand rule B. left hand rule C. head to tall rule D. none of these
1089	In an elevator moving vertically up with an acceleration 'g' the force exerted on the floor by a passenger of mass M is	A. Mg B. 1/2 Mg C. Zero D. 2 Mg
1090	Density is defined as:	A. Mass per volume B. Volume per mass C. Mass x volume D. Mass per length
1091	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
1092	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
1093	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
1094	In the same medium, velocity of the wave:	A. Goes on increasing B. Remains constant C. Goes on decreasing D. None of these
1095	The dot product of electric field intensity E and vector area A is called	A. Electric potential B. Electric flux C. Electric field D. Magnetic field
1096	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
1097	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

1098	The nucleous of uranium -235 differs from a nucleous of a uranium -238 in that the later contains	A. 3 more neutrons B. 3 more electrons C. 3 more protons D. 3 more ions
1099	Absolute temperature can be calculated by	A. Means squares velocity B. Motion of the molecule C. Both A and B D. None of these
1100	When sound waves travel from air to water which of these remains constant?	A. Velocity B. Frequency C. Wavelength D. All the above
1101	Which of the following options states the names of fluids in the order of increasing viscosity?	A. mercury, motor oil, methanol B. methanol, mercury, motor oil C. motor oil, mercury, methanol D. methanol, motor oil, mercury
1102	The velocity given to a body to go out of the influence of earth's gravity is known as:	A. Terminal velocity B. Orbital velocity C. Escape velocity D. None of these
1103	In describing function of digital systems, 1 represents:	A. Closed switch B. True Statement C. Lighted bulb D. Only (B) and (C) E. All are true
1104	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
1105	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
1106	At high speed, fluid friction _____ and fuel consumption ___,:	A. Increases, decreases B. Increases, increases C. Decreases, increases D. None of these
1107	The image of the tip of a needle is never sharp because of	A. Polarization of light B. Interference of light C. Diffraction of light D. Reflection of light
1108	When a body is vibrating, the displacement from mean position	A. Increases with time B. Decreases with time C. Changes with time D. None of these
1109	The quantity having dimension of ML^2T^{02}will earth is:	A. 80 sec B. 500 sec C. 1.802 X 10⁴sec D. Aerophysics
1110	Work is a:	A. Scalar quantity B. Vector quantity C. Base quantity D. None of these
1111	In order to have a constant current through wire, the potential difference across its end should:	A. Be zero<o:p></o:p> B. Be maintained constant<o:p></o:p> C. Goes on increasing<o:p></o:p> D. Go on decreasing<o:p></o:p> E. <span style="font-size:12.0pt; line-height:107%;font-family:"Times New

		Roman","serif"">Both (A) and (B) <o:p></o:p></p>
1112	The consumption source if energy is:	A. Energy from blomass B. Hydroelectric energy C. Geothermal energy D. None of these
1113	The phase at the positive peak is	A. Π/2 B. Π C. 3Π/2 D. 2Π
1114	In a heat engine, heat is supplied by the	A. cold reservoir B. sink C. hot reservoir D. none of them
1115	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/s² B. 1400 m/s² C. 700 m/s² D. 400 m/s²
1116	The nature of radiations emitted by a hot body depends upon its:	A. Metarial B. Temperature C. colour D. Volume E. Length
1117	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
1118	A second's pendulum is a pendulum whose time period is	A. 1 second B. 2 seconds C. 3 seconds D. 4 seconds
1119	Velocity of a body changes if	A. direction of the body changes B. speed of the body changes C. neither speed nor direction changes D. either speed or direction changes
1120	Referring to above figure, a changing current in coil P can be produced:	A. At the instant the switch is closed B. At the instant the switch is opened C. With the help of rheostat D. All of these E. None of these
1121	If mass of 10 gm is suspended from a spring of K=0.8 Nm^{-1}then the extension will be:	A. 10 cm B. 1 m C. 10 mn D. None of these
1122	Pair production take place when energy ofγ-rays photon is	A. equal to 1.02 Mev- B. greater than 1.02 Mev C. less than 1.02 Mev D. none of these
1123	Work has a dimension as that of:	A. Torque B. Angular momentum C. Linear momentum D. Power
1124	In which of the following components, pn-junction is used	A. light emitting diode B. photo diode C. photo voltaic cell D. all of these
1125	The locus of all points in a medium having same phase of vibration is called	A. Crest B. Trough C. Wavelength D. Wave-front
1126	The rate of change of momentum of a molecule is equal to:	A. Pressure B. Work

1126	The rate of change of momentum of a molecule is equal to:	C. Density D. Force
1127	An object in SHM will have maximum speed when its displacement from equilibrium position is:	A. Infinity B. Maximum C. Zero D. Minimum
1128	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
1129	During the upward motion of the projectile, the vertical component of velocity:	A. Decreases B. Increases C. Remains constant D. None of these
1130	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:	A. 1 m B. 5 m C. 10 m D. 15 m
1131	To make an LED, it is impreacticable to use:	A. Silicon B. Gallium arsenide C. Gallium arsenide phosphide D. Iron E. Both (B) and (C)
1132	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
1133	Torque is also called:	A. Momentum B. Linear inertia C. Moment of a force D. Mass
1134	The electric intensity at infinite distance from the point charge will be	A. Infinite B. Positive C. Zero D. Negative
1135	F = I(L x B) is a	A. vector B. scalar C. unit vector D. none of these
1136	γ-rays behave like a particle because they explain the	A. Compton effect B. Photoelectric effect C. Pair-production D. all the above
1137	As the light shines on the metal surface, the electrons are ejected	A. slowly B. instantaneously C. either of these D. none of these
1138	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
1139	The curie temperature of iron is about	A. 250°C B. 500°C C. 750°C D. 1000°C
1140	If a given spring of spring constant k is cut into two indentical segments, the spring constant of each segment is:	A. k/2 B. 2 k C. 4 k D. None of these
1141	Most of the electrons in the base of an NPN transistor flow	A. Out of the base lead B. Into the collector C. Into the emit D. Into the base supply
1142	Mechanical waves on the surface of a liquid are	A. Transverse B. Longitudinal C. Torsional D. both transverse and longitudinal
		A. 0.2 henry

1143	In a coil current change from 2 to 4 A in .05 s. If the average induced emf is 8V then coefficient of self-inductance is:	A. 0.2 henry B. 0.1 henry C. 0.8 henry D. 0.04 henry
1144	Radioactivity is	A. self disruptive activity B. spontaneous activity C. exhibited by all elements under proper conditions D. both 'a' and 'b'
1145	Marie curie and Pierre curie discovered:	A. Uranium B. Polonium C. Radium D. Both (A) and (C) E. Plutonium
1146	Gaussian surface is always:	A. <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">Rectangular<o:p></o:p> B. <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">Spherical<o:p></o:p> C. <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">Cylindrical<o:p></o:p> D. <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">Box shape<o:p></o:p> E. <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">Any of these<o:p></o:p>
1147	Ethanol (alcohol) is a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
1148	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
1149	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
1150	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
1151	The direction of lines of force depends upon the direction of	A. voltage B. current C. charges D. none of these
1152	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
1153	CRO deflects the beam of	A. proton B. a-particle C. electron D. neutron
1154	In deriving the Bernoulli's equation, we assume that the fluid is	A. incompressible B. no viscous C. flows in a steady manner D. all of them
		A. The charge in the plates reduces and potential difference increase

1155	A capacitor is charged with a battery and then it is disconnected. A slab of dielectric is now inserted between the plates, then	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
1156	The angular speed of a particle moving along a circular path is 5 Pie rad sec^{-1}, Its period of motion is:	A. 2.5 sec B. 0.06 sec C. 15.7 sec D. 0.4 sec
1157	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
1158	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. 5 cm B. 20 cm C. 10 cm D. 15 cm
1159	The wave nature of light was proposed by:	A. Newton B. Thomas Young C. Huygen D. None of these
1160	The charged nucleus of an atom itself spins its magnetic field	A. equal to the field produced by orbital electrons B. greater than the field produced by orbital electrons C. much weaker than the field produced by orbital electrons D. none of these
1161	Back emf is produced due to	A. Self induction B. Mutual induction C. A.C D. Lenz's law
1162	For making cooking utensils, which of the following pairs of properties is most suited?	A. Low specific heat and high conductivity B. Low specific heat and low conductivity C. High specific heat and high conductivity D. High specific heat and low conductivity
1163	Acceleration of a body is positive, if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
1164	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
1165	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 ($g=10m/s^2$)	A. 58.8 m/s B. 49 m/s C. 65 m/s D. 19.6 m/s
1166	Dimension of mass is written as:	A. M B. [M] C. (M) D. [m]
1167	To convert galvanometer into ammeter we connect	A. small resistance in parallel with galvanometer B. small resistance in series with galvanometer C. high resistance in series with galvanometer D. high resistance in parallel with galvanometer
1168	A mixture of two gases at constant temperature contains molecules of two kinds. The first kind of mass m1 nd rms speed c1 and the second molecule has mass m2 and rms speed c2, the ration c1/c2 is.	A. m1/m2 B. [m1/m2]^{1/2} C. m2/m1 D. [m2/m1]1/2
1169	Wien's constant is measured in:	A. Metre per kelviin B. Metre kelvin C. Kelvin per meter D. Joules E. Dynes
1170	When a silicon crystal is doped with a pentavalent element, such an extrinsic semi-conductor is called	A. p-type semi-conductor B. n-type semi-conductor C. either of them D. none of them
1171	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

1172	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
1173	Conversion of chemical energy to electrical energy can be achieved by:	A. Primary cell<o:p> </o:p> B. Secondary cell<o:p> </o:p> C. Both (A) and (B)<o:p></o:p> D. Photovoltaic cell<o:p></o:p> E. Solar cell<o:p> </o:p>
1174	Work is a always done on a body when	A. A force acts on it B. It moves through certain distance C. None of A or B is correct D. Both A and B are correct
1175	The term drift velocity is used when the ends of a wire are:	A. Connected to a laser source<o:p></o:p> B. Connected to a voltage source<o:p></o:p> C. Not connected to a voltage source<o:p></o:p> D. At different values of potential<o:p></o:p> E. Both (B) and (D)<o:p></o:p>
1176	Which one of the following physical quantities changes with relativistic speed	A. Length B. Mass C. Time D. All of the above
1177	If the radius of first orbit of hydrogen atom is 0.53° A the radius of second orbit will be	A. 2.120°A B. 0.212°A C. 21.2°A D. 0.14° a
1178	The SI unit of magnetic permeability is	A. WB A⁻¹m⁻¹ B. WB mA⁻¹ C. WB Am⁻¹ D. None of these
1179	Zirconia is classified as:	A. Ceramic solid B. Ionic compound C. Metal D. Either (A) or (B) E. Either (B) or (C)
	A body moving along the circumference of a circle of radius R completes	A. Radius of the circle B. Twice the radius

1180	one revolution. The radius of a covered path to the angle subtended at the centre is:	B. Twice the radius C. Thrice the radius D. None of these
1181	A traveling wave has a shape of:	A. Square wave B. Sine wave C. Parabola D. hyperbola
1182	Melting point of ice	A. Increases with increasing pressure B. Decreases with increasing pressure C. Is independent of pressure D. Is proportional to pressure
1183	When a mass 'm' is pulled slowly, the spring stretches by an amount x_0,then the average force would be	A. F= Kx₀ B. F=1/2Kx₀ C. F=2Kx₀ D. F=4Kx₀
1184	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
1185	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	A. diamagnetic substances B. ferromagnetic substances C. paramagnetic substances D. all of them
1186	The rain drop falling from the sky reach the ground with	A. Constant terminal velocity B. Constant gravitational acceleration C. Variable acceleration D. acceleration greater than g
1187	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
1188	The solids are classified as:	A. Metals B. Crystalline C. Amorphous D. Polymeric E. All except (A)
1189	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	A. 2 R B. R/4 C. R/2 D. R
1190	Astrophysics is a branch of physics, which deals with:	A. Sub-atomic particles B. Stars and galaxies C. Light and sound D. Music
1191	The diameter of an atom is of the order	A. 10⁻¹²⁵m B. 10⁻¹¹m C. 10⁻¹⁰m D. 10⁻⁹m
1192	An object undergoes SHM. Its maximum equilibrium positions:	A. Maximum B. Half of its maximum value C. Zero D. None
1193	Wavelength of light, on the average, is given by	A. 10⁻¹⁴m B. 10⁻¹⁰m C. 10⁻⁶m D. 10⁻⁴m
1194	We can express the work in term of	A. directly measurable variables B. indirectly measurable variables C. either of them D. both of them
1195	Aluminum is a:	A. Good insulator<o:p></o:p> B. Bad conductor<o:p></o:p> C. Both (A) and (B)<o:p></o:p> D. <span style="font-

		D. Excellent conductor<o:p></o:p> E. Semiconductor<o:p></o:p>
1196	The sum of positive and negative peak values are usually written as	A. P-P value B. negative C. zero D. may be positive or negative
1197	With increase of temperature, the viscosity of liquid and gases	A. Increases for both B. Decreases for both C. Increases for liquids and decreases for gases D. Decreases for liquids and increases for gases
1198	Newton published laws of motion in his famous book "principia" in	A. 1867 B. 1667 C. 1676 D. 1687
1199	A rocket carries its own fuel in the form of	A. liquid only B. liquid or solid C. liquid and solid D. liquid or solid and oxygen
1200	The charge carriers in gases are	A. electrons B. ions C. protons D. ions and electrons
1201	Electric flux is defined by the relation	A. E.A. B. E x A C. E/A D. none of these
1202	Electromagnetic waves transmit energy equal to	A. 1/2 mv² B. m_oc² C. hf/c D. hf
1203	The electric flux through any surface depends upon:	A. Intensity of electric field<o:p></o:p> B. Area of the surface<o:p></o:p> C. Angle between intensity and area<o:p></o:p> D. All of these<o:p></o:p> E. None of these<o:p></o:p>
1204	The SI unit of flux density is	A. Newton/Amp-meter B. Newton-m/Ampere C. Newton-m/Amp² D. Newton-Amp/meter
1205	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
1206	The nucleus left after the emission of some radiation is called:	A. Parent nucleus B. Daughter necleus C. Mother necleus D. Any of these E. None of these
1207	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
1208	For the conversion of galvanometer into voltmeter, we connect a	A. small resistance in series with galvanometer B. small resistance in parallel with galvanometer C. high resistance in parallel with galvanometer

		D. high resistance series with galvanometer
1209	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	A. F = B² B. F = 0 C. F = B D. F = B/2
1210	A simple pendulum consists of a	A. small light bob B. small heavy bob C. big light bob D. big heavy bob
1211	The body oscillates due to _____ accelerates and overshoots the rest position due to_____,:	A. Applied force, inertial B. Restoring force, friction C. Frictional force, inertial D. Restoring force, inertial
1212	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
1213	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
1214	How is the image formed by a convex lens affected if the upper half of the lens is covered with a paper:	A. The upper half of the image is cut off B. The brightness of the image is reduced C. The brightness of the image is increased D. No effect at all
1215	Ferromagnetic substances lose their magnetism when heated above a certain temperature, known as	A. critical temperature B. curie temperature C. high temperature D. fixed temperature
1216	Liquids and gasses have	A. zero viscosity B. non-zero viscosity C. very large viscosity D. very small viscosity
1217	Solar cell converts sunlight directly into	A. potential energy B. thermal energy C. mechanical energy D. electrical energy
1218	Unit of impulse in	A. Newton B. Kg m C. Kg m/s D. Joule
1219	Most of the geysers occur in:	A. Volcanic regions B. Magnetic regions C. Northern region D. None of these
1220	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
1221	In a semi-conductor material, current flows due to	A. positive charge B. negative charge C. both of them D. none of them
1222	The vibrations of factory floor caused by the running of heavy machinery is an example of	A. free vibration B. natural vibrations C. forced vibrations D. all of them
1223	When force and displacement are perpendicular to each other than work is equal to	A. Unity B. Infinity C. Zero D. -Fd
1224	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
1225	Distance covered by a freely failing body n the first second of its motion will be:	A. 4.9 m B. 9.8 m C. 19.6 m D. 29.4 m

1226	A vector which has magnitude 'one' is called:	A. Resultant vector B. A unit vector C. Position vector D. None of these
1227	The rate change of area expressed is expressed in:	A. None of these B. ms⁻¹ C. m²s⁻² D. ms⁻² E. m²s⁻¹
1228	On the power stroke, a spark fires the mixtures causing a rapid increase in pressure and temperature and the burning mixture expands	A. adiabatically B. isothermally C. isochorically D. isobarically
1229	The electric potential at the surface of an atomic nucleus (Z = 50) of radius 9.0×10^{-15} is	A. 9 x 10⁵V B. 9 V C. 8 x 10⁶V D. 80 V
1230	A body of mass 1.0 kg is falling with an acceleration of 10 m/s^2. Its apparent weight will be (g=10 m/s^2)	A. 1.0 kg wt B. 2.0 kg wt C. 0.5 kg wt D. Zero
1231	Phenomenon of radioactivity is due to disintegration of	A. nucleus B. neutron C. proton D. molecule
1232	When a platinum wire is heated, it appears orange red at	A. 500°C B. 900°C C. 1100°C D. 1300°C
1233	The ideal gas law is	A. P = nRT B. V = nRT C. PV =RT D. PV =nRT
1234	The pressure will change in the pipe, as the fluid moves through that pipe of varying	A. cross-section B. height C. none of them D. both of them
1235	A body is moving with constant velocity of 10 m/sec in the north-east direction. Then its acceleration will be:	A. 10 m/sec² B. 20 m/sec² C. 30 m/sec² D. Zero
1236	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
1237	Biomass includes:	A. Crop residue B. Natural vegetation C. Animal dung D. All of these
1238	Referring to the above figure, the binding energy per nucleon increases upto mass number equal to:	A. 50 B. 100 C. 150 D. 200 E. 250
1239	The terminal velocity of water droplet of radius 1×10^{-4}m and desity 1000 kg m^{-3}descending through air of viscosity 19×10^{-6}kg. m^{-1} s^{-1} is	A. 2.5 ms⁻¹ B. 3.2 ms⁻¹ C. 4.3 ms⁻¹ D. 1.1 ms⁻¹
1240	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
1241	Battery is charged in motor cars, which is based on	A. Chemical effect B. Magnetic effect C. Electric effect D. None
		A. Nitrogen B. Oxygen

