ECAT Pre General Science Online Test

Sr	Questions	Answers Choice
1	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
2	The concept of direction and position are purely	A. absolute B. relative C. absolute or relative D. none of these
3	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)
4	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
5	A 1000 Kg car travelling with a speed of 90 km/hr turns around a curve of radius 0.1 km. The necessary centripetal force comes out to be:	A. 8.1×10^7N B. 625 N C. 6250 N D. None of these
6	To display a digit of EIGHT, the number of ON LED'S are:	A. Two B. Three C. Five D. Seven E. Eight
7	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
8	An important part of photocopier is:	A. Toner cartridge B. Deflection plates C. Charging electrode D. Print head E. None of these
9	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
10	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
11	Which of the following represents an electric current?	A. C^{-1} B. CS^{-1} C. $J.S^{-1}$ D. $dynes^{-1}$

12	Slope of velocity time graph represents:	A. Acceleration B. Speed C. Torque D. Work
13	Angular frequency 'w' is basically a characteristics of	A. linear motion B. circular motion C. both of them D. none of them
14	A diatomic gas molecule has	A. translational energy B. rotaional energy C. vibrational energy D. all of them
15	Shock absorber of the car is an example of	A. resonance B. forced oscillations C. interference D. damped oscillations
16	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
17	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
18	The results of spectra obtained by Blamer were expressed in 1896 by	A. Bohr B. Rydberg C. Planck D. Rutherford E. Coulomb
19	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
20	The critical temperature of mercury is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
21	Velocity is a	A. scalar quantity B. vector quantity C. constant quantity D. none of them
22	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
23	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
24	The earth's potential is taken as	A. Negative B. Positive C. Zero D. Infinite
25	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
26	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
27	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
28	The information from far side of the universal are gathered by:	A. Radio telescope B. Microscope C. Telescope D. Spectro scpe
	If a minor union of union constant K is out into two identical components the	A. K/2 B. 2 K

29	If a given spring of spring constant K is cut into two identical segments, the spring constant of each segment is:	B. 2 K C. 4 K D. None of these
30	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
31	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
32	When certain area A is held parallel to the field lines, then:	A. No lines cross this area B. Maximum lines pass through this area C. The number of lines are between zero and maximum D. Both (A) and (B) correct E. None of these
33	The ratio of the gravitational force F_g to the electrostatic force F_e between two electrons at the same distance apart is approximately	A. 9.8 B. 24×10^{19} C. 24×10^{42} D. 24×10^{-44}
34	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
35	A rotating body tends to be slower, when its angular acceleration is:	A. Positive B. Negative C. Zero D. Infinity
36	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
37	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
38	In an A.C circuit with resistor only, the current and voltage have a phase angle of	A. 90° B. 0° C. 180° D. none of these
39	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
40	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
41	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
42	A device used to measure the speed of liquid flow is known as	A. barometer B. speedometer C. sphygmomanometer D. venture-meter

43	Area under the force displacement graph gives	A. Power B. Work C. Heat D. Energy
44	The open loop gain of OP-AMP is of the order of	A. 10^2 B. 10^3 C. 10^4 D. 10^5
45	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
46	A capacitor is charged with a battery and then it is disconnected. A slab of dielectric is now inserted between the plates, then	A. The charge in the plates reduces and potential difference increase B. Potential difference between the plates increase, stored energy decreases and charge remains the same C. Potential difference between the plates decreases and charge remains unchanged D. None of the above
47	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^{-16}N B. 10^{-14}N C. 10^{-12}N D. 10^{-10}N
48	A traveling wave has a shape of:	A. Square wave B. Sine wave C. Parabola D. hyperbola
49	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
50	Root out the conventional source of energy:	A. Energy from biomass B. hydroelectric energy C. Geothermal energy D. None of these
51	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
52	Which of the following has a great concentration of impurity	A. base B. emitter C. collector D. none of these
53	The chemical properties of all the isotopes of an elements are	A. same B. different C. slightly different D. none of these
54	An ideal voltmeter has:	A. Zero resistance B. Small resistance C. Large resistance D. Infinite resistance E. Both A and B
55	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
56	The idea of quantization of energy was proposed by:	A. Einstein B. Max.Planck C. Maxwell D. Bohr E. Rutherford
57	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
58	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

59	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
60	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
61	When charged particle is projected perpendicular to a uniform magnetic field its trajectory is	A. circular B. elliptical C. cycloid D. straight line
62	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
63	Hotness and coldness of an object is represented in terms:	A. Heat B. Temperature C. Chemical energy D. None of these
64	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
65	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. 4×10^{-3} J D. 2×10^{-3} J
66	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
67	One KWh is equal to:	A. 3.6×10^{2} J B. 3.6 KJ C. $3,6 \times 10^{1}$ KJ D. 3,6 MJ
68	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
69	Escape velocity from surface of Moon as compared to that from Earth surface is:	A. Greater B. Smaller C. Equal D. None of thes
70	A circuit has a resistance of 11Ω an inductive reactance of 25Ω and a capacitance reactance of 18Ω. It is connected to an a.c. source of 200 V and 50 Hz. The current through the circuit (in amperes) is	A. 11 B. 15 C. 18 D. 20
71	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
72	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
73	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
74	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
75	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
		A. 1 cm

#	Question	Options
76	If a mass of 10 gm is suspended from a spring of $k = 9.8$ Nm^{-1}, then the extension will be:	B. 1 m C. 10 mm D. None of these
77	0.1 kg mass will be equivalent to the energy	A. 9×10^{15} J B. 5×10^{8} J C. 6×10^{16} J D. 9×10^{-16} J
78	In a normal healthy person the value of systolic pressure is	A. 75 torr B. 80 torr C. 120 torr D. all of them
79	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
80	A curie represents a very strong source of	A. α-particle B. β-particle C. γ-particle D. none of these
81	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
82	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
83	A dimension stands for the _____ nature of certain physical quantity.	A. super B. Quantitative C. Qualitative D. Both B and C
84	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
85	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
86	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
87	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
88	With the increase of temperature viscosity	A. Increase B. Decrease C. Remains same D. Doubles
89	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
90	The process of formation of spectrum is called:	A. Interference B. Spectroscopy C. Dispersion D. Reflection E. Botha (A) and (D)
		A. Positrons B. Positive charges C. ...

#	Question	Options
91	The conventional current is the name given to current due to flow of:	...Negative charges D. Both (A) and (C) E. None of these
92	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
93	Energy is stored in the choke coil in the form of	A. Heat B. Magnetic energy C. Electric energy D. Electro-magnetic energy
94	The resistance of 20 cm long wire is $10\,\Omega$. When the length is changed to 40 cm. The new resistance is	A. $10\,\Omega$ B. $20\,\Omega$ C. $30\,\Omega$ D. $40\,\Omega$
95	The un-steady streamline flow is called	A. laminar flow B. turbulent flow C. both of them D. none of them
96	According to Stoke's law, drag force depends on	A. Initial velocity B. Final velocity C. Terminal velocity D. Instantaneous velocity
97	The fractional change in resistance per kelvin is known as	A. temperature coefficient B. resistance coefficient C. super temperature D. critical temperature
98	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
99	The photocopying process is called:	A. Geography B. Sonography C. Xerography D. Zerography E. None of these
100	Swimming becomes possible because of _____ law of motion:	A. First B. Second C. Third D. None of these
101	An example of photoconductor is:	A. Boron B. Carbon C. Iron D. ...

		size:12.0pt;line-height:107%;font-family: "Times New Roman","serif"">Aluminum<o:p></o:p></p> E. <p class="MsoNormal">Selenium<o:p></o:p></p>
102	The inkjet printer ejects a thin stream of:	A. <p class="MsoNormal">Water<o:p></o:p></p> B. <p class="MsoNormal">Oil<o:p></o:p></p> C. <p class="MsoNormal">Ink<o:p></o:p></p> D. <p class="MsoNormal">Any of above<o:p></o:p></p> E. <p class="MsoNormal">None of these<o:p></o:p></p>
103	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
104	A typical four stroke petrol engine undergoes how many successive processes in each cycle	A. one B. two C. three D. four
105	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
106	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
107	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
108	The shell closer to the nucleus is called:	A. N shell B. L shell C. K shell D. M shell E. O shell
109	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
110	Flurescent screen is a screen where visible spot	A. vanishes B. is made C. becomes small and large D. none of these
111	The SI unit of magnetic induction is	A. Gauses B. Tesla C. Weber D. Weber²
112	The SI unit of magnetic induction is	A. Weber B. Weber/meter C. Henry D. Tesla
113	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
114	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
115	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
116	A uniform bar AE of weight 9 N is held horizontal by vertical forces. Two additional force act A and D as shown in figure. The points A,B,C,D and E are at equal intervals along the bar. At which point must vertical force of 6 N act to keep bar in equilibrium.	A. Point D B. Point E C. Point C D. Point B
117	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
118	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
119	A body moving with uniform velocity has	A. positive acceleration B. negative acceleration C. infinite acceleration D. zero acceleration
120	The pattern of crystalline solid is:	A. One dimesional B. Two dimensional C. Three dimensional D. None of these E. Either (A) or (B)
121	The restoring force is always directed towards:	A. Rest position B. Equilibrium position C. Mean position D. All of them
122	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
123	Satellites are held in orbits around Earth by its:	A. Gravitational field B. Magnetic field C. Own orbital motion D. Own spin motion
124	The appearance of the colour in the soap (oil) film results from:	A. Dispersion B. Interference C. Reflection D. Refraction
125	An object undergoes SHM. Its maximum equilibrium positions:	A. Maximum B. Half of its maximum value C. Zero D. None
126	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. 0.15×10^{-3} Ns B. 0.98×10^{-3} Ns C. 1.5×10^{-3} Ns D. 2.5×10^{-3} Ns
127	Force is a:	A. Scalar quantity B. Base quantity C. Derived quantity D. None of these
128	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
129	Scalar product is also called:	A. Cross product B. Dot product C. Product scalar D. Product vector
130	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
131	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