1242	Polymers are the chemical combination of carbon with:	C. Hydrogen D. All of these E. None of these
1243	The photocopying process is called:	A. Geography B. Sonography C. Xerography D. Zerography E. None of these
1244	Energy gas behaves like an ideal gast at	A. High temperature and low pressure B. Low temperature and high pressure C. Both A and B D. None
1245	If speed of electron is 5 x 10^5m/s. How long does it take one electron to transverse 1 m?	A. 1 x 10⁶ B. 2 x 10⁶ C. 2 x 10⁵ D. 1 x 10⁵
1246	Which one is the least multiple	A. Pico B. Femto C. Nano D. Atto
1247	The current that flows through the coil of a motor causes	A. Its shaft to revolve B. Its brushes to rotate C. Motor to move D. Its shaft to rotate E. None of these
1248	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
1249	The kinetic energy of one molecule of a gas at normal temperature and pressure will be (k = 8.31 J/mole K) :	A. 1.7 x 10³J B. 10.2 x 10³J C. 3..4 x 10³J D. 6.8 x 10³J
1250	Number of supplementary units are	A. Three B. Two C. Seven D. Five
1251	The cohesive forces between atoms, molecules or ions in crystalline solids maintain the strict	A. short range order B. long range order C. both of them D. none of them
1252	Light waves are	A. Transverse waves B. Longitudinal waves C. Compressional D. None of them wave
1253	When the object lies between F and 2F, the image formed by is formed at:	A. Virtual B. Diminished C. Erect D. Real
1254	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
1255	The portion of the water above its mean level forms a:	A. Crest B. Trough C. Both A and B D. None of these
1256	The current in microamperes required to produce one millimeter deflection on a scale placed one meter away from the mirror of the galvanometer, defined the sensitivity of	A. ammeter B. voltmeter C. galvanometer D. avo-meter
1257	Examples of moderators used in a fission reactor is/are:	A. Water B. Heavy water C. Carbon D. Hydrocarbon E. All of these
1258	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	A. second law thermodynamics B. first law of thermodynamics C. third law of thermodynamics D. none of them
1259	You have 20 inductors available each of 15H. You need an inductor of 1H in	A. 15 inductor in parallel

1259	a circuit. You achieve it by combination.	B. 20 inductor in series C. 20 inductor in parallel D. 15 inductor in series
1260	To and fro motion of a body is about its mean position is known as:	A. Translatory motion B. Vibratory motion C. Rotatory motion D. None of these
1261	The number of vibration in two seconds can be expressed as _____ of frequency of vibration is f:	A. f B. 2 f C. 3 f D. 1/2 f
1262	A spring of constant k = 0.4 N m^{-1} is to be extended thorugh 10 cm at a place where g = 10 m sec^{-2}. The mass to be suspended should be:	A. 4 gms B. 0.4 gms C. 40 gms D. None of these
1263	The work is stored in the inductor as	A. Electric potential energy B. Elastic potential energy C. Magnetic energy D. Absolute potential energy
1264	According to the special theory of relativity	A. mass and energy are same entities B. mass and energy are same entities but interconverible C. mass and energy are different entities but interconverible D. mass and energy are different entities but non-interconveritble
1265	When a person jumps off the ground, the reaction force of the ground is	A. greater than the weight of the person B. smaller than the weight of the person C. equal to the weight of the person D. zero
1266	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
1267	Which of the following options correctly states the equation of continuity for an ideal fluid?	A. A₁A₂= V₁V₂ B. A₁/A₂= V₂/V₁ C. A₁/A₂= V₁/V₂ D. none of the above
1268	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. 2 K C. 4 K D. None of these
1269	Electrostatics is the branch of physics which deals with the study of electro charges:	A. At rest<o:p></o:p> B. At rest under the action of electric forces<o:p></o:p> C. In motion under the action of electric forces<o:p></o:p> D. In motion<o:p></o:p> E. At rest under the action of nuclear forces<o:p></o:p>
1270	Teh 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
1271	If a freely oscillating system is subjected to an external force, then	A. free vibrations will take place B. the body will move with its natural frequency C. forced vibrations will take place D. none of them
1272	Velocity of sound in a diatomic as is 300 m/sec. what is its rms velocity?	A. 400 m/sec B. 40 m/sec C. 430 m/sec D. 300 m/sec

1273	The tidal energy is due to gravitational pull of :	A. sun B. moon C. Mars D. None of these
1274	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
1275	The process in which energy is dissipated from the oscillating system is known as	A. resonance B. interference C. diffraction D. damping
1276	If an electron of charge 'e' is accelerated through a potential difference V., it will acquire energy	A. Ve B. V/e C. e/V D. 2Ve
1277	Swimming is based on the principle of	A. Newton's 1st law B. Newton's 2nd law C. Newton's 3rd law D. All
1278	Electric flux is:	A. Cross product of two vector <o:p></o:p> B. Dot product of two vectors<o:p></o:p> C. A vector quantity<o:p></o:p> D. A scalar quantity<o:p></o:p> E. Both (B) and (D)<o:p></o:p>
1279	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
1280	At resonance, the impedance of RLC series circuit is	A. Maximum B. Zero C. Minimum D. Determinate
1281	When the object lies between F and 2F, the image formed by is formed at:	A. Real B. Virtual C. Diminished D. Erect
1282	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
1283	When a conductoris 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
1284	While deriving equation of pressure by kinetic theory of gases, we take into account:	A. Only linear motion of molecules B. Only rotational motion C. Only vibratory motion D. All of these
1285	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
1286	The artillery shells travel along parabolic paths under the influence of	A. magnetic field B. electric field C. electromagnetic field

		D. gravitational field
1287	The unit of spring constant is:	A. J-sec B. Metre C. Nm⁻¹ D. None of these
1288	A person standing near the track of a fast moving train has tendency to fall towards it because of	A. Vibration due to motion of train B. Gravitation force of attraction between person and trains C. The high speed of train D. Some other effect
1289	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
1290	Huygen's theory cannot explain	A. Diffraction B. Interference C. Polarization D. Photoelectric effect
1291	Smaller the damping, greater will be the	A. frequency B. wavelength C. amplitude D. none of them
1292	A particle of mass 5.0 mg moves with a speed of 8.0 m/s. Its de-Brogile wavelength is	A. 1.66 m B. 1.66 x 10⁻¹⁰m C. 1.66 x 10⁻²⁹cm D. 1.66 x 10⁻²⁹m
1293	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 x 10¹⁸electrons per second E. Both B and D
1294	When a stress changes length, it is called the	A. compressional stress B. tensile stress C. shear stress D. any one of them
1295	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
1296	Which one of the following is correct?	A. V_o= 1.414 V_{rms} B. I_{ams}= 1.414 I_o C. VO = 10.70 Vrms D. Both a and b
1297	Which quantity has the same units as impulse	A. force B. work C. linear momentum D. acceleration
1298	The mass of an object will be doubled at speed	A. 1.6 x 10⁸ms⁻¹ B. 2.6 X 10⁸ms⁻¹ C. 2.6 x 10⁷ms⁻¹ D. 2.6 x 10⁹ms⁻¹
1299	When a platinum wire is heated, it appears white at	A. 1600°C B. 900°C C. 1100°C D. 1300°C
1300	In L.C.R series A.C. circuit, the phase angle between current and voltage is	A. Any angle between 0 and <u>+</u>π/2 B. π/2 C. π D. Any angle between 0 and<i style="font-family:

		D. Any angle between 0 andπ/2
1301	Wave disturbances may also come in a concentrated bundle, like shock wave from an aeroplane flying at	A. subsonic speed B. sonic speed C. super sonic speed D. any one of them
1302	The smooth or steady stream-line flow is know as	A. Laminar flow B. Turbulent flow C. Both a and b D. None of the above
1303	The blood pressure of a person	A. decrease with age B. increase with age C. has no effect with age D. none of them
1304	Bernoulli's equation is important in the field of	A. Electrical circuit B. Magnetism C. Photoelectric effect D. Flow of fluids
1305	A current of 1.6 A is passed through a solution of $CuSO_4$. How many Cu^{2+} ions are liberated in one minute?	A. 3 x 10²⁰ B. 3 x 10¹⁰ C. 6 x 10²⁰ D. 6 x 10¹⁰
1306	The quantity F x t is called as	A. momentum B. velocity C. acceleration D. impulse
1307	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of these
1308	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	A. 300°C B. 573°C C. 600°C D. 743°C
1309	Swimming becomes possible because of_____law of motion.	A. First B. Second C. Third D. None of these
1310	The work done on the system by the environment is considered as	A. positive B. negative C. zero D. any one of them
1311	Synthetic materials fall into the category of	A. crystalline solids B. amorphous C. polymeric solids D. all of them
1312	Second's pendulum is the pendulum whose time period is:	A. 1 second B. 2 second C. 3 second D. None of these
1313	In the forward biases situation, the current flowing across the p-n junction is a few:	A. amperes B. Milli amperes C. Micro amperes D. Pico amperes E. None of these
1314	The domains are of macroscopic size of the order of	A. centimeters B. meters C. millimeters D. nanomneters
1315	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
		A. A - Z

1316	For an atom having atomic number 'Z' and atomic weight 'A', the number of neutrons in the nucleous is	B. A C. Z D. A + Z
1317	Whenever a covalent bond breaks, it creates:	A. An electron B. A hole C. An electron-hole pair D. A positron E. All of these
1318	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
1319	For transmission of both transverse and longitudinal waves, we can use:	A. Solid B. Gas C. Plasma D. None of these
1320	The average value of current and voltage over a cycle is	A. Positive B. Negative C. Zero D. May be positive or negative
1321	Flight of rocket in the space is an example of	A. Newton's first law B. Newton's third law C. Newton's second law D. all of them
1322	Swimming becomes possible because of_____law of motion:	A. First B. Second C. Third D. None of these
1323	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)
1324	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
1325	The angle of deflection of coil can be measured by the	A. one method B. three method C. two method D. none of these
1326	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
1327	A particle is moving along a circular path with uniform speed. Its projection will execute____along the____of the circle:	A. Circular motion, circumference B. Vibrator, chord C. SHM, diameter D. SHM, circumference
1328	The value of escape velocity of Earth planet comes out to be:	A. 11 m/sec B. 11 km/sec C. 11 km/hour D. 11 cm/sec
1329	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)
1330	In case of metallic conductors, the change carries are:	A. Protons<o:p></o:p> B. Electrons<o:p></o:p> C. Antiprotons<o:p> </o:p> D. <span style="font-size:12.0pt; line-height:107%;font-family:"Times New

		Roman","serif"">Positrons<o:p> </o:p> E. <span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Both (A) and (B) <o:p></o:p>
1331	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.
1332	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?	A. potential energy B. pressure energy C. strain energy D. (a) and (b) only
1333	Surface tension of water is due to	A. Inter molecular attractions B. Inter molecular spaces C. Inter molecular repulsion D. None of above
1334	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)
1335	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
1336	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
1337	A metal road of length 1m is moving at a speed of 1 ms^{-1}In a direction making angle of 30^{o} with 0.5 Y magnetic field. The emf produced in the rod is:	A. 0.25 N B. 0.25 V C. 2.5 V D. 2.5 N E. 25 V
1338	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	A. 20 B. 200 C. 2000 D. 20,000
1339	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
1340	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)
1341	The total work done in moving the body up and then down through the same height in a gravitational field is equal to:	A. mgh B. Its wight C. Weight X height D. Zero
1342	When a position comes close to an electron they annihilate into	A. one photon B. two photons which travel in the same direction C. two photons which travels in the opposite direction D. two photons which travel in any direction
1343	The time period of pendulum, at center of earth.	A. Zero B. Infinite C. Maximum D. Minimum
1344	A body can have constant velocity when it follows:	A. A circular path B. A rectilinear path C. Trajectory of a projectile D. None of these
1345	The value of the plank's constant 'h' is given by	A. 1.6 x 10⁻¹⁹J B. 1.67 x 10⁻²⁷Kg C. 6.63 x 10³⁴Js D. 6.63 x 10⁻³⁴Js
		A. Shape

1346	The nature of capacity of electrostatic capacitor depends on	B. Size C. Thickness of plates D. Area
1347	One KWh is equal to:	A. 3.6 x 10²J B. 3.6 KJ C. 3.6 x 10¹KJ D. 3.6 MJ
1348	A magnetic force on an electron travelling with $10^8 ms^{-1}$ parallel to a field of strength 1 Wb m^{-2} is	A. Zero B. 10⁵m C. 10⁻¹⁰N D. 10⁸N
1349	A flywheel accelerates from rest to an angular velocity of 7 rad/sec in 7 seconds. Its average acceleration will be:	A. 49 rad/sec² B. 1 rad/sec² C. 0.16 rev/sec² D. Both A and C E. Both B and C
1350	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 sphere of radii 5 cm each having the same charge as that of the respective point charges. The distance between their centre is again kept 0.1 m ; then the force of repulsion will	A. Increase B. Decrease C. Remain F D. Become 10F/9
1351	Flurescent screen is a screen where visible spot	A. vanishes B. is made C. becomes small and large D. none of these
1352	When quarter of a cycle is completed, the phase of vibration is:	A. 90<span style="font-size: 10.5pt; line-height: 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;">° B. 180<span style="font-size: 10.5pt; line-height: 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;">° C. 45<span style="font-size: 10.5pt; line-height: 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. 360<span style="font-size: 10.5pt; line-height: 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;">°
1353	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°
1354	When a high energy photon interact with a metal, which of the following effect is most likely to be taken place	A. pair production B. photoelectric effect C. Compton effect D. None of these
1355	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	A. Momentum B. Kinetic energy C. Velocity D. Total energy
1356	An eV is unit of:	A. <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">Potential<o:p></o:p> B. <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">Energy<o:p></o:p> C. <span style="font-size:12.0pt;line-height:107%;font-family: "Times New Roman" "serif";mso-fareast-font-

		New Roman","serif",;mso-fareast-font-family:"Times New Roman";mso-fareast-theme-font: minor-fareast">Work<o:p></o:p> D. Power E. Both (B) and(C)<o:p></o:p>
1357	Glass and high carbon steel are the examples of	A. brittle substances B. ductile substances C. plastic substances D. elastic substances
1358	Three quarks make:	A. An electron B. A meson C. A baryon D. A photon E. None of these
1359	Resistor is a device which convert electric energy to	A. Heat energy B. Chemical energy C. Elastic energy D. All of the above
1360	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
1361	According to the special theory of relativity, time is	A. absolute quantity B. not absolute quantity C. constant quantity D. none of these
1362	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
1363	Huygen principle is used to determine	A. Speed of light B. Location of wavefront C. About polarized and unpolarized light D. None of them
1364	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 E. Capacitors
1365	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
1366	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
1367	A potential barrier of 0.7 V exists across p-n junction made from:	A. Germanium B. Silicon C. Arsenic D. Gallium E. Indium
1368	Blomass includes:	A. Crop residue B. Natural vegetation C. Animal dung D. All of these
1369	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
1370	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
1371	When heat is removed from the system	A. negative B. positive C. zero D. any one of them

1372	During the nuclear changes, the law/s of conservation that hold/s are that of:	A. Charge B. energy C. Momentum D. Mass E. All of these
1373	If one of the pipes has a much smaller diameter than the other and are placed horizontally then form both sides of Bernoulli's equation, we can drop the term	A. P B. 1/2 fv² C. pgh D. none of them
1374	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. 10³ B. 10⁶ C. 10⁹ D. 10¹²
1375	Which of the following diodes can operate in the reverse biased condition	A. photo diode B. light emitting diode C. photo voltaic cell D. none of these
1376	When quarter of a circle is completed, phase of vibration is:	A. 90<span style="font-size: 10.5pt; line-height: 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;">° B. 180<span style="font-size: 10.5pt; line-height: 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;">° C. 45<span style="font-size: 10.5pt; line-height: 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. 360<span style="font-size: 10.5pt; line-height: 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;">°
1377	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
1378	The temperature scale approved in SI units is:	A. Celsius scale B. Kelvin scale C. Fehrenheit scale D. None of these
1379	The loudness and pitch of a sound note depends on	A. Intensity and velocity B. Frequency and velocity C. Intensity and frequency D. Frequency and number of harmonic
1380	At 'resonance' the transfer of energy from deriving source to the oscillator is	A. maximum B. minimum C. zero D. none of them
1381	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
1382	The magnitude of resultant of three vectors is 3. Its x-component is one, y-component is two, then its z-component is:	A. 0 B. 1 C. 2 D. 3
		A. 2

1383	The number of translation degress of freedom for a diatomic gas is	B. 3 C. 5 D. 6
1384	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
1385	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
1386	Some charge is being given to a conductor. Then its potential	A. Is maximum at surface B. Is maximum at centre C. Is remain same throughout the conductor D. Is maximum somewhere between surface and centre
1387	Xerography means:	A. Dry writing<o:p></o:p> B. Wet writing <o:p></o:p> C. Poor writing<o:p></o:p> D. Excellent writing<o:p></o:p> E. Both (A) and (B)<o:p></o:p>
1388	When a platinum wire is heated, it appears yellow at	A. 1600°C B. 900°C C. 1100°C D. 1300°C
1389	Physics is one of the branches of:	A. Social sciences B. Physical sciences C. Biological sciences D. Abstract art
1390	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
1391	An alpha particle is accelerated through a potential difference of 10^6volt. Its kinetic energy will be	A. 1 MeV B. 2 MeV C. 4 MeV D. 8 MeV
1392	Work has the dimension as that of:	A. Torque B. Angular momentum C. Linear momentum D. Power
1393	In the formula P = N_0KT, N_0denotes:	A. Number of molecules per unit per volume B. Number of moles C. Number of molecules D. None of these
1394	Which one of the following could be the frequency of ultraviolet radiation?	A. 1.0 x 10⁶Hz B. 1.0 x 10⁹Hz C. 1.0 x 10¹²Hz D. 1.0 x 10¹⁵Hz
1395	The work done in 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
1396	A one microfarad capacitor of a TV is subjected to 4000 V potential difference. The energy stored in capacitor is	A. 8 J B. 16 J C. 4 x 10⁻³J D. 2 x 10⁻³J
		A. Longitudinal

1397	Sound waves in air always	B. Transverse C. Stationary D. Electromagnetic
1398	The coefficient of linear expansion of iron is 0.000011 per°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
1399	A rheostat can e used:	A. As variable resistor B. As potential divider C. For varying the current D. All of these E. None of these
1400	Substances that do not flow easily have	A. large coefficient of viscosity B. small coefficient of viscosity C. either of them D. none of them
1401	The number of vibrations in two seconds can be expressed as_____if frequency of vibration is f.	A. f B. 2 f C. 3 f D. 1/2 f
1402	Electromagnetic radiation or photons interact with matter in	A. two distinct ways B. three distinct ways C. four distinct ways D. five distinct ways
1403	If the object is situated at focus of a convex lens, then its image is formed at:	A. F B. 2F C. Infinity D. None of these
1404	The fluid which is incompressible and non viscous is called	A. Ideal fluid B. Non-ideal fluid C. Prefect fluid D. All
1405	The number of field lines passing through unit area held perpendicular to the field lines represent:	A. Flux in that region<o:p></o:p> B. Intensity of the field<o:p></o:p> C. Charge<o:p></o:p> D. Area of the region<o:p></o:p> E. None of these<o:p></o:p>
1406	In case of two identical charges placed certain distance apart, the electric field lines are:	A. Straight lines<o:p></o:p> B. Sine curves<o:p></o:p> C. Curved<o:p></o:p> D. Both (A) and (B)<o:p></o:p> E. None of these<o:p></o:p>
1407	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.	A. Equal to the actual siren frequency B. Less than the actual siren frequency C. Greater than the actual siren frequency D. Changing as the ambulance moves frequency

		D. Changing as the ambulance moves frequency
1408	If a process cannot be retraced in the backward direction by reversing the controlling factors, it is	A. a reversible process B. an irreversible process C. any one of them D. both of them
1409	The bob of a simple pendulum is suspended by	A. string B. heavy inextensible string C. light extensible string D. light inextensible string
1410	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	A. Zero B. 10Ω C. 1Ω D. 0.10Ω
1411	The analysis of the distribution of wavelengths of the radiation emitted from a hot body set the foundation of new mechanics, known as	A. classical mechanics B. Newtonian mechanics C. quantum mechanics D. statistical mechanics
1412	The induced current is 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
1413	When the particles of the medium vibrate about their mean position, along the direction of the motion of waves, then the waves are called:	A. Longitudinal waves B. Transverse waves C. Water waves D. Complex waves
1414	At the top of the trajectory of a projectile the acceleration is	A. The maximum B. The minimum C. Zero D. g
1415	SI unit of frequency is	A. second B. hertz C. revolution D. vibrations/sec
1416	The resultant of two velocities 3 m/sec and 400 cm/sec making an angle 90° with each other is:	A. 20 m/sec B. 5 m/sec C. 3 m.sec D. None of these
1417	During the steady flow, different streamlines	A. cannot across each other B. can across each other C. either of them D. neither of them
1418	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)
1419	Consider a spherical shell of metal at he centre of which a positive point charge is kept	A. The electric filed is zero outside the shell B. The electric field is zero everywhere C. The electric field is zero in the region inside the shell D. The electric field is non-zero in both regions outside and inside the shell
1420	The energy stored in a charge capacitor	A. 1/2CV² B. 1/2C²V C. 1/2C/V² D. None of these
		A. Thermistor<o:p></o:p> B. Thermometer<o:p></o:p>

1421	The device which can convert heat energy into electrical energy is called:	C. Thermostat<o:p></o:p> D. Thermocouple<o:p></o:p> E. Both (C) and (D)<o:p></o:p>
1422	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	A. 180 watt B. 10 watt C. 20 watt D. 60 watt
1423	The path (or trajectory) described by a projectile is	A. a parabola B. a hyperbola C. a circle D. a straight line
1424	Neutrons are	A. positive charge B. negatively charged C. massless D. neutral
1425	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
1426	0.0001210 has _____ significant figures.	A. Four B. Three C. Seven D. Eight
1427	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
1428	With the help of 50 K v electron microscope, a resolution of	A. 0.5 to 1 m to possible B. 1 m to 10 m is possible C. 0.5 to 1 nm is possible D. 1 to 10 nm is possible
1429	The number of countries who manage the largest satellite system is:	A. 3 B. 24 C. 126 D. 200
1430	The irregular and unsteady flow of the fluid is called	A. turbulent flow B. steady flow C. either of them D. both of them
1431	From sand, we get a material used for construction of computer chips. That material is called:	A. Copper B. Lead C. Silicon D. Germanium
1432	According to Einstein, with the great increase in the speed of the body, the relativistic mass of the body	A. Remains constant B. Decreases C. Increases to infinity D. Reduced to zero
1433	An inertial frame of reference is that frame of reference in which	A. a = 0 B. a > 0 C. a < 0 D. all of them
1434	The distance from eye to near point is taken as:	A. 10 cm B. 15 cm C. 20 cm D. 25 cm
		A. Short, loosely wound, cylindrical<o:p></o:p> B. Long, tightly wound

1435	A solenoid is a coil of wire which is:	Roman","serif"">Long, tightly wound, spherical<o:p></o:p> C. Long, loosely wound, cylindrical<o:p></o:p> D. Long, tightly wound, cylindrical<o:p></o:p> E. None of these<o:p></o:p>
1436	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
1437	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
1438	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:	A. <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">Circle<o:p></o:p> B. <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">Rectangle<o:p></o:p> C. <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">Sphere<o:p></o:p> D. <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">Box<o:p></o:p> E. <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">Cylinder<o:p></o:p>
1439	A the top of the trajectory of a projectile, the directions of its velocity and acceleration are	A. Perpendicular to each other B. Parallel to each other C. Inclined to each other at an angle of 45° D. Anitparallel to each other
1440	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
1441	The electrons in the outermost shell of an atom are called	A. core electrons B. valence electrons C. high energy electrons D. none of them
1442	A transformer has 100 turns on the imput 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
		A. Greater than the speed at which they pass from left to right<o:p></o:p> B. <span style="font-size:12.0pt; line-height:107%;font-family:"Times New

1443	The rate at which the free electrons pass through any section of a metallic wire from right to left is:	Roman","serif"">Less than the speed at which they pass from left to right<o:p></o:p> C. The same speed at which they pass from left to right <o:p></o:p> D. Any of above<o:p> </o:p> E. None of them<o:p> </o:p>
1444	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
1445	If we connected the ordinary DC ammeter to measure alternating current, it would measure its:	A. Instantaneous value B. RMS value C. Value averaged over a cycle D. Either (B) or (C) E. Either (A) or (C)
1446	Area under the force displacement graph gives	A. Power B. Work C. Heat D. Energy
1447	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
1448	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
1449	Unless stated otherwise, when we speak of A.C. meter reading, we usualy mean:	A. Peak value B. RMS value C. Instantaneous value D. Peak-to-peak value E. Both (A) and (C0
1450	All trigonometric functions (sine, cosine, tangent etc) are positive in:	A. 1st quadrant B. 2nd quadrant C. 3rd quadrant D. 4th quadrant
1451	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	A. q = Q/4 B. q = Q/2 C. q = ! D. None of these
1452	Physics details with the study of:	A. Matter B. Energy C. Both of them D. Human body
1453	A piece of wire along which charges are made to accelerate is known as	A. transmitting antenna B. receiving antenna C. modulator D. nor of these
1454	In free space, the speed of electromagnetic waves is	A. 3 x 10⁸ms⁻¹ B. 3 x 10⁶ms⁻¹ C. 4 x 10⁷ms⁻¹ D. 3 x 10⁹ms⁻¹
1455	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
1456	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

1457	An inertial frame is that frame in which	A. a>0 B. a=0 C. a<0 D. none of these
1458	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
1459	The work done on the body will be zero if:	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<span style="font-size: 10.5pt; line-height: 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. All of these are correct
1460	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
1461	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
1462	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
1463	Work done is maximum when angle between force and displacement is	A. 0° B. 90° C. 180° D. None of these
1464	Which of the following quantities remain constant in step up transformer?	A. Current B. Voltage C. Power D. Heat
1465	The greatest stress that a material can endure without losing the proportionality between stress and strain is called	A. plastic line B. breaking point C. proportional limit D. none of them
1466	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
1467	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
1468	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
1469	Where the streamlines are very far apart from each other, the pressure will be	A. low B. zero C. high D. all of them
1470	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
1471	The special theory of relatively treats the problems involving:	A. Inertial frames of reference B. Non-inertial frames C. Non-accelerated frame D. Botha (A) and (C) E. Both (B) and (C)
1472	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

		D. Ampere's law
1473	An airplane is flying horizontally with a velocity of 600 km/h and at a height of 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	A. 1200 m B. 0.33 km C. 3.33 km D. 33 km
1474	The unit of intensity of electric field is	A. newton/coluomb B. jule/coluomb C. volt x metre D. newton/metre
1475	The total energy of spring mass system is	A. zero B. changing with time C. constant D. none of them
1476	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
1477	A typical rocket consists of fuel	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
1478	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	A. energy bands B. energy shells C. states D. all of them
1479	When the mass of the colliding body is much larger than the mass of the body at rest, its velocity after collision.	A. Becomes half B. Becomes zero C. Ramains same D. Becomes double
1480	A grating with high resolving power can distinguish _____ difference in wavelengths :	A. Smaller B. Larger C. Zero D. None of these
1481	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
1482	The SI unit of capacitance is	A. Farad B. Henry C. Ohm D. Volt
1483	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°
1484	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
1485	The time taken to complete one vibration is called:	A. Frequency B. Amplitude C. Time D. Time period
1486	The measure of the deformation in a solid when stress is applied to its is called	A. elastic constant B. young's modulus C. strain D. elasticity
1487	In SHM, the acceleration is _____ when velocity is _____:	A. Zero, smallest B. Smallest, zero C. Zero, zero D. Zero, greatest
1488	The expression of Hook's law is	A. F=ma B. F=kx C. F= -kx D. -kx=ma
1489	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

	respectively with x axis, then x component of their resultant is:	C. 10 N D. 8.66 N
1490	In a normal healthy person the value of systolic pressure is	A. 75 torr B. 80 torr C. 120 torr D. all of them
1491	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
1492	For multiplication and division purposes, percentage uncertainties are:	A. Add B. subtracted C. Multiplied D. Divided
1493	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
1494	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'sstatement of second law C. Clausius statement of first law D. Kelvin's statement of first law
1495	Which one of the following is dimensionless.	A. Acceleration B. Velocity C. Density D. Angle
1496	The short distance between two points direction from its initial point to final point is called:	A. Velocity B. Displacement C. Speed D. Distance
1497	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
1498	The positron was discovered by:	A. In cosmic radiation B. In 1932 C. By Carl Anderson D. All above E. By direc
1499	Two sources of sound are said to be coherent if	A. The produce sounds of equal intensity B. They produce sounds of equal frequency C. They produce sound waves vibrating with the same phase D. They produce sound waves with zero or constant phase difference all instant of time
1500	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)
1501	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
1502	Which of the following does not have the same units:	A. Work B. Heat C. Kinetic energy D. Power
1503	A 100 W, 200 V bulb is connected to a 160 volts supply. The actual power consumption would be	A. 64 W B. 80 W C. 100 W D. 125 W
1504	When there is no relative motion between the magnet and coil, the galvanometer indicates:	A. No current in circuit B. An increasing current C. A decreasing current D. Either B or C
1505	For a body executing S. H. M, its	A. momentum remains constant B. potential energy remains constant C. kinetic energy remains constant D. total energy remains constant
		A. Yellow boxes B. Black boxes

1506	The use of chips in electrons is described in the form of:	C. Red boxes D. White boxes E. Orange boxes
1507	Each atom in a metal crystal vibrates about a fixed point with an amplitude that:	A. Decrease the rise in temprature B. Is not affected by rise in temprature C. Increase with rise in temprature D. Both (B) and (C) E. None of these
1508	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	A. 5000 cms⁻¹ B. 500 cms⁻¹ C. 50 cms⁻¹ D. 0.5 cm/s
1509	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
1510	The speed of randomly moving electrons depends upon	A. pressure B. volume C. temperature D. mass
1511	The definite number of significant figures in 5000 is:	A. Four B. Three C. Two D. One
1512	The efficiency of carnot engine cannot be 100% or one unless cold reservoir is at	A. 100 K B. 273 K C. 0 K D. -273 K
1513	A cube of metal is given a positive charge Q. For the above system, which of the following statements is true?	A. Electric potential at the surface of the cube is zero B. Electric potential within the cube is zero C. Electric filed is normal to the surface of the cube D. Electric filed varies within the cube
1514	A rotating body tends to be slower, when its angular acceleration is:	A. Positive B. Negative C. Zero D. Infinity
1515	Velocity is a	A. scalar quantity B. vector quantity C. constant quantity D. none of them
1516	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
1517	The product of induced current and the resistance of the wire through which the current is passing is called:	A. Electromagnetic induction B. induced emf C. Induced current D. Self induced E. None of these
1518	Significant figures in 0.0010 are:	A. Four B. Three C. Two D. One
1519	A long wire wound tightly on a cylindrical core is called:	A. Potentiometer B. Solenoid C. Toroid D. Wheat and stone bridge E. None of these
1520	Suppose the water flows out from a pipe at 3kg $s^{-1}$and its velocity changes from 5m $s^{-1}$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
		A. In electric motor<o:p></o:p> B. To detect current<o:p></o:p>

1521	Magnetic effect of current is used:	C. To measure current<o:p></o:p> D. All of these<o:p></o:p> E. None of these<o:p></o:p>
1522	In case of metallic conductors, the charge carriers are	A. Protons B. Electrons C. Antiprotons D. Positrons E. Both A and B
1523	The circuit in which current and voltage are in phase, the power factor is	A. zero B. 1 C. negative D. 0.83
1524	When the p-n junction is forward biased its resistance is of the order of	A. few mega ohms B. few kilo ohms C. few ohms D. few milli ohms
1525	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
1526	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
1527	The current in LCR circuit will be maximum when ω is	A. As large as possible B. Equal to natural frequency of LCR system
1528	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	A. n/AL B. Al/n C. nAL D. nA/L
1529	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
1530	The phase at the positive peak of an A.C. cycle is:	A. 0º <o:p></o:p> <o:p></o:p> B. 90º <o:p></o:p> C. 180º <o:p></o:p> D. 0 and<span style="font-size:12.0pt;line-height:107%; 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">؛ E. <span style="font-size:12.0pt;line-height:107%;

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1531	An compared to solid matter, a crack or an air bubble allows:	A. Great amount of X-rays to pass B. Smallast amount of X-rays to pass C. Very samall amount of X-rays to pass D. Any of these E. None of these
1532	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
1533	A particle having mass and charge equal to that of an electron is called:	A. Proton B. Positron C. Pion D. Pi-meson E. Both (C) and (D)
1534	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
1535	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
1536	In an A.C circuit with resistor only, the current and voltage have a phase angle of	A. 90<span style="color: rgb(84, 84, 84); font-family: arial, sans-serif; font-size: small;">° B. 0<span style="color: rgb(84, 84, 84); font-family: arial, sans-serif; font-size: small;">° C. 180<span style="color: rgb(84, 84, 84); font-family: arial, sans-serif; font-size: small;">° D. none of these
1537	The unit of thermodynamical scale is	A. centigrade B. fahrenheit C. kelvin D. none of them
1538	An oscillating body oscillates due to:	A. Applied force B. Restoring force C. Frictional force D. None of these
1539	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
1540	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
1541	The size of the image is maximum when its distance from the magnifying glass is:	A. 0.10 m B. 0.15 m C. 0.20 m D. 0.25 m
1542	The example of mechanical wave is	A. waves in ropes B. waves on water surface C. waves in air D. all of them
1543	The motion in a plane is the motion in	A. one dimension B. two dimension C. three dimension D. four dimension
1544	The SI unit of spring constant is identical with that of	A. Force B. Surface tension C. Pressure D. Loudness
		A. Greater than that of a proton

1545	Electron is a particle whose mass is:	B. Smaller than of a proton and greater than mass of neutron C. Smaller than that of proton or neutron D. Greater than that of an atom
1546	A process is a reversible process, if the entropy of the system	A. increases B. decreases C. remains constant D. none of them
1547	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	A. Independent of h B. Proportional to h^{1/2} C. Proportional to h D. Proportional to h²
1548	The cause of mirage observed in deserts in bright sunlight is due to	A. Refraction of light B. Reflection of light C. Scattering of light D. Total internal reflection of light
1549	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 x B/I C. F = IL x B D. F = IL . B
1550	Bernoulli's equation is based upon law of conversation	A. Mass B. Momentum C. Energy D. None of these
1551	The solids which has structure in-between order and disorder are called	A. amorphous solids B. polymeric solids C. crystalline solids D. all of them
1552	One complete round trip of the body about its mean position is called	A. displacement B. vibration C. a complete motion D. an acceleration
1553	A force of 5 n is acting Y-axis. Its component along X-axis is:	A. 7 N B. 5 N C. Zero D. 10 N
1554	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
1555	Of the following, the option _____ reminds of longitudinal waves.	A. Sound waves B. Heat waves C. Electromagnetic waves D. Light waves
1556	Centripetal acceleration is also called _____ acceleration:	A. Tangential B. Radial C. Angular D. None of them
1557	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
1558	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to degree D. none of these
1559	The efficiency of petrol engine is usually not more than 25% to 30% because of	A. friction B. heat losses C. both of them D. none of them
1560	In a moving coil galvanometer, the deflecting couple depends upon	A. area of the coil B. number of turns of coil C. value of magnetic field D. all of the above
1561	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