132	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
133	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
134	As the light shines on the metal surface, the electrons are ejected	A. slowly B. instantaneously C. either of these D. none of these
135	Magnetic flux passing through a element whose vector area makes an angle0º with lines of magnetic force is:	A. BACosΘ<p class="MsoNormal" style="text-align:justify"><o:p></o:p></p> B. Zero C. BA D. BA sinΘ E. None of these
136	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
137	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
138	Centripetal force for electron is given by	A. mv^2/r B. mv/r^2 C. mv^2/r D. mr^2/v
139	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
140	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
141	Which one of the following is dimensionless:	A. Acceleration B. Velocity C. Density D. Angle
142	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
143	The equation of continuity is	A. $A_1A_2 = V_1V_2$ B. $A_1/V_1 = A_2/V_2$ C. $V_1/A_1= V_2/A_2$ D. $A_1V_1 = A_2V_2$
144	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)
145	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
146	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

147	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
148	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
149	Which one of the following could be the frequency of ultraviolet radiation?	A. 1.0×10^{6} Hz B. 1.0×10^{9} Hz C. 1.0×10^{12} Hz D. 1.0×10^{15} Hz
150	The surface destiny of charge is defined is:	A. Charge per volume B. Mass per volume C. Charge per area D. Mass per area E. Both (B) and (C)
151	The acceleration of body executing SHM is directly proportional to	A. Applied force B. Amplitude C. Displacement D. Frictional force
152	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
153	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
154	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
155	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
156	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
157	Blood vessels can be stretch like rubber, therefore they are	A. rigid B. hard C. very thick D. not rigid
158	Where the streamlines are very close to each other, the pressure will be	A. low B. zero C. high D. all of them

159	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
160	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
161	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}
162	The solids are classified as:	A. Metals B. Crystalline C. Amorphous D. Polymeric E. All except (A)
163	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
164	Which one is related to angular motion:	A. Moment of a force B. Moment of inertia C. Moment of momentum D. None of these
165	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
166	A device which converts Electrical energy into mechanical energy is called as	A. Transformer B. Generator C. Motor D. All of these
167	Laplace formula is derived from	A. Isothermal change B. Adiabatic change C. Isobaric change D. None of these
168	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. Circle B. Rectangle C. Sphere D. Box E. Cylinder
169	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
170	Liquids and gasses have	A. zero viscosity B. non-zero viscosity C. very large viscosity D. very small viscosity

171	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
172	Aluminum is a:	A. Good insulator B. Bad conductor C. Both (A) and (B) D. Excellent conductor E. Semiconductor
173	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
174	The potential difference across each resistance in series combination is	A. same B. different C. zero D. none of these
175	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
176	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
177	The crystalline structure of NaCl is	A. rectangular B. hexagonal C. tetrahedral D. cubical
178	When a mass 'm' is pulled slowly through a distance 'x_o' , the elastic potential energy of the spring would be	A. $P.E = Kx^2{}_o$ B. $P.E = 1/2kx{}_o$ C. $P.E = 1/2Kx^2{}_o$ D. $P.E = Kx^2{}_o$
179	The law of conservation of energy gives us	A. equation of continuity B. Bernoulli's theorem C. both of them D. none of them
180	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
181	The SI unit of flux density is.	A. Tesla B. Weber C. Gaun D. Weber/meter
182	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
183	When force and displacement are perpendicular to each other than work is equal to	A. Unity B. Infinity C. Zero D. -Fd
184	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

#	Question	Options
185	The use of chips in electrons is described in the form of:	A. Yellow boxes B. Black boxes C. Red boxes D. White boxes E. Orange boxes
186	Melting point of ice	A. Increases with increasing pressure B. Decreases with increasing pressure C. Is independent of pressure D. Is proportional to pressure
187	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. $60°$ B. $90°$ C. $30°$ D. $0°$
188	A real gas can be approximated to an ideal gas at	A. Low density B. High pressure C. High density D. Low temperature
189	An alpha particle has a charge of	A. $+2e$ B. $-2e$ C. $-e$ D. $+3e$
190	Split rings act as	A. Vibrator B. Resistor C. Motor D. Commulator
191	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
192	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
193	The unit of magnetic flux is	A. Weber-m^2 B. Weber-m^3 C. Henry D. Weber
194	Acceleration of body executing SHM is always directed towards	A. Extreme position B. Mean position C. Along the direction of motion D. None
195	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
196	A magnifier gives an image which is:	A. Virtual, inverted B. Real, erect C. Virtual, erect D. Real, inverted
197	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
198	Conventionally, all the distance p, q, f are measured from _____ of the lens:	A. Focus B. Optical center

198	Conventionally, all the distance p, q, r are measured from _____ of the lens:	C. Edges D. None of these
199	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
200	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.
201	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
202	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
203	Electric potential of earth is taken to be zero because the earth is good	A. Semiconductor B. Conductor C. Insulator D. Dielectric
204	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
205	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
206	A meter wire carraying a current of 2A is at right angle to the uniform magnetic field of 0.5 Weber/m^{2}The force on the wire is	A. 5N B. 4N C. 1.5N D. 6N
207	When angular acceleration is positive, the body rotates:	A. Slower B. Slowest C. Faster D. None of these
208	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
209	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
210	Ammeter is used to measure	A. voltage B. resistance C. voltage and current D. current
211	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
212	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
213	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
214	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

215	Capacitance of two or more capacitors	A. Increases in series combination B. Increases in parallel combination C. Remains unchanged D. None of the above
216	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
217	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
218	With age, least distance of distinct vision:	A. Increases B. Decreases C. Is not affected D. None is correct
219	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
220	Zirconia is classified as:	A. Ceramic solid B. Ionic compound C. Metal D. Either (A) or (B) E. Either (B) or (C)
221	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
222	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
223	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
224	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
225	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
226	Calculate the amount of charge flowing in 2 minutes in a wire of resistance 10Ω when a potential difference of 20 V is applied between its ends	A. 120 C B. 240 C C. 20 C D. 4 C
227	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
228	For maximum linear distance of travel, a projectile must be fired at an angle of	A. 0° B. 45° C. 90° D. 60°
229	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
230	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
		A. In the forward direction on both the wheels B. In the backward direction on both the wheels

231	When a bicycle is in motion, the frictional forces exerted by the ground are	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
232	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
233	Op-amp has been discussed as comparator of:	A. Distances B. Voltages C. Velocities D. Magnetic fields E. Both (A) and (C)
234	Fraction of the decaying atoms per unit time is called	A. decay atom B. decay element C. decay constant D. decay
235	First law of thermodynamics is consequence of conservation of	A. Work B. Energy C. Heat D. All of these
236	The value of LDR depends upon intensity of:	A. Sound falling on it B. Current passing through it C. Magnetic field surrounding it D. Light falling on it E. Non of these
237	The electrons occupying the conduction band are known as	A. conduction electrons B. free electrons C. both of them D. none of them
238	The current sensitivity of the galvanometer is	A. C/BAN B. BAN/C C. CAN/B D. CBN/A
239	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
240	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
241	Marie curie and Pierre curie discovered:	A. Uranium B. Polonium C. Radium D. Both (A) and (C) E. Plutonium
242	Above the curie temperature, iron becomes	A. ferromagnetic B. paramagnetic C. diamagnetic D. any one of them
243	The law of electromagnetic induction is related to:	A. Coulomb B. Ampere C. Faraday D. Lenz E. None of these
244	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
245	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
246	Computer chips are made from:	A. Iron B. Silicon C. Helium D. Stontium E. Aluminium
247	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

#	Question	Options
248	At resonance frequency the impedance of parallel resonance circuit is	A. Maximum B. Minimum C. Zero D. None of the above
249	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
250	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
251	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
252	The waves produced in a microwave oven have wavelength.	A. 12 mm B. 12 cm C. 12 m D. 12 mm
253	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
254	The path followed by the projectile is known as:	A. Cycle B. Hyperbola C. Trajectory D. Route
255	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
256	Work done along a closed path in a gravitational field is:	A. Maximum B. Minimum C. Zero D. Unity
257	Frequency of red colour as compared to that of violet colour is	A. Equal B. Smaller C. Greater D. None of these
258	Graph of Black body radiation is example of	A. Band spectra B. Continuo's spectra C. Line spectra D. All
259	Light year is a unit of:	A. Time B. Distance C. Velocity D. Intensity of light
260	The volume of given mass of a gas will be doubled at atmosphere pressure if the temperature of the gas is changed from 150℃ to	A. 300°C B. 573°C C. 600°C D. 743°C
261	The passage of current is accompanied by a magnetic field in the surrounding space:	A. Always accompanied B. Sometimes accompanied C. Never accompanied D. Any of above