1562	The vast majority of solids are in the form of	A. amorphous structure B. polymeric structure C. crystalline structure D. all of them
1563	Acceleration produced in a body by the 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
1564	The unit of viscosity is SI system is:	A. Kg⁻¹m sec⁻¹ B. Kgm⁻¹ sec⁻¹ C. Kg⁻¹m⁻¹ sec D. None of these
1565	Current varies with voltage	A. Inversely B. as square root C. Directly D. None of these
1566	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
1567	The consumption of energy by a 60 W bulb in 2 minutes is:	A. 2 watt-hour B. 120 watt-hour C. 30 watt-hour D. None of these
1568	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
1569	Energy stored in the spring of a watch is called	A. Potential energy B. Kinetic energy C. Nuclear energy D. Elastic potential
1570	The unit of decay constant is	A. sex B. sec² C. sec⁻¹ D. sec⁻²
1571	Which type of wave can be set up in solids	A. longitudinal waves B. transverse waves C. both of them D. none of them
1572	Two vectors to be combined have magnitudes of 60 N and 35 N. Pick the possible answer:	A. 100 N B. 70 N C. 20 N D. Zero
1573	Newton's law of motion do not hold in	A. an accelerated frame of reference B. an unaccelerated frame of reference C. both of these D. none of these
1574	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 %
1575	Neutron was disvovered by:	A. Rutherford in 1920 B. Chadwick in 1922 C. Bohr in 1913 D. Compton in 1927 E. None of these
1576	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
1577	Centripetal acceleration is also called _____ acceleration	A. Tangential B. Radial C. Angular D. None of them
1578	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

1579	The amplifier which us used to perform mathematical operations electronically is known as	A. calculator B. OP-AMP C. computer D. any one of them
1580	By convention, torques producing clockwise rotation are taken as:	A. Positive B. Nagative C. Zero D. None of these
1581	The center of mass of a sphere lies at:	A. The axis of the sphere B. Circumference of sphere C. Center of the sphere D. None of them
1582	The special theory of relativity treats problems invoving	A. inertial frame of references B. accelerating frame of references C. both of these D. none of these
1583	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
1584	According to slok's law, drag force depends on	A. Radius of the spherical body B. Terminal velocity of body C. Coefficient of viscosity D. All of above
1585	When the total displacement is divided by total time taken, we get:	A. Velocity B. Average speed C. Average velocity D. None of these
1586	The number of isotopes of hydrogen are	A. 2 B. 1 C. 3 D. 4
1587	INTELSAT operates at frequencies 4, 6, 11, 14 having unit of	A. KHz B. MHz C. GHz D. BHz
1588	The permeability of free space is measured in:	A. Wb/Am B. Wb A/m C. Am/Wb D. m/Web A E. None of these
1589	Light waves are:	A. Transverse wave B. Longitudinal wave C. Compressional wave D. None of them
1590	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
1591	The velocity given to a body to go out of the influence of earth's gravity is known as:	A. Terminal velocity B. Orbital velocity C. Escape velocity D. None of these
1592	Light waves are	A. Mechanical waves B. Electromagnetic waves C. Any of above D. None of above
1593	If both the inputs given to a gate ae 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)
1594	A galvanometer is an instrument used to	A. measure voltage across a circuit B. detect current in a circuit C. measure current flowing through a circuit D. none of these
1595	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
		A. 109

1596	The emission of radiations take place in elements, having charge number greater than	B. 82 C. 69 D. 52
1597	Blood vessels can be stretch like rubber, therefore they are	A. rigid B. hard C. very thick D. not rigid
1598	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. Astrophysics
1599	At high altitude the blood oozes out of the nose and ear because	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
1600	The graph showing the variation of displacement with time is a:	A. Sine curve B. Straight line C. Parabola D. None of these
1601	The second law gives the relationship between	A. mass and velocity B. force and acceleration C. velocity and acceleration D. mass and weight
1602	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
1603	When there is no relative motion between the magnet and coil, the galvanometer indicated	A. No current in the circuit B. An increasing current C. A decreasing current D. A constant current E. Either B or C
1604	The minimum resistance that can be obtained by connecting 5 resistance of 1/4Ωeach is	A. 4/5Ω B. 5/4Ω C. 20Ω D. 0.05 Ω
1605	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^{2}will be	A. 1 cm B. 2 cm C. 8 cm D. None
1606	The velocity of a body at any instant of its motion is known as	A. average velocity B. instantaneous velocity C. uniform velocity D. none of them
1607	The horizontal component of a projectile moving with initial velocity of 500 ms^{-1}at an angle 60° to x-axis is	A. 500 ms⁻¹ B. 1000 ms⁻¹ C. 250 ms⁻¹ D. Zero
1608	The instrument used to gather information form the far side of the universe is	A. Compound microscope B. Radio telescope C. Astronomical Telescope D. Simple microscope
1609	The energy of photon 'E' is proported to	A. The magnetic field H B. The electric field E C. Both the electric and magnetic field H and E D. Frequency
1610	Generally a temperature scale is established by	A. one fixed point B. two fixed point C. three fixed point D. four fixed point
1611	A mass spectrograph sort out	A. molecules B. atoms

1611	A mass spectrograph sort out	C. elements D. isotopes
1612	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
1613	There is a regular arrangement of molecules in a	A. amorphous solids B. polymeric solids C. crystalline solids D. none of them
1614	The modulus of elasticity can be written as	A. stress x strain B. strain/stress C. 1/2 x stress x strain D. stress/strain
1615	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
1616	Amorphous solids:	A. Have definite melting points B. Are called glassy solids C. Have no definite melting point D. Both (B) and (C) E. Both (A) and (C)
1617	Work done in lower and bucket into the well is:	A. Zero B. Positive C. Negative D. None of these
1618	The arrangement or molecules or atoms in a crystalline solid can be studied by using:	A. Chemical methods B. Neutrons C. X-ray techniques D. Copper atoms E. Both (A) and (B)
1619	Average KE of a gas molecule has:	A. Direct relation with absolute temperature and inverse relation with pressure B. Direction relation with both absolute temperature and pressure C. Inverse relation with both absolute temperature and pressure D. None of these
1620	The SI unit of flux density is.	A. Tesla B. Weber C. Gaun D. Weber/meter
1621	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
1622	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
1623	First law of thermodynamics is consequence of conservation of	A. Work B. Energy C. Heat D. All of these
1624	Examples of crystalline solids are:	A. Cooper B. NaCl C. Zirconia D. Both (A) and (B) E. All of these
1625	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
1626	Lenz's law is the consequence of	A. Mass B. Energy conservation C. Momentum conservation D. Charge
1627	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 x 10⁻⁵rad B. 7 x 10⁻⁵rad C. 8 x 10⁻⁵rad

		D. None of these
1628	In flesh, light element like carbon, hydrogen and oxygen predominate. Three elements allows _____ amount of incident X-ray to pass through them	A. Small B. Greater C. Equal D. Sometimes
1629	Above the curie temperature, iron becomes	A. ferromagnetic B. paramagnetic C. diamagnetic D. any one of them
1630	The range of projectile is 50 m whenθ is inclined with horizontal at 15°. What is the range whenθ becomes 45°?	A. 400 m B. 300 m C. 200 m D. 100 m
1631	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
1632	During the projectile motion, the horizontal component of velocity	A. changes with time B. remains constant C. becomes zero D. decreases with time
1633	Which one of the following Electro-magnetic wave have the highest frequency and shortest wave-length	A. X-rays B. Ultraviolet rays C. y-rays D. Cosmic rays
1634	The current produced by moving a loop of wire across a magnetic field is called:	A. Direct current B. Magnetic current C. Alternating current D. Induced current E. None of these
1635	Faraday's law of electromagnetic induction has been used in the construction of:	A. Galvanometer B. Voltmeter C. Electric motor D. Electric genrator E. Commutator
1636	A.C. can be measure with the help of	A. Nuclear effect B. Magnetic effect C. Chemical effect D. Heating effect
1637	In RLC series circuit, resonance occurs when	A. X_{L > Xc} B. X_{L < Xc} C. X_{L = Xc} D. None of these
1638	With age, least distance of distinct vision:	A. Increases B. Decreases C. Is not affected D. None is correct
1639	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
1640	A particle executes SHM with frequency. The frequency with which its K.E oscillates is	A. f/2 B. 2f C. f D. 4f
1641	Work done is independent of path followed in _____	A. Gravitational field B. Magnetic field C. Electric field D. All of these
1642	The power dissipation in a pure inductive or capacitance circuit is	A. maximum B. positive C. zero D. none
1643	The quantity have dimension of ML^2T^{02}will have SI unit of:	A. Watt B. Newton C. Joule D. Metre
1644	Work is a:	A. Scalar quantity B. Vector quantity C. Base quantity D. None of these

1645	Which of the following is an example of a S.H.M?	A. motion of a projectile B. motion of a train along a circular path C. motion of swing D. electrons revolving sound the nucleus
1646	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
1647	In gases, the charge carriers are:	A. Electrons B. Positive ions C. Negative ions D. Both A and C E. Both A and B
1648	Light has:	A. Wave nature B. Particle nature C. Dual nature D. None of these
1649	Any superconductor with critical temperature above 77 K, is referred as	A. low temperature superconductor B. high temperature superconductor C. very low temperature superconductor D. none of them
1650	Victor de-Brogile received the Nobel prize in physics in	A. 1925 B. 1929 C. 1932 D. 1935
1651	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=q²(v x B) C. F=q(v x B) D. F= vx B
1652	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
1653	A relationship between Gauses of magnetic induction and Tesla(T) is given by	A. G 10⁻³T B. G = 10⁻²T C. G = 10⁻⁴T D. G = 10⁻¹T
1654	Speed of Sound in vacuum is.	A. 332 m sec -1 B. 0. m sec-1 C. 340 m sec-1 D. 350 m sec-1
1655	A ball is dropped from a certain height and another ball is projected horizontally from the same point. Which of the following statement is correct?	A. Both hit the ground at the same velocti 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
1656	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°
1657	The number of input terminals of an op-amp is:	A. One B. Two C. Three D. Four E. None of these
1658	The magnitude of induced emf depends upon the:	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
1659	The value of E_0in coulomb's law is:	A. 9 x 10⁹Nm²C⁻² B. 8.85 x 10⁻¹²C²N⁻¹m⁻² C. 8.85 x 10⁻¹²Nm²C⁻² D. 9 x 10⁹C²N⁻¹m⁻²
		A. electrons

1660	Majority charge carriers in the p-region of p-n junction are:	B. positrons C. Holes D. Neutrons E. None of these
1661	Machine parts are jammed due to:	A. Increasing in viscosity of lubricant B. Decreasing in viscosity of lubricant C. Decreasing in surface tension of lubricant D. None of these
1662	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 x 10¹⁹ C. 24 x 10⁴² D. 24 x 10⁻⁴⁴
1663	Amount of heat required to raise the temperature of a body through 1 K is called its	A. Specific heat B. Water equivalent C. Thermal capacity D. Entropy
1664	The _____ viscous the medium is _____, is the value of terminal velocity of the droplet:	A. More, lesser B. Lesser, more C. Both A and B D. Lesser, lesser
1665	The bridge circuit of full wave rectification uses	A. one diode B. two diode C. three diode D. four diode
1666	Escape velocity from surface of Moon as compared to that from Earth surface is:	A. Greater B. Smaller C. Equal D. None of thes
1667	Triple point of water is	A. 273.16°F B. 372.16K C. 273.16°F D. 273.16
1668	A mass of 5kg moves with an acceleration of 10m s^{-2} force applied is	A. 10N B. 50N C. 2N D. 20N
1669	Distance to nearest galaxy from earth is	A. 10¹⁰m B. 10¹⁵m C. 10⁴⁰m D. 10³⁰m
1670	When each particle of the fluid moves along a smoth path, this path is known as	A. straight path B. smooth path C. haphazard path D. steamline
1671	The density of blood is nearly equal to that of	A. mercury B. sodium C. water D. honey
1672	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
1673	Work done along a closed path in a gravitational force is:	A. maximum B. Minimum C. Zero D. Unity
1674	The strength of magnetic field around the current conductor is	A. Smaller near the conductor B. Greater near the conductor C. Greater at the large distance from the conductor D. Constant near and away from the conductor
1675	Light year is a unit of:	A. Time B. Distance C. Velocity D. Intensity of light
1676	The current produced by moving a loop of wire across a magnetic field is called	A. Direct current B. Magnetic current C. Alternating current D. Induced current E. None of these
		A. Voltmeter

		A. Voltmeter
1677	When a suitable small resistance is put in parallel with the galvanometer coil, it is converted into	B. Avometer C. Ammeter D. None of these
1678	During the whole carnot cycle	A. Thermal equilibrium is maintained B. mechanical equilibrium is maintained C. both the thermal and mechanical equilibriumis maintained D. both the thermal and mechanical equilibrium is not maintained
1679	One radian is	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of these
1680	The RMS value of alternating current is:	A. 0.7 times at the peak value B. 0.5 times the peak value C. 0.7 times the Instantaneous value D. Equal to maximum voltage E. None of these
1681	The maximum possible error in the reading for a meter rod with least count 1 mm is:	A. 0.005 mm B. 0.05mm C. 0.5mm D. 5.0mm
1682	The surface destiny of charge is defined is:	A. <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">Charge per volume<o:p></o:p> B. <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">Mass per volume<o:p></o:p> C. <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">Charge per area<o:p></o:p> D. <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">Mass per area<o:p></o:p></o:p> E. <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">Both (B) and (C)<o:p></o:p>
1683	The SI unit of current is	A. watt B. coulomb C. volt D. ampere
1684	Heat required to raise the temperature of one mole of a gas through 1 K at constant pressure is called	A. heat capacity B. specific heat capacity C. specific heat at constant volume D. specific heat at constant pressure
1685	Galvanometer is a device used for the detection of	A. voltage B. current C. temperature D. pressure
1686	Angular velocity is a:	A. Scalar quantity B. Vector quantity C. Complex quantity D. None of these
1687	The information from far side of the universe are gathered by:	A. Radio telescope B. Microscope C. Telescope D. Spectro scope
1688	The intensity at a point due to a charge is inversely proportional to	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

1689	Vibratory motion is always under	A. Applied force B. Restoring force C. Periodic force D. Gravitational force
1690	A capacitor of capacity 1μF is charged to 1 KV. The energy stored in J	A. 5 B. 0.5 C. 0.005 D. 50
1691	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
1692	First law of thermodynamic is special case of	A. Law of conservation of energy B. Charle's law C. Law of conservation of mass D. Boyle's law
1693	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
1694	A flowing liquid possess	A. K.E B. P.E C. Pressure Energy D. All
1695	When a water droplet falling freely through air, the drag force on water droplet increases with th	A. decrease in speed B. increase in speed C. pressure D. none of them
1696	An example of photoconductor is:	A. Boron<o:p></o:p> B. Carbon<o:p></o:p> C. Iron<o:p></o:p> D. Aluminum<o:p></o:p> E. Selenium<o:p></o:p>
1697	S.I. unit of planks constant is	A. J-s⁻¹ B. J.s C. J.s⁻² D. J.s²
1698	When a constant potential difference is applied across the conductor, the drift velocity of electrons:	A. Increases<o:p></o:p> B. Decreases<o:p></o:p> C. Remains the constant<o:p></o:p> D. Either of these<o:p></o:p> E. None of these<o:p>

		Roman","serif"">None of these<o:p></o:p>
1699	In wilson cloud chamber, the air becomes saturated with:	A. Alcohol vapours B. Water C. Helium gas D. Nitrogen gas E. None of these
1700	The e/m of an electron moving in a circular path in a magnetic field is equal to	A. V/Br B. V/B²r² C. V²/Br² D. V²/Br
1701	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
1702	Which of the following can become a good permanent magnet	A. iron B. steel C. both of them D. none of them
1703	When two spherical conducting balls at different potentials are joined by a metallic wire, after some time:	A. Both the conductors are at the same potential<o:p></o:p> B. Potential difference across the conductors remain constant<o:p></o:p> C. Potential difference across the conductors becomes zero<o:p></o:p> D. Both (A) and (B) <o:p></o:p> E. Both (A) and (C)<o:p></o:p>
1704	Force is a:	A. Scalar quantity B. Base quantity C. Derived quantity D. None of these
1705	The absolute temperature for an ideal gas is	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
1706	The SI unit of conductivity is	A. ohm-m B. ohm⁻¹m⁻¹ C. ohm-m⁻¹ D. ohm⁻¹m
1707	When heat is added into the system then change in entropy is	A. negative B. positive C. zero D. any one of them
1708	In radio-active decay, the original element which disintegrate to another element is called	A. element B. daughter element C. parent element D. none of these
1709	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
1710	The direction of vector in space is specified by:	A. One angle B. Two angles C. Three angles D. None of these
		A. N.m⁻¹

1711	Blood pressure is measured in torr. Which of the following units could belong to torr?	A. N m⁻² B. N m⁻² C. N m D. N⁻¹m⁻²
1712	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
1713	For an atom having atomic number Z and atomic weight A, the number of electron in an atoms	A. A - Z B. A + Z C. Z D. A
1714	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
1715	The tidal energy is produced due to rotation of Earth relative to:	A. Moon B. Sun C. Oceans D. Water
1716	Reception of particular radio station is selected by tuning knob of radio, tuning the tuning knob changes the.	A. Inductance B. Impedance C. Capacitance D. All
1717	The dimension of linear inertia is:	A. MLT² B. ML<span style="font-size: 10.5pt; line-height: 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;">°<span style="font-size: 10.5pt; line-height: 107%; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">T⁻² C. ML<span style="font-size: 10.5pt; line-height: 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;">°T<span style="font-size: 10.5pt; line-height: 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. MLT⁻¹
1718	When certain nucleus emits aβ-particles, is mass number:	A. Remain same B. Increases by one C. Decreases by one D. Decreases by four E. None of these
1719	Pressure may be define as _____ per second per unit area:	A. Change in force B. Change in momentum C. Change in energy D. Work done
1720	When angular acceleration is positive, the body rotates:	A. Slower B. Slowest C. Faster D. None of these
1721	The absolute temperature of the tripple point of water is	A. 100°C B. 4°C C. 373 K D. 273.16 K
1722	Ohm is the unit of	A. current B. capacitance C. energy D. resistance
1723	Two electric bulbs of 200 W and 100 W have same voltage. If $R_1$and R_2be their resistance respectively then	A. R₁= 2R₂ B. R₂= 2R₁ C. R₂=4R₁ D. R₁= 4R₂

1724	The length contraction happens only	A. Opposite to the direction of motion B. along the direction of motion C. perpendicular to the direction of motion D. In any direction
1725	What is the current is a 2 x 10^6ohm resistor having a potential difference of 2 x 10^3volts?	A. 10⁻¹A B. 10⁻²A C. 10⁻⁴A D. 1 mA
1726	Resistance is measured in	A. volts B. ampere C. ohm D. watt
1727	In a voltmeter the conduction takes place due to	A. Electrons only B. Holes only C. Electrons and holes D. Electrons and ions
1728	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
1729	Which of the following material has smaller has life	A. uranium B. polonium C. radium D. radian
1730	A heater coil rated at (1000 W - 200 V) is connected to 110 volt line. What will be the power consumed?	A. 200 W B. 302.5 C. 250 W D. 350 W
1731	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
1732	As the current flow through the wire:	A. It generates heat in the wire<o:p></o:p> B. It produces sound in the wire<o:p></o:p> C. Resistance of the wire decreases<o:p></o:p> D. Voltage across the ends is increased<o:p></o:p> E. None of these
1733	A field in which the work done is moving a body along closed path is zero is called:	A. Nuclear filed B. Conservative field C. Gravitational field D. Non-conservative field
1734	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
1735	Rocket engines lift a rocket from the earth surface, because hot gas with high velocity	A. Push against the air B. React against the rocket and push it up C. Heat up the air which lifts the rocket D. Push against the earth
1736	Graph of Black body radiation is example of	A. Band spectra B. Continuo's spectra C. Line spectra D. All
1737	A magnifier gives an image which is:	A. Virtual, inverted B. Real, erect C. Virtual, erect D. Real, inverted
		A. Hydal water

1738	Nowadays, Most of the electric energy is produced by the A.C. generators using:	B. Geothermal energy C. Solar energy D. Biomass E. Both (B) and (D)
1739	Gamma rays consist of steam of	A. electron B. proton C. photons D. all of these
1740	The CRO is used for displaying the waveform of a given	A. current B. voltage C. both of them D. none of them
1741	Physics deals with the study of	A. Matter B. Energy C. Both of them D. Human Body
1742	The SI unit of viscosity is	A. kg m⁻¹s⁻¹ B. kg ms⁻¹ C. kg m⁻¹s⁻² D. kg m⁻¹s
1743	A thermistor is a resistor which is:	A. Light Sensitive B. Heat Sensitive C. Sound Sensitive D. All of these E. None of these
1744	Free oscillations are always produced by:	A. An applied force B. Gravitational force C. Restoring force and inertia D. Inertia only
1745	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
1746	A real gas can be approximated to an ideal gas at	A. Low density B. High pressure C. High density D. Low temperature
1747	Carnot heat engine only used	A. isothermal processes B. adiabatic processes C. both of them D. none of them
1748	Which of the following waves are more energetic	A. radio waves B. infrared waves C. ultraviolet D. γ-rays
1749	Heat travels through vacuum by	A. Conduction B. Convection C. Radiation D. Both A and B
1750	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
1751	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
1752	A spring of constant k = 0.4 N $m^{-1}$is to be extended through 10 cm at a place where g = 10 m sec^{-2}. The mass to be suspended should be:	A. 4 gms B. 0.4 gm C. 40 gms D. None of these
1753	Tick the conservation force:	A. Tension in a string B. Air resistance string C. Elastic spring force D. Frictional force
1754	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

1755	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
1756	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. Lerger C. Same D. Much larger E. None of these
1757	The general theory of relativity treats problems involving	A. inertial frame of references B. accelerating frame of references C. both of these D. none of these
1758	According to Huygen's principle	A. light travels in straight line B. Light is a transvers wave C. Light has dual nature D. All points on the primary wave-front are the sources of secondary wavelets
1759	A virtual image is formed when object is placed:	A. Within focal length of a convex lens B. Near the focal point of a concave lens C. Both A and B D. Away from 2F of a convex lens
1760	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
1761	An axis of rotation	A. Is a straight line B. Is normal to the plane of rotation C. Passes through pivot point O D. All of them
1762	Significant figures in 0.0010 are	A. Four B. Three C. Two D. One
1763	As the water falls from the tap, the cross sectional area should decrease according to.	A. Bernoulli equation B. Venture relation C. Equation of continuity D. None
1764	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
1765	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
1766	According to the Bernoulli's theorem the pressure velocity are	A. equal to each other B. proportional to each other C. inversely proportional to each other D. none of them
1767	An inkjet printer uses in its operation:	A. Neutrons only<o:p></o:p> B. Mesons only<o:p></o:p> C. Positrons and photons<o:p></o:p> D. An electric charge<o:p></o:p> E. None of these<o:p></o:p>
1768	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

1769	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
1770	Which of the following statements for an object in equilibrium is not true?	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
1771	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
1772	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
1773	In the formula $B = \mu_0 nI$, the symbol n denotes:	A. Total number of turns of solenoid<o:p></o:p> B. Number of turns per unit length<o:p></o:p> C. Number of turns per unit volume<o:p></o:p> D. Numbers of turns per unit area<o:p></o:p> E. Number of moles<o:p></o:p>
1774	The value of output resistance of OP-AMOP is of the order of	A. few ohms B. few hundred ohms C. several kilo ohms D. several mega ohms
1775	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
1776	If an amount of heat enters the system it could	A. decrease the internal energy B. not change the internal energy C. increase the internal energy D. none of them
1777	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	A. 3, 15 B. 4, 14 C. 5, 13 D. 6, 12
1778	An LED emits light when it is:	A. Forward biased B. Reverse biased C. Operated without battery D. Operated with heat source E. None of these
1779	In compressional wave,the layer of medium having reduced pressure is called:	A. Compression B. Elasticity C. Node D. Rarefaction
1780	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
		A. <span style="font-size:12.0pt; line-height:107%;font-family:"Times New

1781	When a constant potential difference is applied across the conductor, the drift velocity of electrons:	Roman","serif"">Increases<o:p></o:p> B. Decreases<o:p></o:p> C. Remains the constant<o:p></o:p> D. <span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Either of these<o:p></o:p> E. None of these<o:p></o:p>
1782	The unit of resistivity is	A. ohm B. ohm-m² C. ohm-meter D. ohm-m⁻¹
1783	Physicist George Simon ohm was a	A. German physical B. French physicist C. Chinese physicist D. Russian physicist
1784	Which of the following diode is used for the detection of light	A. photo diode B. light emitting diode C. photo voltaic cell D. all of them
1785	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
1786	When a body is moving with uniform positive acceleration, the velocity- time graph is a straight line. Its slope is	A. zero B. negative C. positive D. non-existing
1787	A device which converts Electrical energy into mechanical energy is called as	A. Transformer B. Generator C. Motor D. All of these
1788	Intensity of light determines the:	A. Energy of each photon B. Number of photons C. Speed of photons D. Size of photons E. None of these
1789	One coulomb per second is equal to	A. One volt B. One ampere C. One hom D. One henry
1790	High energy physics is branch of physics, which deals with:	A. Stars and galaxies B. Sub-atomic particles C. Light and sound D. Molecules
1791	A heat engine is that which converts	A. mechanical energy into thermal energy B. thermal energy into mechanical energy C. K.E into potential energy D. heat energy into light energy
1792	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
1793	Albert Einstein got the Nobel prize in physics for his explanation of photoelectric effect in	A. 1916 B. 1919 C. 1921 D. 1923
1794	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

1795	Fog droplets are suspended in air when their weight is balanced by:	A. Force of gravity B. Upward trust due to air C. Surface tension D. None of these
1796	The driection of vector si space is specified by:	A. One angle B. Two angles C. Three angles D. None of above
1797	If the ends of a wire are connected to a battery an electric field E will be set up at:	A. The ends of the wire only<o:p></o:p> B. Mid points of the wire only<o:p></o:p> C. Every point within the wire<o:p></o:p> D. At nodes only<o:p></o:p> E. Both (B) and (D) <o:p></o:p>
1798	The dimensions of viscosity are:	A. M²L⁻¹T⁻² B. M⁻¹L¹T⁻¹ C. M⁻¹L⁻¹T D. ML⁻¹T⁻¹
1799	Acceleration of body executing SHM is always directed towards	A. Extreme position B. Mean position C. Along the direction of motion D. None
1800	The number of "Earth Stations" which transmit signals to satellites and receive signals fro them are	A. 3 B. 24 C. 126 D. 200
1801	If the displacement of a body executing S.H.M is plotted against time, then the curve is known as	A. frequency of S.H.M B. period of S.H.M C. wave form D. none of them
1802	The vertical and horizontal range will be equal id angle of projection is	A. 76° B. 45° C. 60° D. 120°
1803	A body whose momentum is constant must have constant	A. Acceleration B. Velocity C. Force D. None of these
1804	A photon is considered to have	A. Momentum B. Energy C. Wavelength D. All of the above
1805	If the length of second pendulum becomes four times then its time period will become	A. Four time B. Two times C. Six times D. Eight times
1806	The chemical behaviour of an atom is determined by	A. binding energy B. atomic number C. mass number D. number of isotopes
1807	The value of electrical constant of proportionality k is	A. 9 x 10⁹Nm²C⁻² B. 9 x 10⁻⁹Nm²C⁻²

		C. 9 x 10¹⁰Nm²C² D. 9.85 x 10⁻¹²N⁻¹C⁻²
1808	White light is directed at a diffraction grating at an angle normal to the grating starting at the normal to the grating (0^o), 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
1809	the current is pass through the straight wire. The magnetic field established around it has its lines of force:	A. Circular and endless<o:p></o:p> B. Oval in shape and endless<o:p></o:p> C. Straight<o:p></o:p> D. Parabolic<o:p></o:p> E. All are true
1810	The conventional current is the name given to current due to flow of	A. Positrons B. Positive charges C. Negative charges D. Both A and C E. None of these
1811	The electric flux from a closed surface	A. Is independent of the shape of the surface B. Depends on the charge enclosed by the surface C. Both a and b D. None of the above
1812	The He-Ne laser discharge tube is filled with:	A. 85% He B. 15% He C. 50% He D. 60% He E. 85% Ne
1813	The practical application of the phenomenon of Mutual induction is	A. Transformers B. Generator C. Motor D. All of these
1814	An isochoric process is one which take place at	A. Constant internal energy B. Constant entropy C. Constant volume D. Constant pressure
1815	Ammeter is used to measure	A. voltage B. resistance C. voltage and current D. current
1816	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
1817	Alfa particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons
1818	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	A. negative charges B. positive charges C. protons D. electrons
1819	In helium Neon Laser Neon = 15% and Helium = 85% used. The lasing gas this unit is	A. Helium B. Neon C. Both D. None of these
1820	Crests and troughs are formed in:	A. Longitudinal waves B. Transverse waves C. Both of these D. None of these

1821	In case of a parallel plate capacitor if the plate separation is doubled and plate area is halved, the capacitance becomes	A. Four-fold B. One-half C. One-fourth D. Zero
1822	U-238 present in the natural uranium is about:	A. 59% B. 0.007% C. 99% D. 39% E. 19%
1823	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
1824	For normal operation of transistor, the batteries	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
1825	Field lines are closer to each other in the region where the field is:	A. Stronger<o:p></o:p> B. Weaker<o:p></o:p> C. Much weaker<o:p></o:p> D. Absent<o:p></o:p> E. None of these<o:p></o:p>
1826	The conductivity of a superconductor is	A. Infinite B. Very large C. Very small D. Zero
1827	Radium was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. Rutherford E. Both (B) and (C)
1828	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
1829	To turn the transistor OFF, the base current is set:	A. At maximum value B. At zero C. Either (A) or (B) D. All are correct E. None of correct
1830	The expression for restoring force is	A. F=ma B. F=kx C. F= -kx D. Kx=ma
1831	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
1832	Blood has a density	A. Equal to water B. Greater then water C. Lesser then water D. None of these
1833	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
1834	A bar 1.0 m in length and located along x-axix moves with a speed of 0.75 c with respect to a stationary observer. The length of the bar as measured by	A. 1.66 m B. 1.0 m

1834	with respect to a stationary observer. The length of the bar as measured by the stationary observer is	C. 0.66 m D. 2.66 m
1835	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
1836	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
1837	Slope of velocity time graph represents:	A. Acceleration B. Speed C. Torque D. Work
1838	The current of 1 ampere is passing through a conductor. The charge passing through it in half a minute is:	A. One coulomb<o:p> </o:p> B. 0.5 coulomb<o:p> </o:p> C. 30 coulomb<o:p> </o:p> D. 2 coulombs<o:p> </o:p> E. None of these<o:p> </o:p>
1839	The first super conductor was discovered in	A. 1811 B. 1890 C. 1901 D. 1911
1840	The error may occur due to:	A. Negligence B. Faulty apparatus C. Inappropriate method D. all of these
1841	N s $m^{-2}$is unit of:	A. Drag force B. Pressure C. Surface tension D. Coefficient of viscosity
1842	During the positive half-cycle in the half-wave rectification,the diode	A. does not conduct B. conducts C. either of these D. neither of these
1843	Internal friction of fluid is called	A. Surface tension B. Viscosity C. Resistance D. Cohesive force
1844	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^3during its steady flow	A. 1.3 m/s B. 1.6 m/s C. 1.9 m/s D. 2.2 m/s
1845	High speed meteors rushing through air reduces to ashes because of:	A. Force of gravity B. High resistance of air C. Drag force D. None of these
1846	The best conductor is:	A. Silver B. Copper C. Aluminimum D. Both B and C E. None of them
1847	In the resonance condition, the amplitude of the oscillator becomes	A. very large B. very small C. zero

		D. any one of them
1848	Acceleration of the mass at any instant is given by	A. a=k/m x B. a= - m/k x C. a = - k/m x D. a=m/k x
1849	The volume of a gas will be double of what it is at 0°C (pressure remaining constant) at	A. 546 K B. 273 K C. 546°C D. 273°C
1850	The 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
1851	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
1852	Radiation detector are used to	A. measure intensity of radiation B. measure energy of radiation C. difference between different types of radiation D. all the above
1853	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
1854	The force which opposes the applied force producing the displacement in the spring is called	A. restoring force B. periodic force C. centripetal force D. resistive force
1855	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 X 10⁷N B. 625 N C. 6250 N D. None of these
1856	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
1857	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
1858	The critical temperature of tin is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
1859	The resistance of a conductor does not depend on its	A. mass B. resistivity C. length D. cross-sectional area
1860	In SHM, there is always a constant ratio between displacement if body and its:	A. Velocity B. Period C. Mass D. Acceleration
1861	Bernoulli's equation is based upon law of conversation of	A. mass B. momentum C. Energy D. None
1862	A medium of dielectric constant 'K' is introduced between the plates of parallel plate condenser. As a result its capcitance	A. Increase k time B. Decreases k times C. Decreases 1/K times D. Remains unchanged
1863	When a conductor is moved across a magnetic field, the redistribution of charge sets up:	A. Magnetic field B. Electrostatic field C. Electromagnetic field D. All of these

		E. None of these
1864	The critical temperature of mercury is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
1865	dimensions are the same for:	A. Work and energy B. Force and weight C. None of these D. Both a and b
1866	The process of formation of spectrum is called:	A. Interference B. Spectroscopy C. Dispersion D. Reflection E. Botha (A) and (D)
1867	Resistance of a conductor is increased, the currant will	A. Decrease B. Increase C. Remain the same D. None of these
1868	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
1869	When a mass 'm' is pulled slowly, the spring stretches by an amount x_o, then the work done will be	A. W=Kx_o B. W=1/2Kx_o C. W=1/2Kx²_o D. W=4Kx_o
1870	The frequency of free vibrations is known as	A. free frequency B. forced frequency C. natural frequency D. un-natural frequency
1871	The minimum charge on any object can not be less than	A. 1.6 x 10⁻¹⁹C B. 3.2 x 10⁻¹⁹C C. 1.0 C D. 4.8 x 10⁻¹⁹C
1872	Absolute zero is considered as that temperature at which:	A. All liquid become gases B. All gases become liquid C. Water freezes D. None of these
1873	When an electron enters in a magnetic field right angle to its motion, the magnitude of its velocity will be	A. changed B. zero C. unchanged D. none of these
1874	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
1875	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
1876	When charged particle is projected perpendicular to a uniform magnetic field its trajectory is	A. circular B. elliptical C. cycloid D. straight line
1877	Work is a Quantity	A. Vector B. Scalar C. Non-physical D. None of these
1878	When using optical fiber in data transmission, the angle of incidence 0i of the light source on the glass fiber should be.	A. Less than critical angle B. Less than angle of refraction C. Greater than critical angle D. Greather than angle of refraction
1879	The SI unit of electric field intensity is	A. CN⁻¹ B. NC⁻¹or Vm⁻¹ C. JC⁻¹ D. AV⁻¹
1880	When platinum wire is heated, it appears cherry red at	A. 1600°C B. 900°C C. 1100<span style="color: rgb(84, 84, 84); font-

		family: arial, sans-serif; font-size: small;">°C D. 1300°C
1881	In the expression F x t, the force F is	A. total force B. instantaneous force C. average force D. all of them
1882	The useful unit of angular replacement in SI unit is:	A. Degree B. Revolution C. Radian D. Metre
1883	A thermistor with negative temperature co-efficient is placed in a furnace. When temperature of furnace increases the resistance?	A. Decrease B. Remain unchanged C. Increase D. None of above
1884	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
1885	Which quantity has different dimension?	A. Tension B. Work C. Energy D. Torque
1886	Maric Curie and Pieree Curie discovered two new radioactive elements, which are called	A. polonium uranium B. uranium and radium C. polonium and radium D. none of these
1887	Split rings act as	A. Vibrator B. Resistor C. Motor D. Commulator
1888	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
1889	Fluids can transmit:	A. Transverse wave B. Compressional wave C. Both of them D. None of them
1890	0.10 cm can be written as:	A. 1.0 x 10⁻²m B. 1.0 x 10⁻³cm C. 1.0 x 10⁻⁴cm D. 1. x 10⁻⁴m
1891	The critical temperature of aluminium is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
1892	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
1893	The total number of lines of magnetic induction pasing through a surface perpendicular to the magnetic field is called	A. magnetic flux B. magnetic flux density C. magnetic induction D. magnetic field intensity
1894	An intertial 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
1895	The most common source of alternating voltage is:	A. Motor B. Transformer C. AC genrator D. Both (A) and (C) E. Both (A) and (B)
1896	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)
		A. protons B. neutrons