262	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
263	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
264	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. $F = B^2$ B. $F = 0$ C. $F = B$ D. $F = B/2$
265	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
266	CT scanning is the abbreviated name of	A. Computed Technology B. Computed Technique C. Computed Technology D. Computerized Technique
267	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
268	The term drift velocity is used when the ends of a wire are:	A. <p class="MsoNormal" style="text-align:justify">Connected to a laser source<o:p></o:p></p> B. <p class="MsoNormal" style="text-align:justify">Connected to a voltage source<o:p></o:p></p> C. <p class="MsoNormal" style="text-align:justify">Not connected to a voltage source<o:p></o:p></p> D. <p class="MsoNormal" style="text-align:justify">At different values of potential<o:p></o:p></p> E. <p class="MsoNormal" style="text-align:justify">Both (B) and (D)<o:p></o:p></p>
269	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
270	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
271	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
272	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

273	The distance travelled byα-particle in a medium before coming to rest, is called	A. range of γ-particle B. range of neutrons C. range of particle D. none of these
274	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
275	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
276	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^{-8} second E. Both (A) and (C)
277	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
278	A solenoid is a coil of wire which is:	A. Short, loosely wound, cylindrical B. Long, tightly wound, spherical C. Long, loosely wound, cylindrical D. Long, tightly wound, cylindrical E. None of these
279	Beta particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons
280	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
281	An alpha particle is accelerated through a potential difference of 10^6 volt. Its kinetic energy will be	A. 1 MeV B. 2 MeV C. 4 MeV D. 8 MeV
282	According to the special theory of relativity, time is	A. absolute quantity B. not absolute quantity C. constant quantity D. none of these
283	When the velocity of a liquid flowing steadily in a tube increases, its pressure?	A. Decreases B. Increases C. Remains same D. Zero
284	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 reliured 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
285	The SI unit of charge is	A. Ampere B. Watt C. Coulomb

D. Volt
E. Joule

286	Internal energy is the sum of all the forms of	A. K.E B. P.E C. both of them D. none of them
287	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
288	When two spherical conducting balls at different potentials are joined by metallic wire, the current starts:	A. Decreasing from zero to maximum B. Increasing from zero to maximum C. Decreasing from maximum to zero D. Increasing from maximum to zero E. Both (A) and (D)
289	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
290	The total reactance of a series RLC circuit at resonance is	A. zero B. Equal to the resistance C. Infinity D. Capacitive
291	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
292	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.
293	Dimension of mass is written as:	A. M B. [M] C. (M) D. [m]
294	1 gm-cm^{-3} is equal to:	A. 10^3 kg-m^{-3} B. 10^{-3} kg-m^{-3} C. 1 kg-m^{-3} D. 10^6 kg-m^{-1}
295	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
296	Root out of the conventional source of energy:	A. Energy from biomass B. Hydroelectric energy C. Geothermal energy D. None of these
297	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

A. Positive maximum value + V$_o$ and

298	The entire wave form of sinusoidal voltage is actually a set of all the:	negative maximum value $-V_o$ B. Posiotive maximum value $+V_o$ and zero C. Zero and negative maximum value $-V_o$ D. Any of these E. None of these
299	Which of these is not a radiation detector	A. Wilson cloud chamber B. cyclotron acceleration C. Geiger Miller counter D. solid state detector
300	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
301	The value of resistivity is the least for:	A. Copper B. Aluminimum C. Silver D. Tungsten E. Iron
302	An inkjet printer uses in its operation:	A. Neutrons only B. Mesons only C. Positrons and photons D. An electric charge E. None of these
303	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)
304	In case of planets, the necessary acceleration is provided by:	A. Gravitational force B. Coulomb force C. Frictional force D. None of these
305	We can excite an atom by	A. Bombardment of particles B. Radiating photons C. Providing potential difference D. All answer are true
306	In thermodynamics, internal energy is the function of	A. temperature B. pressure C. state D. none of them
307	The wave form of SHM is	A. Pulsed wave B. Square wave C. Triangular waved D. Sine wave
308	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
309	X-rays produced in a tube operating at 10^5V. The speed of X-rays produced is	A. 3×10^8 m/s B. 3.1×10^8 m/s C. 2.8×10^8 m/s D. 1.88×10^8 m/s
310	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
311	At any point on the right bisector of the line joining two equal and opposite	A. At electric field is zero B. The electric potential is zero C. The electric potential decreases with increasing

311	At any point on the right bisector of the line joining the equal and opposite charges	C. The electric potential decreases with increasing distance from the centre D. The electric field is perpendicular to the line joining the charges
312	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
313	Computer chips are made from	A. Conductors B. Semiconductors C. Insulators D. Both A and B
314	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
315	Radioactivity was discovered by	A. Rutherford B. Henri Becqureal C. Maxwell D. James Chadwick
316	Examples of polymeric substances are:	A. Plastic B. Synthetic rubbers C. Zirconia D. All of these E. Both (A) and (B)
317	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
318	Aerodynamics is a branch of:	A. Hydrodynamics B. Thermodynamics C. Both of them D. Statics
319	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
320	Most ideal gas at room temperature is.	A. CO2 B. SO2 C. NH3 D. H2
321	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
322	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
323	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
324	What is another name for laminar flow?	A. streamline B. unsteady flow C. turbulent flow D. both (a) and (b)
325	The rectangular components of a vector are equal in magnitude when the vector makes and angle _____with their x-component:	A. 0° B. 30° C. 45°

326	The most abundant isotope of neon is	A. neon-20 B. neon-21 C. neon-22 D. neon-23
327	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
328	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
329	Glass is an example of	A. crystalline solid B. amorphous solid C. polymeric solid D. none of them
330	You have 20 inductors available each of 15H. You need an inductor of 1H in a circuit. You achieve it by combination.	A. 15 inductor in parallel B. 20 inductor in series C. 20 inductor in parallel D. 15 inductor in series
331	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
332	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. $P=P/V<1/2mv^2>$ B. $P=2N/V<1/2mv^2>$ C. $P=2/3N/V<1/2mv^2>$ D. $P=2/3N/V<mv^2>$
333	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
334	The value for systolic blood pressure for a normal healthy person is	A. 140 torr B. 80 torr C. 90 torr D. 120 torr
335	The angle of deflection of coil can be measured by the	A. one method B. three method C. two method D. none of these
336	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
337	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
338	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
339	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
340	Photons must have energy equal to	A. ev B. En C. hf D. None of these
341	The unit of viscosity is SI system is:	A. $Kg^{-1}m\,sec^{-1}$ B. $Kgm^{-1}\,sec^{-1}$ C. $Kg^{-1}m^{-1}\,sec$ D. None of these

342	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
343	Centripetal acceleration is also called _____ acceleration	A. Tangential B. Radial C. Angular D. None of them
344	Speed of light in vacuum depends upon:	A. Frequency B. Wavelength C. Amplitude D. None of these
345	Compton shift refers to:	A. Photon B. Meson C. Proton D. Positron E. Both (B) and (D)
346	The nature of radiations emitted by a hot body depends upon its:	A. Metarial B. Temperature C. colour D. Volume E. Length
347	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
348	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
349	Velocity of particle executing SHM will be maximum at	A. Extreme position B. Mean position C. b/w mean and extreme D. None
350	The phase angle of a series RLC circuit at resonance is	A. $180°$ B. $90°$ C. $0°$ D. None of the these
351	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
352	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
353	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
354	The terminal velocity of a small size spherical body of radius R moving in a fluid varies as	A. R B. R^2 C. $1/R$ D. $(1/R)^2$
355	Matter is made up of very tiny particles called	A. Atoms B. Molecules C. Ions D. None of these
356	A pair of quark and antiquark makes a:	A. Meson B. Baryon C. Proton D. Neutron E. None of these
357	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

358	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
359	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
360	At the top of the trajectory of a projectile the acceleration is	A. The maximum B. The minimum C. Zero D. g
361	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
362	A water hose with an internal diameter of 20 mm at the outlet discharges 30 kg of water in 60 s. What is water speed at the outlet if density of water is 1000 kg/m^3 during its steady flow	A. 1.3 m/s B. 1.6 m/s C. 1.9 m/s D. 2.2 m/s
363	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
364	Question Image	A. 5 μF B. 10 μF C. 3 μF D. 6 μF
365	The restoring force always directed towards the	A. extreme position B. mean position C. both of them D. none of them
366	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
367	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
368	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
369	Newton's first law is also called:	A. Law of torque B. Law of force C. Law of inertia D. None of these
370	Physicist George Simon ohm was a	A. German physical B. French physicist C. Chinese physicist D. Russian physicist
371	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
372	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. Instantaneous value

373	If we connected the ordinary DC ammeter to measure alternating current, it would measure its:	B. RMS value C. Value averaged over a cycle D. Either (B) or (C) E. Either (A) or (C)
374	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
375	The ratio of linear stress/linear strain is called as	A. Yong's modulus B. Bulk modulus C. Shear modulus D. Modulus
376	Pressure exerted by a gas on the walls of its container in due to	A. adhesion between the gas molecules and the container B. cohesion between the gas molecules and the container C. collision between the gas molecules and the container D. surface tension of the gas
377	Pair production take place when energy of γ-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
378	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
379	The unit of intensity of electric field is	A. newton/coluomb B. jule/coluomb C. volt x metre D. newton/metre
380	Neutron was discovered in	A. 1915 B. 1920 C. 1925 D. 1932
381	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
382	Work is a Quantity	A. Vector B. Scalar C. Non-physical D. None of these
383	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
384	The body will move with terminal velocity when it acquires	A. minimum speed B. zero speed C. maximum speed D. none of them
385	The basic circuit elements of A.C circuit are	A. Resistor B. Inductor C. Capacitor D. All the three
386	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. $C_p - C_v > R$
387	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
388	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
	In a building, there are 15 bulbs of 40 watts, 5 bulbs of 100 watts, 5 fans of	A. 0.4 A B. 11.4 A

389	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	B. 11.4 A C. 9.8 A D. 10.6 A
390	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
391	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
392	The energy of a photon in a beam of infrared radiation of wavelength 1240 nm is	A. 100 ev B. 10^6 e v C. 10^3 e v D. 1.0 e v
393	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
394	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
395	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
396	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
397	The inside cavity of the black body is	A. painted white B. painted silver C. blackened with soot D. painted red
398	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
399	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
400	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
401	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
402	Particles have the mass smallest of following is:	A. Electron B. Proton C. Neutron D. Quark
403	When a source of light isat very large distance,the shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
404	0.10 cm can be written as:	A. 1.0×10^{-2} m B. 1.0×10^{-3} cm C. 1.0×10^{-4} cm D. $1. \times 10^{-4}$ m
405	Which are not the elementary particles?	A. Photons B. Leptons C. Hadrons D. Quarks E. None of these

406	The torque per unit twist of coil is called	A. proportionality constant B. gravitational constant C. boltzman constant D. coupling constant
407	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
408	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
409	The dimensions of work	A. $[MLT^{-1}]$ B. $[MLT^{-2}]$ C. $[ML^2T^{-2}]$ D. $[MLT]$
410	Fluids resist force, This property is called	A. Stiffness B. Strength C. Ductility D. Elasticity
411	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)
412	The process in which energy is dissipated from the oscillating system is known as	A. resonance B. interference C. diffraction D. damping
413	The electric potential at the surface of an atomic nucleus (Z = 50) of radius 9.0×10^{-15} is	A. 9×10^5V B. 9 V C. 8×10^6V D. 80 V
414	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
415	In compressional wave,the layer of medium having reduced pressure is called:	A. Compression B. Elasticity C. Node D. Rarefaction
416	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
417	The unit of decay constant is:	A. Second B. Metre C. Hour D. Year E. Second^{-1}
418	The flow of an ideal fluid is	A. streamline flow B. incompressible flow C. non-viscous D. all of the above
419	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
420	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
421	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
	The mechanics, which deals with the objects moving with velocities	A. Relativistic mechanics B. Wave mechanics

#	Question	Options
422	The mechanics, which deals with the objects moving with velocities approaching that of light is called:	B. Wave mechanic C. Quantum mechanics D. Statics
423	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
424	A body moves a distance of 10 m among a straight line under the action of a force of 5 N. If the work done is 25 J, the angle which the force makes with the direction of motion of a body is:	A. $0°$ B. $30°$ C. $60°$ D. $90°$
425	The direction of a vector in space requires:	A. X-axis B. X and Y-axes C. XYZ axes D. Y and Z-axes
426	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
427	Which one of the following is the unit of electric field intensity	A. JC^{-1} B. Vm^{-1} C. Cm^{-1} D. CJ^{-1}
428	Viscosity of water is _____ that of air but ___ that of plasma.	A. More, more B. Less, more C. Less, less D. More, less
429	SHM is type of _____ motion	A. Vibratory B. Linear C. Circular D. None
430	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
431	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
432	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
433	Field lines are closer to each other in the region where the field is:	A. Stronger B. Weaker C. Much weaker D.

434	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 balloon
435	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
436	The absolute temperature of the tripple point of water is	A. $100°C$ B. $4°C$ C. 373 K D. 273.16 K
437	Photoelectrons are emitted when ultraviolet light falls on:	A. Casium B. Silver C. Potassium D. Any of these E. None of these
438	Acceleration in a body is always produced in the direction of :	A. Velocity B. Weight C. Force D. Both B and C
439	Self inducede e.m.f. is also called	A. Motional e.m.f. B. Thermistor C. Electrostatic induction D. Back e.m.f
440	In RLC series circuit, resonance occurs when	A. $X_L > X_c$ B. $X_L < X_c$ C. $X_L = X_c$ D. None of these
441	A simple pendulum consists of a	A. small light bob B. small heavy bob C. big light bob D. big heavy bob
442	Work done is maximum when angle between force and displacement is:	A. $0°$ B. $90°$ C. $180°$ D. None of these
443	Crystalline solids are in the form of:	A. Metals B. Ionic Compounds C. Ceramics D. Both (A) and (B) E. All of these
444	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
445	The electric intensity outside the two oppositely charged parallel metal plates is	A. Maximum B. Minimum C. Zero D. Infinite
446	Wave length of light, on the average, is given by:	A. $10^{-14} m$ B. $10^{-10} m$

446	Wave length of light, on the average, is given by:	C. 10^{-6} m D. 10^{-4} m
447	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)
448	Free electrons are	A. tightly bound B. fixed C. loosely bound D. tightly fixed
449	The phase at the positive peak is	A. $\Pi/2$ B. Π C. $3\Pi/2$ D. 2Π
450	In case of two identical charges placed certain distance apart, the electric field lines are:	A. Straight lines B. Sine curves C. Curved D. Both (A) and (B) E. None of these
451	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
452	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
453	Particles have the mass smallest of following is:	A. Electron B. Proton C. Neutron D. Quark
454	A hollow insulated conduction sphere is given a positive charge of 10 μC. What will be the electric field at the centre of the sphere if its radius is 2 meters?	A. Zero B. 5 μC m^{-2} C. 20 μC m^{-2} D. 8 μC m^{-2}
455	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
456	Resistance is measured in	A. volts B. ampere C. ohm

C. ohm
D. watt

457	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
458	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
459	In process of annihilation of matter, the two photons produced move in opposite direction to converse	A. momentum B. charge C. energy D. mass
460	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)
461	The velocity of light in vacuum can be changed by changing	A. Frequency B. Amplitude C. Wavelength D. None of these
462	Data transmitted along glass-fiber cables is in the form of pulses of monochromatic red light each of duration 2.5 ns. Which of the following is the best estimate of the number of wavelength in each pulse?	A. 10^3 B. 10^6 C. 10^9 D. 10^{12}
463	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
464	Significant figures in 0.0010 are:	A. Four B. Three C. Two D. One
465	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
466	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
467	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
468	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
469	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
470	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
471	The electrode connected with the positive terminal of the current source is called	A. cathode B. anode C. electrolyte D. position
472	When the total displacement is divided by total time taken, we get:	A. Velocity B. Average speed C. Average velocity D. None of these
473	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)

474	The system international (SI) is built from _____ kind of unites	A. Two B. Three C. Four D. Five
475	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
476	How many number of anodes used in electron gun	A. one B. two C. three D. six
477	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
478	The graph showing the variation of displacement with time is a	A. Sine curve B. Straight line C. Parabola D. None of these
479	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/sec^2 B. 5 m/sec^2 C. 1.5 m/sec^2 D. 9.8 m/sec^2
480	The passage of current is accompanied by a magnetic field in the surrounding space:	A. Always accompanied B. Sometimes accompanied C. Never accompanied D. Any of above E. None of these
481	Velocity of sound in vacuum (in m/s) is	A. 330 B. 1000 C. 156 D. 0
482	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
483	The chemical properties of an element depends upon the number of	A. electron B. position C. photons D. neutrons
484	Selenium is:	A. An insulator B. A conductor C. Insulator in the dark and becomes conductor when exposed to light D. Conductor in

485	Mechanical waves on the surface of a liquid are	A. Transverse B. Longitudinal C. Torsional D. both transverse and longitudinal
486	In a heat engine, heat is supplied by the	A. cold reservoir B. sink C. hot reservoir D. none of them
487	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
488	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
489	A particle having the mass of electron and charge of a proton is called a	A. photon B. position C. antiproton D. antineutrino
490	For a parallel resonant circuit at resonance, current from supply is	A. minimum B. maximum C. zero D. none of these
491	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
492	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
493	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}
494	During the projectile motion, the horizontal component of velocity	A. changes with time B. remains constant C. becomes zero D. decreases with time
495	'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
496	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
497	The number of "Earth stations" which transmit signals to satellites and receive signals from them are:	A. 3 B. 24 C. 126 D. 200
498	Galvanometer is a device used for the detection of	A. voltage B. current C. temperature D. pressure
499	The portion of the water above its mean level forms a:	A. Crest B. Trough C. Both A and B D. None of these
500	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
	Two vectors to be combined have magnitudes of 60 N and 35 N. Pick the	A. 100 N B. 70 N