1897	The current through a metallic conductor is due to the motion of	C. electrons D. free electrons
1898	When the atomic particle are moving with velocities approaching that of light:	A. Newton's laws become valid B. Relativistic effects become prominent C. Botha(A) and (B) are valid D. Neither (A)nor (B) E. There mass becomes zero.
1899	Those quantities which can be measured accurately are known as	A. Physical Quantities B. Scalar Quantities C. Vector Quantities D. Non Physical Quantities
1900	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
1901	(CRO) Cathode ray oscilloscope is a device used for high speed	A. velocity B. graph plotting C. time-velocity D. none of these
1902	Electron gun consist of	A. three anodes B. heating cathode C. three anodes D. three anodes , heating cathode, grid
1903	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
1904	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
1905	Capacitance of two or more capacitors	A. Increases in series combination B. Increases in parallel combination C. Remains unchanged D. None of the above
1906	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.	A. 5 coulombs B. 15 coulombs C. 10 coulombs D. 20 coulombs
1907	A potential barrier of 0.7V exists across p-n junction made from:	A. Germanium B. Silicon C. Arsenic D. Gallium E. Indium
1908	The SI unit of magnetic induction is	A. Weber B. Weber/meter C. Henry D. Tesla
1909	If d is the displacement of the body in time t, then its average velocity will be	A. V_{av}= d x t B. V_{av = t/d} C. V_{av = d/t} D. V_{av = d/t}
1910	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
1911	If a body reaches a speed equal to the speed of light, then its mass will became	A. zero B. very small C. infinity D. none of these
1912	Amplitude in SHM is equivalent to _____ in circular motion	A. Diameter B. Radius C. Circumference D. None of these
1913	There is no net transfer of energy by particle of medium in	A. Longitudinal wave B. Transverse wave C. Progressive wave D. Stationary wave
		A. Ze²

1914	The total charge of any nucleus is given as	B. Z²e C. Z/e D. Ze
1915	Which of the following should remain constant if no torque acts upon a body.	A. Linear constant B. Momentum C. Angular momentum D. Charge
1916	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
1917	When the same object is viewed at a shorter distance, the image on the retina of the eye is _____ the so the object appears:	A. Greater, smaller B. Smaller, smaller C. Smaller, larger D. Greater, larger
1918	The colour sequence in a carbon resistor in red, brown, orange and silver. The resistance of the resistor is	A. 21 x 10³<u>+</u> 10% B. 23 x 10¹<u>+</u> 10% C. 21 x 10³<u>+</u> 5% D. 12 x 10³<u>+</u> 5%
1919	How many isotopes of helium are present?	A. 1 B. 2 C. 3 D. 4
1920	Average value of A.C voltage during one cycle is	A. 1 B. Zero C. Maximum D. Variable
1921	The basic circuit element in D.C. circuit is:	A. A capacitor B. A resistor C. An inductor D. Both (A) and (C) E. Both (A) and (B)
1922	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 D. Faster in gases than in liquids and solids
1923	Density is defined as:	A. Mass per volume B. Volume per mass C. Mass X volume D. Mass per length
1924	Which one of the following elasticizes is possessed by fluids:	A. Young's elastic modulus (length) B. Bulk elastic modulus (volume) C. Modulus of rigidity (shape) D. None of these
1925	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
1926	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 D. 700 nano meters
1927	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
1928	Method "lamp and scale arrangement" used to measure the	A. angle of deflection B. restoring torque C. magnetic field strength D. current
1929	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
1930	When a vector is multiplied by a negative number, its direction:	A. Remains the same B. Changes C. Changes by 180<span style="font-size: 10.5pt; line-height: 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. None of these
1931	Uncertainty is of following type/types:	A. Absolute B. Fractional C. Percentage D. All of these
1932	Compton was awarded Nobel prize in physics in	A. 1921 B. 1923 C. 1925 D. 1927
1933	In LCR circuit which one of the following statement is correct?	A. L and R oppose each other B. R value increase with frequency C. The inductive reactance increases with frequency D. The capacitive reactance increases with frequency
1934	Wave length of light, on the average, is given by:	A. 10⁻¹⁴_m B. 10⁻¹⁰_m C. 10⁻⁶_m D. 10⁻⁴_m
1935	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:	A. 5 rad/sec² B. -10 rav/sec² C. -10 rad/sec² D. -5 rav/sec²
1936	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
1937	Which of the following is not mechanical wave?	A. Sound wave B. Light wave C. wave produced in spring D. None of them
1938	If a 40 watt light bulb burns for 2 hours. how much heat is generated	A. 288 x 10³J B. 288 x 10⁸J C. 288 x 10⁵J D. 288 x 10⁶J
1939	The wave form of SHM is	A. Pulsed wave B. Square wave C. Triangular waved D. Sine wave
1940	In the equation $E=mc^2$ value of c is?	A. 186000 miles per hour B. 186000 miles per sec C. 3 X 10⁸m/sec D. Both A and C E. Both B and C
1941	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
1942	Flux through a closed surface of any shape and flux through the surface of a sphere drawn around a charge are:	A. Different<o:p></o:p> B. Same<o:p></o:p> C. Such that it is greater in the first case<o:p></o:p> D. Such that it is greater in the second case<o:p></o:p> E. <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">None of these<o:p></o:p>
1943	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)
		A. Absolute B. Relative

1944	The concept of direction is purely:	C. Relative to stars always D. Relative to the sun always E. None of these
1945	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
1946	The half lie of radium-226 is	A. 238 years B. 4.5 x 10⁹days C. 1620 years D. 332 years
1947	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
1948	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
1949	Semi-conductor elements have atoms with	A. 2 valence electrons B. 3 valence electrons C. 4 valence electrons D. 5 valence electrons
1950	In an interference pattern of Young's double slit(YDS) experiment:	A. Bright fringesare 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
1951	The net force acting on a 100 kg man standing in an elevator accelerating downward with a = 0.8 m sec^{-2}comes out to:	A. 980 N B. 580 N C. 1380 N D. Zero
1952	If water in a closed bottle is taken up to the moon and opened, the water gets	A. Freeze B. Boiled C. Dissociated into O₂and H₂ D. Evaporated
1953	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 decresase
1954	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
1955	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
1956	The unit of decay constant is:	A. Second B. Metre C. Hour D. Year E. Second⁻¹
1957	Magnetic induction is also called as:	A. Ampere's law<o:p></o:p> B. Faraday's law<o:p></o:p> C. Lenz's law<o:p></o:p> D. Newton's law<o:p></o:p> E. <span style="font-size:12.0pt; line-height:107%;font-

		family:"Times New Roman","serif"">Coulomb’s law<o:p></o:p></p>
1958	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
1959	Recent studies of ferromagnetism have shown that there exists in ferromagnetic substances small regions called	A. tiny regions B. domains C. vectors D. none of them
1960	A typical four stroke petrol engine undergoes how many successive processes in each cycle	A. one B. two C. three D. four
1961	When a falling body hits ground, its KE changes to _____ energy.	A. Potential B. Chemical C. Mechanical D. sound and heat
1962	Radioactivity	A. is exhibited more by semiconductors in general B. in 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
1963	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:	A. Power B. Work C. Pressure D. None of these
1964	Neutron was suggested to be in the nucleus by:	A. Rutherford in 1920 B. Bohar in 1913 C. Dirac in 1928 D. Anderson in 1932 E. None of these
1965	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
1966	A charged particle moving at right angle to the magnetic field will experience	A. minimum force B. maximum force C. zero D. moderate force
1967	The magnetic field outside the solenoid due to current is	A. strong B. zero C. weak D. uniform
1968	The SI unit of stress is	A. N/m² B. Nmc C. dynes/m D. N
1969	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
1970	The torque per unit twist of coil is called	A. proportionality constant B. gravitational constant C. boltzman constant D. coupling constant
1971	A particle is moving along a circular path with uniform speed. Its projection will execute ___along the _____ of the circle:	A. Circular motion, circumference B. Vibratory, chord C. SHM, diameter D. SHM, circumference
1972	Depletion region contains:	A. Protons B. Positive ions C. Negative ions D. Both (B) and (C) E. Both (A) and (C)
1973	Nucleus consists of	A. proton and neutron B. protons and electron C. electron and neutron D. protons only
		A. pair production

1974	When low energy photon interact with a metal,which of the following effect is likely to be taken place	B. photoelectric C. Compton effect D. None of these
1975	Heating effect of current utilized in:	A. Electric motor<o:p> </o:p> B. Electric toaster<o:p> </o:p> C. Electroplating<o:p> </o:p> D. Electric kettle<o:p> </o:p> E. Both (B) and (D)<o:p></o:p>
1976	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
1977	Example of progressive wave is	A. transverse waves B. longitudinal waves C. both of them D. none of them
1978	The most suitable material for permanent magnet is	A. cobalt B. iron C. steel D. alaminium
1979	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
1980	A body moves a distance of 10 m along a straight line under the action of a force of 5 N and work done in 25J. The angle which the force makes with the direction of motion will be	A. 60° B. 90° C. 30° D. 0°
1981	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
1982	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
1983	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
1984	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
1985	When a body is moving on a surface, the force of friction is called	A. Static friction B. Dynamic friction C. Limiting friction D. Rolling friction
1986	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
1987	Lorentz force is defined as	A. q(E + V x B) B. q(E x B + V) C. q(E x V + B) D. q(E x B)

1988	The appearance of colours in the soap (or oil) film results from	A. Dispersion B. Interference C. Reflection D. Refraction
1989	The ratio of linear stress/linear strain is called as	A. Yong's modulus B. Bulk modulus C. Shear modulus D. Modulus
1990	A typical rocket consumes about	A. 100 kg s⁻¹of fuel B. 1000 kg s⁻¹of fuel C. 10000 kg s⁻¹of fuel D. 100000 kg s⁻¹of fuel
1991	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
1992	The distance covered by a body in unit time is called.	A. Displacement B. speed C. Velocity D. Both B and C
1993	What will be the ratio of the distance moved by a freely falling body from rest in 4th and 5th seconds of journey?	A. 4 : 5 B. 7 : 9 C. 16 : 25 D. 1 : 1
1994	Selenium is:	A. An insulator B. A conductor C. Both A and B D. Excellent conductor E. None of these
1995	If the slope of the velocity-time graph increases at constant rate with time, then the body is said to have	A. uniform deceleration B. uniform negative acceleration C. average acceleration D. uniform positive acceleration
1996	If you are moving at relativistic speed between two points that are a fixed distance apart, then the distance between the two points appers	A. larger B. shorter C. equal D. none of these
1997	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
1998	While deriving the equation for pressure of a gas we consider the	A. rotational motion of molecules B. vibrational motion of molecules C. linear motion of molecules D. all of them
1999	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
2000	The electric field due to an infinite long thin wire at a distance R varies as	A. 1/R B. 1/R² C. R D. R²
2001	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
2002	1 amu is equal to.	A. 1.66 x 10⁻²⁴kg B. 1.66 x 10⁻¹⁹kg C. 1.66 x 10⁻²⁴kg D. 1.66 x 10⁻²⁷kg
2003	The percentage of available heat energy converted into work by a diesel engine is roughly	A. 35 %` B. 40 % C. 35 - 40 % D. 25 %
2004	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	A. 0.15 x 10⁻³Ns B. 0.98 x 10⁻³Ns C. 1.5 x 10⁻³Ns D. 2.5 x 10⁻³Ns
	A uniform bar AE of weight 9 N is held horizontal by vertical forces. Two additional forces act A and B as shown in figure. The points A,B,C,D and E	A. Point D B. Point E

2005	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.	B. Point E C. Point C D. Point B
2006	The dimensions of work	A. [MLT⁻¹] B. [MLT⁻²] C. [ML²T⁻²] D. [MLT]
2007	An electric charge at rest is	A. Only an electric field B. Only a magnetic field C. Both electric and magnetic fields D. None of the above
2008	The obvious effect/s of current is/are:	A. Heating effect<o:p></o:p> B. Magnetic effect<o:p></o:p> C. Chemical effect<o:p></o:p> D. Both (C) and (B)<o:p></o:p> E. All of these
2009	The capacity of a parallel plat capacitor depends on the	A. Type to metal used B. Thickness of plates C. Potential applied across the plates D. Separation between the plates
2010	The flux through a closed surface depends upon:	A. <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">Shape of geometry of the closed surface<o:p></o:p> B. <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">Charge enclosed<o:p></o:p> C. <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">Nature of the medium<o:p></o:p> D. <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">Both (A) and (B)<o:p></o:p> E. <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">Both (B) and (C)<o:p></o:p>
2011	The resistance of the given conductor can be increased by	A. Increasing the area B. Changing resistivity C. Decreasing the length D. None of the above because change does not matter because in any case the volume remains the same
2012	Photons must have energy equal to	A. ev B. En C. hf D. None of these
		A. Newton

2013	The wave nature of light was proposed by	B. Thomas Young C. Huygen D. None of these
2014	A thermistor with positive temperature coefficient in used to measure temperature in a furnace. As the furnace heats up, the resistance value fo the thermistor.	A. Decrease B. Remains unchanged C. Increase D. None of the above
2015	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
2016	The wavelength of wave is 5000 A^o. This wave will be in region	A. U.V B. Visible C. Radio D. Infrared
2017	Tick the correct pair when M denotes the molecular mass and other symbols carry usual meanings:	A. N = nN_Am = MN_A B. n = N N_A, M = mN_A C. M = N_A/N , N_A= m/n D. N = nN_A, M = mN_A
2018	Which of the following does not obey ohm's law?	A. Copper B. Al C. Diode D. None
2019	The open loop gain of OP-AMP is of the order of	A. 10² B. 10³ C. 10⁴ D. 10⁵
2020	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	A. Has a definite pitch B. Has a definite quality C. Has a definite capacity D. Can penetrate the wall
2021	The body passing a viscous medium affected by:	A. One force only B. Two forces only C. Four forces D. None of these
2022	Specific resistance of a wire depends upon	A. Length B. Cross-section area C. Mass D. None
2023	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
2024	One radian is equal to:	A. 30.3<span style="font-size: 10.5pt; line-height: 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;">° B. 45.3<span style="font-size: 10.5pt; line-height: 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;">° C. 50.3<span style="font-size: 10.5pt; line-height: 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. 57.3<span style="font-size: 10.5pt; line-height: 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;">°
2025	The entire wave form of sinusoidal voltage is actually a set of all the:	A. Positive maximum value + V_oand negative maximum value -V_o B. Posiotive maximum value +V_oand zero C. Zero and negative maximum value -V_o D. Any of these E. None of these
2026	Electric intensity at a place due to a charged conductor is a	A. Scalar quantity B. Vector quantity C. Semi vector and semi scalar

2026	Electric intensity at a place due to a charged conductor is a	C. Semi vector and semi scalar D. Dimensionless quantity E. Both A and D are true
2027	The energy of a photon is represented by	A. h/c² B. h/T C. hc² D. hf/c²
2028	Within each domain, the magnetic field of all the spinning electrons are	A. parallel B. antiparallel C. perpendicular D. all of them
2029	Eddy current is produced when:	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
2030	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
2031	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
2032	A current carrying conductor is placed at right angle to the magnetic field. The magnetic force experienced by the conductor is	A. minimum B. maximum C. zero D. none of these
2033	The angle between centripetal force and displacement of the body moving in a circle is:	A. 0<span style="font-size: 10.5pt; line-height: 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;">° B. 90<span style="font-size: 10.5pt; line-height: 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;">° C. 180<span style="font-size: 10.5pt; line-height: 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. None of these
2034	On heating, glass gradually softens into a paste like before it becomes a very viscous liquid at almost	A. 600°C B. 7600°C C. 800°C D. 900°C
2035	A galvanometer in which the coil comes to rest quickly after the current passed through it, or the current stopped form flowing through it, is called	A. dead beat galvanometer B. stable galvanometer C. shunt galvanometer D. sensitive galvanomter
2036	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
2037	Work is product of:	A. Force and velocity B. Heat and energy C. Force and displacement D. None of these
2038	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	A. 0 J B. 2 J C. 5 J D. 10 J
2039	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
2040	You have 20 capacitors available with you, each of 15 F. You need a	A. 15 capacitors in parallel B. 15 capacitors in series

2040	capacitor of around 1F in a circuit. You can achieve this value by connecting	C. 20 Capacitors in series D. 20 Capacitors in parallel
2041	Which of the following medium/media can transmit both transverse and longitudinal waves:	A. Solids B. Liquids C. Gases D. All of them
2042	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
2043	Frequency of red color as compared to that of violet color is:	A. Equal B. Smaller C. Greater D. None of these
2044	The flow of an ideal fluid is	A. streamline flow B. incompressible flow C. non-viscous D. all of the above
2045	Astrophysics is a branch of physics, which deals with	A. Sub-atomic B. Stars and galaxies C. Light and sound D. Music
2046	When the conductor moved across a magnetic field:	A. Emf induced is similar to that of a battery <o:p></o:p> B. Emf induced gives rise to induced current <o:p></o:p> C. An emf induced across its ends <o:p></o:p> D. All are correct <o:p></o:p> E. None of these <o:p></o:p>
2047	The chemical properties of all the isotopes of an elements are	A. same B. different C. slightly different D. none of these
2048	Significant figures in 0.0010 are:	A. Four B. Three C. Two D. One
2049	Op-amp has been discussed as comparator of:	A. Distances B. Voltages C. Velocities D. Magnetic fields E. Both (A) and (C)
2050	The current sensitivity of the galvanometer is	A. C/BAN B. BAN/C C. CAN/B D. CBN/A
	Hold the wire in the right hand with fore finger along the direction of magnet	A. Thumb<o:p></o:p> B. Curled fingers<o:p></o:p> C. <span style="font-size:12.0pt; line-height:107%;font-