501	Two vectors to be combined have magnitudes of 80 N and 35 N. Pick the possible answer:	B. 70 N C. 20 N D. Zero
502	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
503	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
504	the current is pass through the straight wire. The magnetic field established around it has its lines of force:	A. `<p class="MsoNormal" style="text-align:justify"><span style="font-size: 12pt; line-height: 107%; font-family: "Times New Roman", serif;">Circular and endless<b><o:p></o:p></b></span></p>` B. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Oval in shape and endless<o:p></o:p></span></p>` C. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt;line-height:107%;font-family:"Times New Roman","serif"">Straight<o:p></o:p></span></p>` D. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt;line-height:107%;font-family:"Times New Roman","serif"">Parabolic<o:p></o:p></span></p>` E. All are true
505	The lasing or active medium in He-Ne laser discharge tube is:	A. Nitrogen B. Helium C. Hydrogen D. Neon E. None of these
506	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
507	If d is the displacement of the body in time t, then its average velocity will be	A. $\mathbf{V}_{av} = \mathbf{d} \times t$ B. $\mathbf{V}_{av} = t/\mathbf{d}$ C. $\mathbf{V}_{av} = d/t$ D. $\mathbf{V}_{av} = \mathbf{d}/t$
508	A capacitor of capacity $1\,\mu$F is charged to 1 KV. The energy stored in J	A. 5 B. 0.5 C. 0.005 D. 50
509	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
510	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
511	1 gm-cm^{-3} is equal to:	A. 10^3 kg-m^{-3} B. 10^{-3} kg-m^{-3} C. 1 kg-m^{-3} D. 10^6 kg-m^{-1}
512	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
513	The SI units of momentum is	A. kg m s^{-2} B. kg ms C. kg m s^2 D. N-s
514	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}

515	The product of force and time is called	A. acceleration B. linear momentum C. angular momentum D. impulse
516	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
517	The electric field, magnetic field and the direction of their propagation are mutually	A. perpendicular B. parallel C. none of these
518	A grating with high resolving power can distinguish _____ difference in wavelengths :	A. Smaller B. Larger C. Zero D. None of these
519	The appearance of colours in the soap (or oil) film results from	A. Dispersion B. Interference C. Reflection D. Refraction
520	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
521	The temperature scale approved in SI units is:	A. Celsius scale B. Kelvin scale C. Fehrenheit scale D. None of these
522	The distance covered by the wave in one second is:	A. Wave number B. Wave length C. Frequency D. Wave speed
523	In a transistor, collector current is controlled by	A. Collector voltage B. Base current C. Collector resistance D. All of the above
524	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
525	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
526	The artillery shells travel along parabolic paths under the influence of	A. magnetic field B. electric field C. electromagnetic field D. gravitational field
527	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
528	The bridge circuit of full wave rectification uses	A. one diode B. two diode C. three diode D. four diode
529	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
530	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
531	Inverter is the name given to:	A. NOT gate B. OR gate C. NOR gate D. AND gate E. XOR gate
532	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

533	Majority charge carriers in the p-region of p-n junction are:	A. electrons B. positrons C. Holes D. Neutrons E. None of these
534	Work is a	A. Scalar quantity B. Vector quantity C. Base quantity D. None of these
535	Work is a scalar product of	A. Force, Velocity B. Velocity, Displacement C. Force, Displacement D. Force, Momentum
536	If the mass of the simple pendulum becomes double, its time period	A. increase B. decreases C. remains constant D. none of them
537	Tick the conservative force	A. Tension in a string B. Air resistance C. Elastic spring D. Frictional force
538	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
539	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
540	Ohm established a relation between	A. voltage and resistance B. voltage and charge C. voltage and current D. voltage resistance and charge
541	Three quarks make:	A. An electron B. A meson C. A baryon D. A photon E. None of these
542	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
543	The best conductor is:	A. Silver B. Copper C. Aluminium D. Both B and C E. None of them
544	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
545	Crests and troughs are formed in:	A. Longitudinal waves B. Transverse waves C. Both of these D. None of these
546	Two dissimilar metals joined at their ends kept at constant temperature constitute:	A. <p class="MsoNormal" style="text-align:justify">Cell<o:p></o:p></p> B. <p class="MsoNormal" style="text-align:justify">Voltmeter<o:p></o:p></p> C. <p class="MsoNormal" style="text-align:justify">Thermocouple<o:p></o:p></p> D. <p class="MsoNormal" style="text-align:justify">Potentiometer<o:p></o:p></p> E. None of these

547	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
548	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
549	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to degree D. none of these
550	Change in momentum is one second is called:	A. Impulse B. Force C. Energy D. Work
551	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
552	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
553	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
554	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
555	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
556	A carnot cycle consists of	A. One step B. two step C. three steps D. four steps
557	Surface tension of water is due to	A. Inter molecular attractions B. Inter molecular spaces C. Inter molecular repulsion D. None of above
558	The combined effect of resistance and reactance in a.c. circuit is called	A. conductance B. resistance C. impedance D. choke
559	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
560	By CAT scans, we can detect the density difference of the order of:	A. 1% B. 20% C. 30% D. 50% E. 70%
561	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°
562	Which of the following medium/media can transmit both transverse and longitudinal waves:	A. Solids B. Liquids C. Gases D. All of them

563	Huygen's theory cannot explain	A. Diffraction B. Interference C. Polarization D. Photoelectric effect
564	An A.C varies as a function of	A. Current B. Voltage C. Time D. Charge
565	For multiplication and division purposes, percentage uncertainties are:	A. Add B. subtracted C. Multiplied D. Divided
566	Circular motion is an example of motion in:	A. One dimension B. Two dimensions C. Three dimensions D. None of these
567	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
568	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
569	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
570	From sand, we get a material used for construction of computer chips. That material is called:	A. Germanium B. Silicon C. Copper D. Lead
571	In describing functions of digital systems, a closed switch will be shown as	A. 0 B. 1 C. low D. any one of these
572	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
573	The velocity of sound in air depends upon	A. Density and elasticity of gas B. Pressure C. Wavelength D. Amplitude and frequency of sound
574	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)
575	U-238 present in the natural uranium is about:	A. 59% B. 0.007% C. 99% D. 39% E. 19%
576	The electric intensity at infinite distance from the point charge will be	A. Infinite B. Positive C. Zero D. Negative
577	The SI unit of current is	A. watt B. coulomb C. volt D. ampere
578	Wave length of that color as compared to that of violet color is:	A. Smaller B. Longer C. Equal D. None of these
579	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
		A. A circular path

580	A body can have constant velocity when it follows:	B. A rectilinear path C. Trajectory of a projectile D. None of these
581	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
582	The vector representation of force experience give the direction of	A. magnetic field B. current C. length of conductor D. force
583	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
584	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
585	Which one of the following is not a vector quantity?	A. Kinetic energy B. Acceleration C. Momentum D. Force
586	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
587	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
588	From sand, we get a material used for construction of computer chips. That material is called:	A. Copper B. Lead C. Silicon D. Germanium
589	Monochromatic light means waves of:	A. Same frequency B. Same colour C. Same wavelength D. All of them
590	The concept of field theory was put forward by	A. Franklin B. Kepler C. Oersted D. Michael Faraday
591	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
592	β-particles are easily deflected by collisions than heavy	A. α-particles B. β-particles C. γ-particles D. none of these
593	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
594	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
595	The motion of a projectile is	A. one dimension B. two dimension C. three dimension D. all of them
596	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
		A. <font face="arial, sans, sans-serif"><span

597	Conventional 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 above
598	The electrical forces between the molecules of a liquid are	A. Repulsive B. Attractive C. Both A and B D. None
599	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
600	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
601	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
602	Torque is also called:	A. Momentum B. Linear inertia C. Moment of a force D. Mass
603	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
604	What are the SI base units of the coefficient of viscosity	A. $Kg\ m\ s^{-2}$ B. $kgm^{2}\ s^{-2}$ C. $Kg\ m\ s^{-1}$ D. $kg\ m^{-1}s^{-1}$
605	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. $5\ rad/sec^{2}$ B. $-10\ rev/sec^{2}$ C. $-10\ rad/sec^{2}$ D. $-5\ rev/sec^{2}$
606	The velocity of sound at same temperature is maximum in	A. H_2 B. N_2 C. O_2 D. NH_3
607	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
608	The vector is space has:	A. One Component B. Two Compnents C. Three Components D. Non of these
609	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
610	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
		A. Nuclear field

611	The space around the earth within which it expects a force of attraction on other bodies is known as:	B. Conservative field C. Electric field D. Gravitational field
612	Light waves are:	A. Transverse wave B. Longitudinal wave C. Compressional wave D. None of them
613	In the theory of dimensional analysis, heat may be properly represented by:	A. ML^2T^{-2} B. MT^{-2} C. $ML^{-1}T^{-1}$ D. None of these
614	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
615	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
616	Which of the following waves are more energetic	A. radio waves B. infrared waves C. ultraviolet D. γ-rays
617	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
618	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
619	Compton was awarded Nobel prize in physics in	A. 1921 B. 1923 C. 1925 D. 1927
620	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
621	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
622	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
623	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
624	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
625	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
626	When the object lies between F and 2F, the image formed by is formed at:	A. Virtual B. Diminished C. Erect D. Real
627	When platinum wire is heated, then at the temperature of 500 °C, it becomes:	A. Yellow B. Orange red C. Dull red D. White E. Cherry red

628	Which quantity has the same dimension as that of impulse?	A. KE B. Power C. Momentum D. Work
629	The body passing a viscous medium affected by:	A. One force only B. Two forces only C. Four forces D. None of these
630	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
631	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
632	Two point charge +3μC 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
633	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
634	The unit of spring constant is:	A. J-sec B. Metre C. Nm^{-1} D. None of these
635	1 amu is equal to	A. 1.66×10^{-24}kg B. 1.66×10^{-19}kg C. 1.66×10^{-34}kg D. 1.66×10^{-27}kg
636	The expression for restoring force is	A. F=ma B. F=kx C. F= -kx D. Kx=ma
637	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
638	Max plank received the Nobel Prize in physics for his discovery of energy quanta in	A. 1900 B. 1906 C. 1912 D. 1918
639	The nucleus/nuclei of hydrogen is/are:	A. Proton B. Deuteron C. Triton D. All of these E. None of these
640	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
641	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
642	A potential barrier of 0.7V exists across p-n junction made from:	A. Germanium B. Silicon C. Arsenic D. Gallium E. Indium
	In a resonance situation the amplitude of the motion may become extra	A. the driving force is large B. the driving force is zero

643	In a resonance situation the amplitude of the motion may become extra ordinarily large, if	B. the driving force is zero C. the driving force may be feeble D. all of them
644	Coulomb multiplied by volt by volt gives the unit called:	A. farad B. Ohm C. Second D. joule E. Watt
645	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
646	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
647	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
648	The path (or trajectory) described by a projectile is	A. a parabola B. a hyperbola C. a circle D. a straight line
649	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
650	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
651	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
652	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
653	The bob of a simple pendulum is suspended by	A. string B. heavy inextensible string C. light extensible string D. light inextensible string
654	The current of 1 ampere is passing through a conductor. The charge passing through it in half a minute is:	A. One coulomb B. 0.5 coulomb C. 30 coulomb D. 2 coulombs E. None of these
655	Aerodynamics is a branch of	A. Hydrodynamics B. Thermodynamics C. Both of them D. Statics

656	The time taken by light to travel from moon to earth is:	A. 80 sec B. 500 sec C. 1.802×10^4 sec D. Aerophysics
657	Radium was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. Rutherford E. Both (B) and (C)
658	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
659	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
660	Light year is a unit of:	A. Time B. Distance C. Velocity D. Intensity of light
661	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
662	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
663	One torr is equal to	A. 13.33 N/m^2 B. 760 N/m^2 C. 760 mm Hg D. 133.3 N/m^2
664	The nature of thermal radiation is similar to:	A. Ultraviolet rays B. Light rays C. Both of them D. None of these
665	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
666	In the formula B= $\mu_0 nl$, the symbol n denotes:	A. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Total number of turns of solenoid<o:p></o:p></span></p>` B. `<p class="MsoNormal" style="text-align:justify"><span style="font-size: 12pt; line-height: 107%; font-family: "Times New Roman", serif;">Number of turns per unit length<b><o:p></o:p></b></span></p>` C. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Number of turns per unit volume<o:p></o:p></span></p>` D. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Numbers of turns per unit area<o:p></o:p></span></p>` E. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Number of moles<o:p></o:p></span></p>`
667	Sound waves in air always	A. Longitudinal B. Transverse C. Stationary D. Electromagnetic
668	Substances that flow easily have	A. large coefficient of viscosity B. small coefficient of viscosity C. either of them D. none of them

#	Question	Options
669	Direction of motion _____ in circular motion	A. Changes off and on B. Changes continuously C. Does not change D. None of them
670	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
671	The work done by the system on its environment is considered as	A. positive B. negative C. zero D. any one of them
672	A vector which has magnitude 'one' is called:	A. Resultant vector B. A unit vector C. Position vector D. None of these
673	Longitudinal waves are also called:	A. Congressional waves B. Transverse waves C. Radio waves D. None of them
674	Which is modified form of galvanometer	A. potentiometer B. battery C. voltmeter D. slide wire bridge
675	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
676	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
677	The special theory of relativity is based on the	A. one postulate B. two postulates C. three postulates D. four postulates
678	The positron was discovered by:	A. In cosmic radiation B. In 1932 C. By Carl Anderson D. All above E. By direc
679	The figure 1.007276µ shows the mass of an:	A. Atom B. Positron C. Electron D. Neutron E. Proton
680	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
681	A field free region is found:	A. Near the outer surface of a hollow charged metal sphere B. In the interior of solid metal uncharged sphere C. In the interior of solid metal charged sphere D. Both (A) and (B) E.

		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>
682	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
683	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
684	γ-rays behave like a particle because they explain the	A. Compton effect B. Photoelectric effect C. Pair-production D. all the above
685	Unit of impulse in	A. Newton B. Kg m C. Kg m/s D. Joule
686	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
687	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
688	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
689	A body moves a distance of 10 m along a straight line under the action of a force of 5 N and work done is 25J. the angle which the force makes with the direction of motion will be:	A. 60° B. 90° C. 30° D. 0°
690	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
691	Laws of motion are not valid in a system which is	A. inertial B. non-interial C. at rest D. moving with uniform velocity
692	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
693	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
		A. <p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New

694	In order to have a constant current through wire, the potential difference across its end should:	A. Be zero B. **Be maintained constant** C. Goes on increasing D. Go on decreasing E. Both (A) and (B)
695	A dirty carpet is to be cleaned by heating. This is an accordance with_____ law of motion:	**A. First** B. Second C. Third D. None of these
696	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
697	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
698	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
699	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
700	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
701	Nuclei that have the same charge number but different mass number are called	A. isotones B. isomers **C. isotopes** D. isobars
702	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
703	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
704	Electron volt is the unit of	A. Potential difference **B. Energy** C. Resistance D. Capacitance
705	If a 40 watt light bulb burns for 2 hours. how much heat is generated	**A. 288 x 10^3 J** B. 288 x 10^8 J C. 288 x 10^5 J D. 288 x 10^6 J
706	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
707	The number of protons inside a nucleus is called	A. mass number B. atomic weight **C. atomic number** D. none of these
	The body oscillates due to _____ accelerates and overshoots the rest	A. Applied force, Inertia B. Restoring force, Friction

708	The body oscillates due to _____ accelerates and overshoots the rest position due to _____	B. Restoring force, Friction C. Frictional force, Inertia D. Restoring force, Inertia
709	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
710	Electric flux is defined by the relation	A. E.A. B. E x A C. E/A D. none of these
711	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
712	The weight 'mg' of the bob is resolved into	A. one component B. two components C. three components D. four components
713	When a suitable small resistance is put in parallel with the galvanometer coil, it is converted into	A. Voltmeter B. Avometer C. Ammeter D. None of these
714	The SI unit of strain is	A. N B. Dynes C. Pascal D. Dimensionless
715	Arsenic, antimony and phosphorus are the elements from	A. third group B. fourth group C. fifth group D. none of them
716	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
717	Charge on proton is	A. 1.59×10^{-9}C B. 1.59×10^{-7}C C. -1.59×10^{-19}C D. 1.59×10^{-19}C
718	The chemical behaviour of an atom is determined by	A. binding energy B. atomic number C. mass number D. number of isotopes
719	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
720	Direction of motion _____ in circular motion:	A. Changes off and on B. Changes continuously C. Does not change D. None of them
721	Which of the following can become a good permanent magnet	A. iron B. steel C. both of them D. none of them
722	What is the coefficient of mutual inductance, when the magnetic flux changes by 2×10^{-2}Wb, and change in current is 0.01 A?	A. 2 H B. 3 H C. 1/2 H D. Zero
723	Boyle's law is applicable in	A. Isochoric process B. Isothermal process C. Isobaric process D. Isotonic process
724	Momentum is a parameter associated with	A. wave motion B. particle motion C. neither wave nor particle motion D. none of these
725	Light waves are	A. Transverse waves B. Longitudinal waves C. Compressional D. None of them wave

726	The unit of thermodynamical scale is	A. centigrade B. fahrenheit C. kelvin D. none of them
727	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
728	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)
729	When the object lies between F and 2F, the image formed by is formed at:	A. Real B. Virtual C. Diminished D. Erect
730	Victor de-Brogile received the Nobel prize in physics in	A. 1925 B. 1929 C. 1932 D. 1935
731	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
732	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
733	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
734	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
735	The Stephen-Boltzmann law for the black body radiation is given by	A. $E = T^2$ B. $E = -T^2$ C. $E = T^4$ D. $E = -T^4$
736	Examples of moderators used in a fission reactor is/are:	A. Water B. Heavy water C. Carbon D. Hydrocarbon E. All of these
737	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
738	An eV is unit of:	A. `<p class="MsoNormal"><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></span></p>` B. `<p class="MsoNormal"><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></span></p>` C. `<p class="MsoNormal"><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">Work<o:p></o:p></span></p>` D. `<p class="MsoNormal"><span style="font-family: "Times New Roman", serif; font-size: 12pt;">Power</span></p>` E. `<p class="MsoNormal"><span style="font-size: 12pt; line-height: 107%; font-family: "Times New`