2051	Hold the solenoid in the right hand with fingers curling in the direction of current. The direction of the field will be given by:	family:" Times New Roman","serif"">Middle finger<o:p></o:p> D. Arm of right hand<o:p></o:p> E. None of these<o:p></o:p>
2052	The closed loop gain of the non-inverting amplifier is given by	A. G = R₂/R₁ B. G = -R₂/R₁ C. G = 1 - R₂/R₁ D. G = 1 + T₂/R₁
2053	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
2054	When a stress changes the shape, it is called the	A. compressional stress B. tensile stress C. shear stress D. any one of them
2055	The terms phase difference and path difference are:	A. Same B. Different C. Equal D. None of these
2056	Nuclei that have the same charge number but different mass number are called	A. isotones B. isomers C. isotopes D. isobars
2057	The magnitude of the force producing an acceleration of 10 m/sec2 in a body of mass 500 grams is:	A. 3 N B. 4 N C. 5 N D. 6 N
2058	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
2059	Absolute motion cannot be detected	A. in its own frame of references B. in a different frame of references C. both in its frame and different frame of references D. none of these
2060	For a given angle of projection, if the time of flight of a projectile is doubled, the horizontal range will increases to	A. Four times B. Thrice C. Once D. Twice
2061	A black body is	A. an ideal absorber B. an ideal radiator C. both of them D. none of them
2062	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
2063	Direction of motion _____ in circular motion:	A. Changes off and on B. Changes continuously C. Does not change D. None of them
2064	The heat required to raise the temperature of one mole of the substance through 1 K is called	A. heat capacity B. specific heat capacity C. molar specific heat D. all of them
2065	Centripetal acceleration is also called _____ acceleration	A. Tangential B. Radial C. Angular D. None of these
		A. Gauses

2066	The SI unit of magnetic induction is	B. Tesla C. Weber D. Weber²
2067	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
2068	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
2069	If F=0.04 N and X=4 cm then K=	A. 1 Nm⁻¹ B. 2 Nm⁻¹ C. 3 Nm⁻¹ D. 4 Nm⁻¹
2070	Mass of neutron is	A. 1.67 x 10⁻³¹kg B. 1.67 x 10⁻²⁷kg C. 9.1 x 10⁻³¹kg D. 1.67 x 10⁻19kg
2071	What is frequency of radio waves transmitted by a station, if the wavelength of those waves is 300 m?	A. 1 MHz B. 10 Hz C. 1 GHz D. 100000 Hz
2072	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
2073	One KWh is equal to:	A. 3.6 x 10²J B. 3.6 KJ C. 3,6 x 10¹KJ D. 3,6 MJ
2074	The crystalline structure of NaCl is	A. rectangular B. hexagonal C. tetrahedral D. cubical
2075	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
2076	If a nucleus emits an alpha particle, its mass number decreases by 4 while charge number decreased by	A. -4 B. 4 C. 2 D. 1
2077	Angular momentum	A. Scalar B. Axial vector C. Polar vector D. At 45° angle
2078	In a transistor, collector current is controlled by	A. Collector voltage B. Base current C. Collector resistance D. All of the above
2079	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
2080	Where the streamlines are very close to each other, the pressure will be	A. low B. zero C. high D. all of them
2081	The potential difference across each resistance in series combination is	A. same B. different C. zero D. none of these
2082	The shell closer to the nucleus is called:	A. N shell B. L shell C. K shell D. M shell E. O shell
		A. fission reaction

2083	When a charged particle passes through matter, it produces ionization, this effect is used in	A. fission reaction B. reactor C. radiation detector D. fusion reaction
2084	Which one of the following is the unit of electric field intensity	A. JC⁻¹ B. Vm⁻¹ C. Cm⁻¹ D. CJ⁻¹
2085	Tick the conservation force:	A. Tension in a string B. Air resistance force C. Elastic spring D. Frictional force
2086	The waves produced in a microwave oven have wavelength.	A. 12 mm B. 12 cm C. 12 m D. 12 mm
2087	Amplitude in SHM is equivalent to_____ in circular motion:	A. Diameter B. Radius C. Circumference D. None of these
2088	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
2089	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
2090	A hollow insulated conduction sphere is given a positive charge of 10μC. What will be the electric field at the centre of the sphere if its radius is 2 meters?	A. Zero B. 5μC m⁻² C. 20μC m⁻² D. 8μC m⁻²
2091	A choke coil is used as a resistance in	A. d.c. circuit B. a.c. circuit C. d.c. potentiometer circuit D. wheatstone bridge
2092	Amperean path is a:	A. Closed path<o:p></o:p> B. Rectangular path<o:p></o:p> C. Circular path<o:p></o:p> D. Any of above<o:p></o:p> E. Broken path<o:p></o:p>
2093	Electromagnetic -radiation means:	A. Photons B. protons C. Electrons D. Mesons E. None of these
2094	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

2095	A rotating wheel accelerates up to the value of 0.75 rev/sec^{2}after 2 seconds of its start. Its angular velocity becomes:	A. 9.42 rad/sec B. 2.6 rev/sec C. 1.5 rev/sec D. Both A and C
2096	The value of threshold frequency for different metals is	A. different B. same C. may be different or may be same D. none of these
2097	Monochromatic light of wavelength 1 in vacuum is incident on the surface of glass at an angle 1. Assuming the refractive index of glass is 1.5 the wavelength of the refracted ray in glass is.	A. 1/1.5 B. 1 C. 1.5₁ D. There is no refracted ray
2098	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. It the collision is perfectly elastic, which of the following statements in correct	A. The two spheres sticks together after impact B. The total kinetic energy before the impact in 3 mv3 C. The total momentum before impact is 4 mv D. Both B and C
2099	Which one of the following relations is correct?	A. 1 Wb-m²= Nm⁻¹A⁻¹ B. 1 tesla = 104 gausses C. 1 Wb-m²= 1 tesla D. All of the above
2100	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
2101	Direction of motion_____ in circular of motion:	A. Changes off and on B. Changes continuously C. Does not change D. None of them
2102	Bernoulli's equation is based upon law of conservation	A. Mass B. Momentum C. Energy D. None of these
2103	Which of the following has the greatest coefficient of viscosity?	A. water B. gasoline C. honey D. tar
2104	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
2105	The time period of a simple pendulum is independent of its:	A. Length B. Mass C. Value of g D. Both A and B
2106	A transistor has:	A. One region B. Two regions C. Three regions D. Four regions E. None is correct
2107	Inverter is the name given to:	A. NOT gate B. OR gate C. NOR gate D. AND gate E. XOR gate
2108	An irreversible heat flow from a hot to cold substances of a system, causes the disorder to	A. decrease B. remains the same C. increase D. any one of them
2109	Electric generators which convert mechanical energy into	A. solar energy B. thermal energy C. kinetic energy D. electrical energy
2110	A diatomic gas molecule has	A. translational energy B. rotaional energy C. vibrational energy D. all of them

2111	The results of mechanical tests are usually expressed in terms of	A. stress B. strain C. stress and strain D. neither strees nor strain
2112	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
2113	A motorist travels A to B at a speed at 40 km/h and returns at speed of 60km/h. His average speed will be	A. 40 km/h B. 48 km/h C. 50 km/h D. 60 km/h
2114	The quantity having the same unit as that of emf is:	A. Force B. Energy C. Potential D. Current E. Charge
2115	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	A. Zero B. Infinity C. V D. 2 V
2116	The relation V = IR represents	A. Ampere law B. Faraday's law C. Ohm's law D. Len's law
2117	If the volume of the gas is to be increased by 4 times, then	A. Temperature and pressure must be doubled B. At constant P the temperature must be increased by 4 times C. At constant T the pressure must be increased by four times D. It cannot be increased
2118	Branch of physics which deals with the study of stars and galaxies is called:	A. Solid state physics B. Astrophysics C. Molecular physics D. Chemical physics
2119	An object moving through a fluid experiences a retarding force called a	A. frictional force B. terminal force C. opposing force D. drag force
2120	A curie represents a very strong source of	A. α-particle B. β-particle C. γ-particle D. none of these
2121	the symbol to be used in relativity problems denotes:	A. Dilated time B. Proper time C. Life time D. Half time E. None of these
2122	Which of the following represents an electric current?	A. C⁻¹ B. CS⁻¹ C. J.S⁻¹ D. dynes⁻¹
2123	Frequency of red colour as compared to that of violet colour is	A. Equal B. Smaller C. Greater D. None of these
2124	In process of annihilation of matter, the two photons produced move in opposite direction to converse	A. momentum B. charge C. energy D. mass
2125	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 an induced current is coil S D. All of these E. None of these
2126	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
		A. Right hand rule

2127	Direction of angular momentum is determined by:	A. Right hand rule B. Head to tail rule C. Left hand rule D. None of them
2128	Two forces each of the magnitude F act perpendicular to each other. The angle made by the resultant force with the horizontal will be:	A. 30<span style="font-size: 10.5pt; line-height: 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;">° B. 45<span style="font-size: 10.5pt; line-height: 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;">° C. 60<span style="font-size: 10.5pt; line-height: 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. 90<span style="font-size: 10.5pt; line-height: 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;">°
2129	The path described by a projectile is called its	A. orbit B. trajectory C. range D. distance
2130	A body is executing free vibrations when it oscilates	A. with the interference of an external force B. without the interference of an external force C. with the interference of an internal force D. none of them
2131	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
2132	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
2133	At absolute temperature, the kinetic energy of the molecules	A. Becomes zero B. Becomes maximum C. Becomes minimum D. Remain constant
2134	An ideal voltmeter has:	A. Zero resistance B. Small resistance C. Large resistance D. Infinite resistance E. Both A and B
2135	AC voltage is passed through single diode rectifier, the output of the bridge rectifier is.	A. Full wave DC voltage B. Double frequency AC Voltage C. Half wave DC voltage D. None
2136	An ideal choke (used along with fluorescent tube) would be	A. A pure resistor B. A pure capacitor C. A pure inductor D. A combination of an inductor and a capacitor
2137	Fidelity refers to	A. Reproduction of original sound B. Reproduction of original image C. Reproduction of music D. Reproduction of a CD from original copy
2138	Gas constant per molecule is called:	A. Universal gas constant B. Stefen's constant C. Boltzmann constant D. Gravitation constant
2139	The information from far side of the universal are gathered by:	A. Radio telescope B. Microscope C. Telescope D. Spectro scpe
		A. adhesion between the gas molecules and the container B. cohesion between the gas molecules and the

2140	Pressure exerted by a gas on the walls of its container in due to	container C. collision between the gas molecules and the container D. surface tension of the gas
2141	In case of metallic conductors, the charge carriers are	A. Protons B. Electrons C. Antiprotons D. Positrons E. Both A and B
2142	If the distance of separation between two chares is increased, the electrical potential energy of the system will	A. Increase B. Decrease C. May increase or decrease D. Remain the same
2143	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
2144	Curie is a unit of	A. reluctance B. resistivity C. binding energy D. radioactivity
2145	A non-inertial frame of reference is one, in which	A. law of inertial is valid B. all laws of physics are the same in all frames C. a>0 or a<0 D. a=0
2146	Silicon is one of the mot commonly used:	A. onductor B. Dielectric C. Insulator D. Semiconduction E. Both (B) and (C)
2147	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<span style="font-size: 10.5pt; line-height: 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;">° B. 315<span style="font-size: 10.5pt; line-height: 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;">° C. 135<span style="font-size: 10.5pt; line-height: 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<span style="font-size: 10.5pt; line-height: 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;">°
2148	The number if neutrons in the nucleus of $_{92}U^{235}$are	A. Infinite B. 92 C. 235 D. 143
2149	What are the SI base units of the coefficient of viscosity	A. Kg m s⁻² B. kgm² s⁻² C. Kg m s⁻¹ D. kg m⁻¹s⁻¹
2150	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	A. 2nd group B. fourth group C. fifth group D. sixth group
2151	The sum of two or more vectors is equal to a single vector which is called:	A. Component vector B. Resultant vector C. Product vector D. None of these
2152	A grating with high resolving power can distinguish _____ difference in wavelengths :	A. Larger B. Zero C. None of these D. Smaller
		A. 80 sec

2153	The time taken by light to travel from moon to earth is:	B. 500 sec C. 1.802 X 10⁴sec D. Aerophysics
2154	Which one is the least multiple:	A. Pico B. Femto C. Nano D. Atto
2155	Pressure exerted by a gas is	A. Independent of density of the gas B. Inversely proportional to the density of the gas C. Directly proportional to the square of the density of the gas D. Directly proportional to the density of the gas
2156	The magnitude of the displacement is a line from initial position to final position which is	A. straight B. curved C. either be curved or straight D. none of them
2157	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
2158	The branch of physics, which deals with the structure an properties of solids is called:	A. Plasma physics B. Solid state physics C. Any of above D. Astro physics
2159	The interior of a hollow charged metal sphere is a region which:	A. <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">Contain some magnitude of electric field<o:p></o:p> B. <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">Is full of electric field lines<o:p></o:p> C. <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">Is field-free region<o:p></o:p> D. <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">Either (A) or (B)<o:p></o:p> E. <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">None of these<o:p></o:p>
2160	Dimensions of velocity are	A. [L] B. [T] C. [LT⁻¹] D. [LT⁻²]
2161	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
2162	Choose the set of physical quantities, which have both numerical and directional properties:	A. Velocity, mass B. Speed, acceleration C. acceleration weight D. Distance, force
2163	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%
2164	Bodies failing freely under gravity provide good example of motion under	A. non-uniform acceleration B. uniform acceleration C. variable acceleration D. increasing acceleration
2165	1 gm-cm^{-3}is equal to:	A. 10³kg-m⁻³ B. 10⁻³kg-m⁻³ C. 1 kg-m⁻³

		C. 1kg-m⁻³ D. 10⁶kg-m⁻¹
2166	Work has the dimensions as that of	A. Torque B. Angular momentum C. Linear momentum D. Power
2167	The special theory of relativity is based on:	A. Four postulates B. Three postulates C. Two postulates D. One postulate E. None of these
2168	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
2169	The energy of a photon in a beam of infrared radiation of wavelength 1240 nm is	A. 100 ev B. 10⁶e v C. 10³e v D. 1.0 e v
2170	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
2171	1 gm-cm^{-3}is equal to	A. 10³kg-m⁻³ B. 10⁻³kg-m⁻³ C. 1kg-m⁻³ D. 10⁶kg-m⁻¹
2172	The fractional change in resistance per kelvin is known as	A. temperature coefficient B. resistance coefficient C. super temperature D. critical temperature
2173	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℃?	A. fluid B B. fluid A C. both take the same time D. not possible to determine from given information
2174	Gauss(G) is smaller unit of magnetic induction which is related to tesla(T) as	A. IT = 10⁻⁴G B. IT = 10⁵G C. IT = 10³G D. IT = 10⁴G
2175	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	A. 2.9 s B. 3.0 s C. 6.6 s D. 9.6 s
2176	A train cover 90 km in half an hour. the time taken by it to travel 15 km will be:	A. 20 minutes B. 48 minutes C. 10 minutes D. 5 minutes
2177	Coulomb multiplied by volt by volt gives the unit called:	A. farad B. Ohm C. Second D. joule E. Watt
2178	The waves which propagate out in space due to oscillation of electric and magnetic fields are known as	A. e.m. waves B. mechanical waves C. sound waves D. water waves
2179	A typical rocket ejects the burnt gases at speeds over	A. 400 ms⁻¹ B. 40000m s⁻¹ C. 40000 ms⁻¹ D. 60000 ms⁻¹
2180	The SI unit of magnetic flux is	A. NmA⁻² B. NmA⁻¹ C. NAm⁻¹ D. Nm²A⁻¹
		A. 90<span style="font-size: 10.5pt; line-height: 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;">° B. 180<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial;

2181	When quarter of a circle is completed, the phase of vibration is:	background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 45<span style="font-size: 10.5pt; line-height: 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. 360<span style="font-size: 10.5pt; line-height: 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;">°
2182	Linear momentum is a	A. fixed quantity B. constant quantity C. scalar quantity D. vector quantity
2183	A solar cell is made from:	A. Iron B. Silicon C. Germanium D. Copper
2184	Work done along a closed path in a gravitational field is:	A. Maximum B. Minimum C. Zero D. Unity
2185	When brakes are applied to a fast moving car, the passengers will be thrown:	A. Forward B. Backward C. Downward D. None of these
2186	Recently a complex crystalline structure known as Yetrium Barium Copper Oxide have been reported to become superconductor at	A. 125 K B. 25 K C. 263 K D. 163 K
2187	The device in which induced emf is statically induced emf is:	A. Transformer B. AC generator C. Alternator D. Dynamo
2188	Tick the one which is not a crystalline solid:	A. Zirconia B. Glass C. Copper D. Ceramic solid E. An ionic compound
2189	Particles have the mass smallest of following is:	A. Electron B. Proton C. Neutron D. Quark
2190	The space around the earth within which it expects a force of attraction on other bodies is known as:	A. Nuclear field B. Conservative field C. Electric field D. Gravitational field
2191	With the propagation of a longitudinal wave through a material medium, the quantities transmitted in the propagation direction are	A. Energy, momentum and mass B. Energy C. Energy and mass D. Energy and linear momentum
2192	Work done is maximum when angle between force and displacement is:	A. 0<span style="font-size: 10.5pt; line-height: 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;">° B. 90<span style="font-size: 10.5pt; line-height: 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;">° C. 180<span style="font-size: 10.5pt; line-height: 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. None of these
		A. 13.33 N/m² B. 760 N/m²