#	Question	Options
739	The SI unit of electric field intensity is	A. CN^{-1} B. NC^{-1} or Vm^{-1} C. JC^{-1} D. AV^{-1}
740	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
741	The smallest three dimensional basic structure is called as:	A. An atom B. Unit cell C. Crystal lattice D. Polymer E. None of these
742	The value of electrical constant of proportionality k is	A. $9 \times 10^{9} Nm^{2}C^{-2}$ B. $9 \times 10^{-9} Nm^{2}C^{-2}$ C. $9 \times 10^{10} Nm^{2}C^{2}$ D. $9.85 \times 10^{-12} N^{-1}C^{-2}$
743	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
744	When temperature increase, the frequency of a tuning fork	A. Increases B. Decreases C. Remains same D. Increase or decreases depending on the material
745	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
746	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
747	Conversion of chemical energy to electrical energy can be achieved by:	A. Primary cell B. Secondary cell C. Both (A) and (B) D. Photovoltaic cell E. Solar cell
748	Wavelength of red colour as compared to that of violet colour is	A. Smaller B. Longer C. Equal D. None of these
749	A body is moving with constant velocity of 10 m/sec in the north-east direction. Then its acceleration will be:	A. $10 \ m/sec^{2}$ B. $20 \ m/sec^{2}$ C. $30 \ m/sec^{2}$ D. Zero
750	The device in which induced emf is statically induced emf is:	A. Transformer B. AC generator C. Alternator

751	Blood pressure is measured in torr. Which of the following units could belong to torr?	A. N m^{-1} B. N m^{-2} C. N m D. N^{-1}m^{-2}
752	The results of spectra obtained by Balmer were expressed in 1896 by:	A. Bohr B. Rydberg C. Planck D. Rutherford E. Coulomb
753	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
754	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
755	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
756	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
757	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
758	Slope of velocity-time graph represents:	A. Acceleration B. Speed C. Torque D. Work
759	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%
760	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
761	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
762	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
763	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
764	The CRO is used for displaying the waveform of a given	A. current B. voltage C. both of them D. none of them
765	In case of point source of light, shape of wavefront is	A. Spherical B. Cylindrical C. Plane D. None of above
766	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
767	Hertz is unit of:	A. Time period B. Displacement

767	Hertz is unit of:	C. Amplitude D. Frequency
768	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
769	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)
770	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. $N = nN_A$, $M = mN_A$
771	The information from far side of the universe are gathered by	A. Radio telescope B. Microscope C. Telescope D. Spectro scpe
772	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
773	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
774	In SHM, there is always a constant ratio between displacement if body and its:	A. Velocity B. Period C. Mass D. Acceleration
775	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
776	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
777	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)
778	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
779	The rate of change of momentum of a molecule is equal to:	A. Pressure B. Work C. Density D. Force
780	In bringing an electron towards another electron, electrostatic potential energy of system	A. Decreases B. Increases C. Remains uncharged D. Becomes zero
781	Back emf is produced due to	A. Self induction B. Mutual induction C. A.C D. Lenz's law
782	Which one is the least multiple:	A. Pico B. Femto C. Nano D. Atto
783	Work has a dimension as that of:	A. Torque B. Angular momentum C. Linear momentum D. Power
784	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

	Cause of heat production in a current carrying conductor is	C. collisions of free electrons with atoms of ions of conductor D. High resistance value
785	Unit of viscosity is:	A. Kg m^{-1}sec^{-1} B. N s m^{-2} C. J s m^{-3} D. All of these
786	Method "lamp and scale arrangement" used to measure the	A. angle of deflection B. restoring torque C. magnetic field strength D. current
787	The distance covered by a body in unit time is called.	A. Displacement B. speed C. Velocity D. Both B and C
788	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
789	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
790	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
791	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
792	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
793	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
794	The driection of vector si space is specified by:	A. One angle B. Two angles C. Three angles D. None of above
795	The units of modulus of elasticity are	A. Nm^{-2} B. Nm C. ms^{-1} D. Pascal
796	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
797	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
798	The domains are of macroscopic size of the order of	A. centimeters B. meters C. millimeters D. nanomneters
799	The string of a simple pendulum should be:	A. Heavy B. Extensible C. In-extensible D. None of these
800	The photon of radio-waves has energy of about	A. 1 Me V B. 1 Ke v C. 10^{-10}e v D. 10^{10}e v
801	Lead, copper and wrought iron are examples of	A. brittle substances B. ductile substances C. plastic substances D. elastic substances

802	What is the current is a 2×10^6 ohm resistor having a potential difference of 2×10^3 volts?	A. 10^{-1}A B. 10^{-2}A C. 10^{-4}A D. 1 mA
803	Ethanol (alcohol) as a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
804	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
805	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
806	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
807	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
808	When sound waves travel from air to water which of these remains constant?	A. Velocity B. Frequency C. Wavelength D. All the above
809	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
810	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
811	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
812	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
813	The effects of bends in a wire on its electrical resistance are:	A. Zero B. Much larger C. Larger D. Smaller E. None of these
814	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
815	Smaller the damping, the resonance will be	A. more flat B. more sharp C. both of them

		D. none of them
816	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
817	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
818	Angular velocity is a:	A. Scalar quantity B. Vector quantity C. Complex quantity D. None of these
819	The r.m.s value of a.c. current is always	A. positive B. negative C. zero D. all of these
820	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
821	The motion in a plane is the motion in	A. one dimension B. two dimension C. three dimension D. four dimension
822	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
823	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
824	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
825	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
826	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
827	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
828	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
829	Physics details with the study of:	A. Matter B. Energy C. Both of them D. Human body
830	Most of the geysers occur in:	A. Volcanic regions B. Magnetic regions C. Northern region D. None of these
831	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
832	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

833	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}
834	Amplitude in SHM is equivalent to_____ in circular motion:	A. Diameter B. Radius C. Circumference D. None of these
835	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°
836	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
837	The direction of velocity is along the direction of	A. distance B. displacement C. acceleration D. all of them
838	When a constant potential difference is applied across the conductor, the drift velocity of electrons:	A. Increases B. Decreases C. Remains the constant D. Either of these E. None of these
839	The henry is the unit for	A. Resistance B. Magnetic flux C. Magnetic field D. Inductance
840	The ohm's is defined as	A. 1 ampere / 1 volts B. 1 coulomb / 1 volt C. 1 volt / 1 ampere D. 1 volt / 1 coulomb
841	The transition from solid state to liquid state is:	A. Abrupt B. Slow C. Continous D. Discontinous E. Both (A) and (D)
842	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
843	Maximum density of H_2O is at the temperature	A. 32°F B. 39.2°F C. 42°F D. 4°F
844	The graphical representation of ohm's law is	A. hyperbola B. straight line C. ellipse

C. ellipse
D. parabola

845	When certain nucleus emits an α particle, its mass number:	A. Increases by one B. Decreases by one C. Remain same D. Decreases by four E. None of these
846	Bernoulli's equation is based upon law of conversation of	A. mass B. momentum C. Energy D. None
847	The damping depends upon the	A. amplitude B. sharpness C. both of them D. none of them
848	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)
849	The length of a metallic rod is 5 meter at 100°C. The coefficient of cubical expansion of the metal will be	A. 2.0×10^{-5} °C B. 4.0×10^{-5} °C C. 6.0×10^{-5} °C D. 2.33×10^{-5} °C
850	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)
851	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
852	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
853	Kirchhoff's first rule is also called:	A. Loop rule B. Thumb rule C. Point rule D. Right hand rule E. None of these
854	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)
855	The ultimate source of money sources of energy is:	A. Sun B. Air C. Water D. Petroleum
856	The fluid is incompressible, if itsdensity is	A. zero B. constant C. very high D. very small
857	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
858	The wave nature of light was proposed by:	A. Newton B. Thomas Young C. Huygen D. None of these

859	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
860	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
861	The CRO deflects the beam of electrons, when they passes through uniform	A. electric field B. gravitational field C. magnetic flux D. magnetic field
862	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
863	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
864	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
865	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 h^2
866	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
867	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)
868	The value of the Stephen's constant for black body radiations is given by	A. 5.6 x 10^{8}Wm^{-2}K^{-4} B. 5.67 x 10^{-8}Wm^{-2}K^{-4} C. 2.9 x 10^{-3}mK D. 2.9 x 10^{3}mK
869	Gas constant per molecule is called:	A. Universal gas constant B. Stefen's constant C. Boltzmann constant D. Gravitation constant
870	if the field is directed along the normal to the area, then flux is:	A. Maximum B. Equal to zero C. Equal to BA D. Minimum E. Both (A) and (C)
871	The waves produced in a microwave oven have frequency	A. 2450 Hz B. 2450 K Hz C. 2450 M Hz D. 2450 G Hz

872	A capacitor acts as an infinite resistance for	A. AC B. DC C. Both AC and DC D. Neither AC nor DC
873	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
874	Chock consumes externally small	A. Charge B. Current C. Power D. Potential
875	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
876	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
877	A particle executes SHM with frequency. The frequency with which its K.E oscillates is	A. f/2 B. 2f C. f D. 4f
878	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
879	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
880	Which of the following can become a good temporarily magnet	A. iron B. steel C. both of them D. none of them
881	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
882	A second's pendulum is a pendulum whose time period is	A. 1 second B. 2 seconds C. 3 seconds D. 4 seconds
883	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
884	When a wave is travels from one place to another, it transfers:	A. Matter B. Energy C. Momentum D. Both B and C
885	Units of impedance are	A. Henry B. Ohms C. moh D. Watt
886	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
887	Inertia mass and gravitational mass are	A. opposite B. identical C. identical when there is no friction D. all of them
888	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