2193	One torr is equal to	B. 760 N/m² C. 760 mm Hg D. 133.3 N/m²
2194	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
2195	Resolving power in mth order diffraction for grating is given by:	A. R = N/m B. R = m/N C. R = N x m D. None of these
2196	Truth table of logic function:	A. Summarizes its output values B. Tabulates all its input conditions only C. Display all its input/output possibilites D. Is not based on logic algebra E. None of these
2197	The fluid is incompressible, if itsdensity is	A. zero B. constant C. very high D. very small
2198	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
2199	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
2200	Light has	A. Wave nature B. Dual nature C. Particle nature D. None of them
2201	The direction of the streamlines is the same as the direction of the	A. force B. torque C. velocity D. weight
2202	The units of modulus of elasticity are	A. Nm⁻² B. Nm C. ms⁻¹ D. Pascal
2203	The magnetism produced by electrons within an atom can arise from	A. electrons orbiting the nucleus B. electrons posses a spin C. both motions D. none of these motions
2204	Stock's law holds for:	A. Motion through free space B. Motion through viscous medium C. Bodies of all shapes D. None of these
2205	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<span style="font-size: 10.5pt; line-height: 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;">° B. 30<span style="font-size: 10.5pt; line-height: 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;">° C. 60<span style="font-size: 10.5pt; line-height: 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. 90<span style="font-size: 10.5pt; line-height: 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;">°
2206	In frequency modulation (FM), the carrier waves amplitude	A. Remains constant B. Increase C. Decreases D. None of these

		D. None of these
2207	The maximum possible error in the reading of an instrument is _____ its least count.	A. Half of B. Quarter of C. Equal to D. Double than
2208	The velocity of sound in air depends upon	A. Density and elasticity of gas B. Pressure C. Wavelength D. Amplitude and frequency of sound
2209	The smallest three dimensional basic structure in a crystalline solid is called	A. lattice point B. crystal lattice C. cubic crystal D. unit cell
2210	The net force acting on a 100 kg man standing in an elevator accelerating downward with a = 9.8 m sec^{-2}comes out to be	A. 980 N B. 580 N C. 1380 N D. Zero
2211	A body moving with an acceleration of 5 m/sec^2started 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
2212	The results of spectra obtained by Blamer were expressed in 1896 by	A. Bohr B. Rydberg C. Planck D. Rutherford E. Coulomb
2213	Charge on neutron is	A. 1.6 x 10⁻¹⁹C B. zero C. -1.6 x 10⁻¹⁹C D. 1.2 x 10⁻¹⁹C
2214	When the bob of simple pendulum is at mean position, its K.E will be	A. maximum B. minimum C. zero D. all of them
2215	Conventionally, all the distance p, q, f are measured from _____ of the lens:	A. Focus B. Optical center C. Edges D. None of these
2216	A P-N juction or semiconductor diode cannot be used as	A. A rectifier B. Detector C. Oscillator D. An amplifier
2217	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
2218	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	A. 10μF B. 20μF C. 30μF D. 15μF
2219	Transmitting antenna emits	A. Magnetic waves B. Electric waves C. Electromagnetic waves D. Sound waves
2220	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
2221	Neutron was discovered by	A. Curie B. Roentgen

2221	Neutron was discovered by	C. Chadwick D. Rutherford
2222	Amorphous solids are also called as	A. crystalline solids B. polymeric solids C. glassy solids D. any one of them
2223	Work is a	A. Scalar quantity B. Vector quantity C. Base quantity D. None of these
2224	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
2225	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
2226	The pressure will be low where the speed of the fluid is	A. Zero B. High C. Low D. Constant
2227	In the formula for finding the speed of waves in the spring, unit of m in SIn units is:	A. kg B. kg-meter C. kg/meter D. Meter/kg
2228	In his experiment on nuclear reactions, Rutherford bombardedα particles on:	A. Nitrogen B. Hydrogen C. Lead D. Oxygen E. Krypton
2229	Associated with the motion of a driven harmonic oscillator, there is a very striking phenomenon, know as	A. waves B. beat C. interference D. resonance
2230	When the emitter-base junction of a transistor is reverse biased, collector current	A. Reverses B. Increases C. Decreases D. Stops
2231	Significant figures in 0.2020 are:	A. Two B. Three C. Four D. Five
2232	The range of wavelengths of colurs in the visible colours is	A. 140 nm to 456 nm B. 10 nm to 56 nm C. 410 nm to 656 nm D. 910 nm to 956 nm E. None of these
2233	The commercial unit of electrical energy is :	A. K Watt B. KWH C. Horse power D. Joule
2234	Which force is not a conservative force:	A. Frictional force B. Gravitational force C. Electric force D. Elastic spring force
2235	When two waves with same frequency and constant phase difference 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
2236	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
2237	A point charge A of charge +4μC and another B of charge -1μC 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)	A. 2 B. 1 C. 0.5 D. 1.5
2238	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	A. A greater than than of B B. A is equal to that of B

2238	pressure are compressed from a volume V to a volume V/2 such that A is compressed isothermally and B adiabatically. The final pressure	C. A is less than that of B D. A is twice the pressure of B
2239	The velocity of a projectile is maximum	A. at the point of projection B. just before striking the ground C. at none of them D. at both of them
2240	The earliest heat engine was	A. petrol engine B. diesel engine C. electric engine D. steam engine
2241	The decrease in velocity per unit time is called:	A. Variable Acceleration B. Average Acceleration C. Retardation D. None of these
2242	If a train traveling at 72 kmph is to be brought to rest in a distance of 200 meters then its retardation should be	A. 20 ms⁻² B. 10 ms⁻² C. 2 ms⁻² D. 1 ms⁻²
2243	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	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
2244	If v is the velocity of flow of liquid through a tube of area of cross-section A, then according to equation of continuity	A. v/A = constant B. A/v = constant C. Av = constant D. None
2245	Einstein's theory about gravity if better than Newton's because it gave explanation of:	A. Inverse square law B. Bending of light C. Both A and B D. None of above
2246	Which one of the following phenomenon cannot be explained on the bases of Huygen's theory	A. Refraction B. Reflection C. Diffraction D. Formation of spectrum
2247	Question Image	A. 5μF B. 10μF C. 3μF D. 6μF
2248	Electric potential of earth is taken to be zero because the earth is good	A. Semiconductor B. Conductor C. Insulator D. Dielectric
2249	The induced emf in a coil is proportional to:	A. Magnetic flux through a coil B. Rate of change of magnetic flux through the coil C. Area of the coil D. Product of magnetic flux and area of the coil
2250	Change in momentum is one second is called:	A. Impulse B. Force C. Energy D. Work
2251	Which of the following is not an example of intertial 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
2252	A weakly damped system has fairly	A. sharp resonance curve B. flat resonance curve C. both of them D. none of them
2253	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
2254	If the absolute uncertainty of an instrument is 0.0a1 cm, then its least count will be :	A. 0.005 cm B. 0.01 cm C. 0.02 cm D. 0.001 cm
2255	Examples of polymeric substances are:	A. Plastic B. Synthetic rubbers C. Zirconia D. All of these E. Both (A) and (B)
2256	We can excite an atom by	A. Bombardment of particles B. Radiating photons C. Providing potential difference D. All answer are true
2257	Huygen principle is used to determine:	A. Speed of light B. Location of wavefront C. About polarized or unpolarized light D. None of them
2258	Force is a:	A. Scalar quantity B. Base quantity C. Derived quantity D. None of these
2259	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
2260	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
2261	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
2262	Which of the following is the longitudinal waves?	A. Sound waves B. Waves on plucked string C. Water waves D. Light waves
2263	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
2264	The waves which propagate by the collision of material particles are known as	A. e.m. waves B. mechanical waves C. light waves D. microwaves
2265	The effect of applying a force on a moving body is to change	A. its direction of motion only B. its speed of motion only C. both the direction and speed of motion D. its inertia only
2266	A current carrying conductor sets up its own:	A. Electric field<o:p></o:p> B. Nuclear field<o:p></o:p> C. Magnetic field<o:p></o:p> D. Both (A) and (C)<o:p></o:p> E. All of these
2267	On the exaust stroke, the outlet values opens. The residual gases are expelled and piston moves	A. outwards B. inwards C. in either way D. none of these

		D. none of these
2268	In Bernoulli's theorem the relation between velocity and pressure is	A. Inverse B. Direct C. None of the above D. Both a and b
2269	In case of destructive interference of two waves, the amplitude of the resultant wave will be _____ either of the waves.	A. Greater than B. Smaller than C. Equal to D. None of these
2270	The threshold frequency of sodium is 6 x 10^6MHz. 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
2271	Time period of simple pendulum is independent of	A. length B. mass C. acceleration due to gravity D. none of them
2272	A heavily damped system has a fairly	A. sharp resonance curve B. flat resonance curve C. both of them D. none of them
2273	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
2274	A body is moving through a viscous medium eventually comes to rest because of:	A. Force of gravity B. Force of friction C. Its weight D. Both A and C
2275	The change of magnetic flux through a circuit will produce	A. Magnetic Field B. Electric Field C. emf D. a.c
2276	The highest value reached by the voltage or current:	A. In quarter cycle is called Instantaneous value B. In half cycle is called peak-to-peak value C. In one cycle is called peak value D. In half cycle is called Instantaneous value E. None of these
2277	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
2278	Ohm's law states that	A. The current through a resistor is directly proportional to the applied voltage B. The voltage across a resistor is directly proportional to the current passing through it C. Resistance is the constant of proportionality between the voltage and current D. all of these
2279	Two sound waves of slightly different frequencies propagating in the same direction produce beats due to	A. Interference B. Diffraction C. Polarization D. Refraction
2280	Referring to above figure, current in coil P falls from its maximum value to zero	A. At the instant the switch is closed B. At the instant the switch is opened C. When switch is kept open D. When switch is kept closed E. None of these
2281	The location and speed anywhere on earth can now be determined using relativistic effects by NAVISTAR to an accuracy of	A. 2 cm/s B. 20 cm/s C. 200 cm/s D. 2000 cm/s
2282	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
2283	The way through which electromagnetic radiations or photons interact with matter depends upon their:	A. Wavelength B. Frequency C. Energy D. Temperature E. All of these

		E. All of these
2284	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 B
2285	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
2286	Tick the conservative force	A. Tension in a string B. Air resistance C. Elastic spring D. Frictional force
2287	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	A. 60 kg wt B. 72 kg wt C. 48 kg wt D. Zero
2288	Diameter of the nucleus s of the order of	A. 10⁻¹⁰m B. 10⁻¹²m C. 10⁻¹⁵m D. 10⁻¹⁸m
2289	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
2290	The peak voltage in a 220 volt A.C. supply is nearly	A. 220 volt B. 253 volt C. .311 volt D. 440 volt
2291	A body starting from rest covers a distance of 0.45 Km and acquires a velocity of 300 Kmh^{-1}. its acceleration will be	A. 7.71 m s⁻² B. 0.5m s⁻² C. 0.15m s⁻² D. 0.092m s⁻²
2292	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
2293	Field lines are closer to each other in the region where the filed is	A. Stronger B. Weaker C. Much weaker D. Absent E. None of these
2294	The temperature at which the vibrations become so great that structure of the Crystal breaks up, is called:	A. Critical temparature B. Temperature of vaporization C. Melting point D. Both (A) and (C) E. Both (A) and (B)
2295	The reciprocal of decay constant λ of a radioactive material is:	A. Frequency B. Half life C. Year D. Mean life E. None of these
2296	The heat required to raise the temperature of one mole of the gas through 1 K at constant volume is called	A. heat capacity B. specific heat capacity C. molar specific heat D. molar specific heat at constant volume
2297	The relationship between Boltzmann constant k with R and $N_A$is given as:	A. k = RN_A B. k =R/N_A C. k = NR/N_A D. None of these
2298	The emission of electrons from a metal surface when exposed to light of suitable frequency is called the	A. pair production B. Compton effect C. photoelectric effect D. relativity
2299	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	A. 120 x 10.8 N B. 180 N C. 720 N D. 360 N
2300	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
2301	The value of current gain of n-p-n transistor is of the order of	A. tens B. hundreds C. thousands D. ten thousands
2302	For maximum linear distance of travel, a projectile must be fired at an angle of	A. 0° B. 45° C. 90° D. 60°
2303	The results of spectra obtained by Balmer were expressed in 1896 by:	A. Bohr B. Rydberg C. Planck D. Rutherford E. Coulomb
2304	The word amorphous means:	A. Without any structure B. With definite structure C. Regular arrangement of molecules D. Both (B) and (C) E. None of these
2305	Conventional the angular Velocity is Directed at an angle of:	A. 90<span style="font-size: 10.5pt; line-height: 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;">° to the axis of rotation B. 30<span style="font-size: 10.5pt; line-height: 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;">° to the axis of rotation C. 0<span style="font-size: 10.5pt; line-height: 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;">° to the axis of rotation D. None of above
2306	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)
2307	Earth is considered to be	A. a non-inertial frame B. an inertial frame C. an accelerated frame D. none of the above
2308	The equation of continuity $A_1V_1 = A_2V_2$ is for the flow of	A. an ideal fluid B. an incompressible fluid C. a non visconcous fluid D. all of the above
2309	The appearance of the colour in the soap (oil) film results from:	A. Dispersion B. Interference C. Reflection D. Refraction
2310	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
2311	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
2312	Glass is an example of	A. crystalline solid B. amorphous solid C. polymeric solid D. none of them
2313	An atom in which there is a resultant magnetic field, behaves like a tiny magnet and is called as	A. magnetic B. magnetic dipole C. magnetic monopole D. none of them

		D. none of them
2314	The wave motion set up in any medium depends upon:	A. Elasticity B. Inertia C. Density D. All of these
2315	The SI unit of electric flux is	A. Weber B. Nm²C⁻¹ C. NmC⁻¹ D. Nm⁻²C
2316	The rate of decay of a radioactive substance	A. decrease exponentially with time B. decreases linearly with time C. increases linearly with time D. increases exponentially with time
2317	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
2318	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.
2319	A particle moving uniformly along circle its projection along diameter performs	A. Linear motion B. Projectile motion C. SHM D. Rotatory motion
2320	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
2321	Change in momentum is one second called.	A. Impulse B. Force C. Energy D. Work
2322	If 250V is the RMS value of alternative voltage, then its peak value V_0will be:	A. 353.5V B. 250V C. 175V D. zero E. 400V
2323	The values 1 and 0 are designated as:	A. Continuous values B. Binary values C. Boolean values D. Decimal values E. Either (B) and (C)
2324	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
2325	Mass of proton is	A. 1.67 x 10⁻²⁷kg B. 1.67 x 10⁻³¹kg C. 1.66 x 10⁻³⁴kg D. 1.67 x 10⁻¹⁷kg
2326	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:	A. 10 m B. 12 m C. 13 m D. 15 m
2327	Bernoulli's equation is applicable for	A. turbulent flow B. streamline flow C. both (a) and (b) D. all kinds of flows
2328	The ratio of shearing stress/shearing strain is called as	A. Modulus B. Pascal modulus C. Hooker's modulus D. Shear modulus
2329	The magnitude of induced emf depends upon the	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
2330	The maximum distance of body from mean position when body is executing	A. Time period B. Displacement

2330	SHM is called	C. Amplitude D. Frequency
2331	The transition from solid state to liquid state is:	A. Abrupt B. Slow C. Continous D. Discontinous E. Both (A) and (D)
2332	One joule is equal to	A. 1.6 x 10¹⁹eV B. 6.25 x 10¹⁸eV C. 1.6 x 18¹⁸eV D. 6.25 x 10¹⁹eV
2333	From sand, we get a material used for construction of computer chips. That material is called:	A. Germanium B. Silicon C. Copper D. Lead
2334	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
2335	Which of the following material has longer half life	A. radium B. polonium C. radium D. uranium
2336	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
2337	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
2338	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
2339	The projectile motion is composed of	A. horizontal motion only B. vertical motion only C. horizontal and vertical motion D. none of them
2340	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	A. In the backward direction on the front wheel and in the forward direction on the rear wheel B. In the forwards directions on the front wheel and in the backward direction on the rear wheel C. In the forward direction on both the wheels D. In the backward direction on both the wheels
2341	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_cwill decrease B. V_{CE}will increase C. I_Cwill increase D. V_{CC}will increase
2342	41 The force experience, when proton projected in a magnetic field with velocity 'v' is	A. +e(v x B) B. -C(V x B) C. +e²(v x B) D. -e(v²x B)
2343	The phase determines the	A. displacement B. amplitude C. frequency D. state of motion of vibrating body
2344	Which instrument is expensive and difficult to use?	A. Voltmeter B. Potentiometer C. CRO D. Both A and C E. Both A and B
2345	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
2346	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 m/s^2)	A. 9.8 m/s B. 19.6 m/s C. 39.2 m/s D. 98.0 m/s
2347	[illegible]	A. only one state B. only two discrete states

2347	A digital system deals with quantities or variables which have	C. three discrete states D. four discrete states
2348	Maximum work is done when force and displacement are	A. Parallel B. Antiparallel C. Perpendicular D. Both a and b
2349	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 reluired to stop the truck in 10 sec is X difference X and Y is equal to.	A. 4 mega Newton B. 14.4 Kilo Newton C. 4 Kilo Newton D. 14,4 Newton
2350	The SI unit of spring constant is identical with that of:	A. Force B. Surface tension C. Pressure D. Loudness
2351	Laws of motion are not valid in a system which is	A. inertial B. non-interial C. at rest D. moving with uniform velocity
2352	The charge carriers in an electrolyte are	A. Positive ions B. Negative ions C. Either A or B D. Both A and B E. Neither A nor B
2353	The strength of magnetic field at certain points around a wire depends upon:	A. Value of current passing<o:p></o:p> B. Distance from the current element<o:p></o:p> C. Color of the material<o:p></o:p> D. Both (A) and (B)<o:p></o:p> E. Both (B) and (C)<o:p></o:p>
2354	The natural frequency of a pendulum which is vibrating freely, depends upon its	A. mass B. length C. material D. all of them
2355	The acceleration of body executing SHM is directly proportional to	A. Applied force B. Amplitude C. Displacement D. Frictional force
2356	Amorphous solids are also more like	A. crystalline solids B. gases C. liquids D. any one of them
2357	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