889	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
890	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
891	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
892	The phase determines the	A. displacement B. amplitude C. frequency D. state of motion of vibrating body
893	Diameter of the atom is of the order of	A. 10^{-10}m B. 10^{-12}m C. 10^{-15}m D. 10^{-9}m
894	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
895	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
896	Decibel is unit of	A. Intensity of light B. x-ray radiation capacity C. sound loudness D. Energy of radiation
897	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
898	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
899	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
900	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
901	When two objects are rubbed together, their internal energy	A. remains same B. decreases C. remains the same then decreases D. increases
902	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
		A. Both the potential and potential difference is scalars B. Potential is a scalar but

903	Tick the correct statement:	potential difference is a vector C. Both are vectors D. Potential is vector but potential difference is scalar E. None of these

904	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

905	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

906	The interior of a hollow charged metal sphere is a region which:	A. Contain some magnitude of electric field B. Is full of electric field lines C. Is field-free region D. Either (A) or (B) E. None of these

907	Work done along a closed path in a gravitational force is:	A. maximum B. Minimum C. Zero D. Unity

908	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

909	The commercial unit of electrical energy is :	A. K Watt B. KWH C. Horse power D. Joule

910	The minimum charge on any object can not be less than	A. 1.6×10^{-19} C B. 3.2×10^{-19} C C. 1.0 C D. 4.8×10^{-19} C

911	The magnitude of alternative voltage V:	A. Always increase B. Always decrease C. Remains constant D. Does not remain constant

912	The shortest distance between two points directed from its initial point to final point is called:	A. Velocity **B. Displacement** C. Speed D. Distance

913	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
914	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)**
915	When a constant potential difference is applied across the conductor, the drift velocity of electrons:	A. Increases B. Decreases **C. Remains the constant** D. Either of these E. None of these
916	The wavelength of wave is 5000 A^O. This wave will be in region	A. U.V B. Visible C. Radio **D. Infrared**
917	A body moves a distance of 10 m along a straight line under the action of a force of 5 N. If the work done is 25 J, the angle which force makes with the direction of motion of a body is:	A. 0° B. 30° **C. 60°** D. 90°
918	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
919	The fourth band is a:	A. Silver band B. Red band C. Gold band **D. Either A or C** E. Either A or B
920	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

A. Length

921	The time period of a simple pendulum is independent of its:	A. Length B. Mass C. Value of g D. Both A and B
922	It is customary represent a current flowing towards the reader by a symbol	A. (x) B. (+) C. (.) D. (-) E. (÷)
923	The natural frequency of a pendulum which is vibrating freely, depends upon its	A. mass B. length C. material D. all of them
924	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. $Q/4\pi r^2$ B. $2Q/4\pi r^2$ C. Q.d D. Zero
925	Nowadays, Most of the electric energy is produced by the A.C. generators using:	A. Hydal water B. Geothermal energy C. Solar energy D. Biomass E. Both (B) and (D)
926	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
927	In an ideal gas, the molecules have:	A. Kinetic energy only B. Potential energy only C. Both KE and PE D. None of these
928	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
929	The quantity having the same unit as that of emf is:	A. Force B. Energy C. Potential D. Current E. Charge
930	Nucleus consists of	A. proton and neutron B. protons and electron C. electron and neutron D. protons only
931	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
932	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
933	The frequency of free vibrations is known as	A. free frequency B. forced frequency C. natural frequency D. un-natural frequency
934	The wave form of S.H.M will be	A. square wave B. sine wave C. rectified wave D. saw-tooth wave

#	Question	Options
935	When low energy photon interact with a metal, which of the following effect is likely to be taken place	A. pair production B. photoelectric C. Compton effect D. None of these
936	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
937	The molecules or ions in a crystalline solids are	A. static B. not static C. randomly moving D. all of them
938	Gauss(G) is smaller unit of magnetic induction which is related to tesla(T) as	A. $1T = 10^{-4}G$ B. $1T = 10^{5}G$ C. $1T = 10^{3}G$ D. $1T = 10^{4}G$
939	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. $4.43\ m\ sec^{-1}$
940	Good absorbers of heat are	A. Poor emitters B. Non emitters C. Good emitters D. Highly polarized
941	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
942	The sources of magnetic field are	A. isolated magnetic poles B. charges at rest C. charges in motion D. none of these
943	The number of LED'S needed to display all the digits is:	A. Four B. Five C. Nine D. Six E. Seven
944	A photon is considered to have	A. Momentum B. Energy C. Wavelength D. All of the above
945	The band above the valence band is called	A. high energy band B. conduction band C. empty band D. none of them
946	The curie temperature of iron is about	A. $250\,°C$ B. $500\,°C$ C. $750\,°C$ D. $1000\,°C$
947	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
948	In gases, the charge carries are:	A. Electrons B. Positive ions C. Negative ions D. Both (A) and (C)

949	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
950	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
951	Direction of motion _____ in circular motion	A. Changes off and on B. Changes continously C. Does not change D. None of them
952	The curve representing an adiabatic process is called	A. isotherm B. adiabat C. adiable D. none of them
953	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
954	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
955	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
956	Phenomenon of radioactivity is due to disintegration of	A. nucleus B. neutron C. proton D. molecule
957	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
958	The basic circuit element in a d.c. circuit is a/an	A. Inductor B. Resistor C. Capacitor D. Battery
959	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.
960	Albert Einstein got the Nobel prize in physics for his explanation of photoelectric effect in	A. 1916 B. 1919 C. 1921 D. 1923
961	Which one is not produced by sound waves in air?	A. Polarization B. Diffraction C. Refraction D. Reflection
962	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
963	During the upward motion of the projectile, the vertical component of velocity:	A. Decreases B. Increases C. Remains constant D. None of these
		A. 30<span style="font-size: 10.5pt; line-height: 107%;

964	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° B. 45° C. 60° D. 90°
965	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
966	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
967	The tidal energy is produced due to rotation of Earth relative to:	A. Moon B. Sun C. Oceans D. Water
968	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
969	Which of the following is most suitable as the core of transformer	A. Soft iron B. Alinco C. Steel D. None of these
970	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. $p = cf/h$
971	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. $Q=CV$
972	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
973	The example/s of non-electrical energy to electrical is/are:	A. Chemical energy B. Mechanical energy C. Heat energy D. Both (A) and (B) E. All of these

974	The example of reversible process is	A. an explosion B. changes occur suddenly C. slow compression of a gas D. all of them
975	dimensions are the same for:	A. Work and energy B. Force and weight C. None of these D. Both a and b
976	The first shell near the neucles is	A. L-shell B. X-shell C. N-shell D. M-shell
977	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
978	The useful unit of the angular displacement in SI unit is:	A. Degree B. Revolution C. Radian D. Metre
979	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
980	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
981	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
982	Static electricity is produced by the transfer of:	A. <p class="MsoNormal">Electrons<o:p></o:p></p> B. <p class="MsoNormal">Protons<o:p></o:p></p> C. <p class="MsoNormal">One fluid<o:p></o:p></p> D. <p class="MsoNormal">Two fluids<o:p></o:p></p> E. <p class="MsoNormal">None of these<o:p></o:p></p>
983	The appearance of colours in the soap (or oil) film results from	A. Dispersion B. Interference C. Reflection D. Refraction
984	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
985	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
986	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
		A. heat can be converted into work

987	The second law of thermodynamics is concerned with the circumstances in which	B. direction of flow of heat C. none of them D. both of them
988	The earth's potential and potential at infinity are taken:	A. <p class="MsoNormal">Equal<o:p></o:p></p> B. <p class="MsoNormal">Zero<o:p></o:p></p> C. <p class="MsoNormal">First is greater than the second<o:p></o:p></p> D. <p class="MsoNormal">Second is greater than the first<o:p></o:p></p> E. <p class="MsoNormal">Both (A) and (B)<o:p></o:p></p>
989	The distance from eye to near point is taken as:	A. 10 cm B. 15 cm C. 20 cm D. 25 cm
990	The tidal energy is due to gravitational pull of :	A. sun B. moon C. Mars D. None of these
991	At the present time, the main frontiers of fundamental science are	A. 2 B. 3 C. 4 D. 5
992	Which of the following is scalar quantity?	A. Electric potential B. Velocity C. Momentum D. Force
993	Resolving power in mth order diffraction for grating is given by:	A. $R = N \times m$ B. None of these C. $R = m/N$ D. $R = N/m$
994	Where the streamlines are very far apart from each other, the pressure will be	A. low B. zero C. high D. all of them
995	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
996	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
997	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
998	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
999	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

1000	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
1001	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
1002	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
1003	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
1004	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
1005	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
1006	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
1007	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
1008	A particle moving uniformly along circle its projection along diameter performs	A. Linear motion B. Projectile motion C. SHM D. Rotatory motion
1009	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
1010	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
1011	Which force is not a conservative force:	A. Frictional force B. Gravitational force C. Electric force D. Elastic spring force
1012	Conversion of alternating current into direct current is called	A. amplification B. rectification C. conduction D. polarization
1013	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
1014	In full wave rectification, simultaneous action is that:	A. Two diodes conduct and two do not. B. One diode conduct and three do not. C. Three diodes conduct and one does not. D. All the four diodes conduct E. None of these
1015	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
1016	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

1017	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
1018	Transformer is used to	A. Increase alternating current B. Increase d.c voltage C. Increase & Decrease emf D. All answers are right
1019	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
1020	Work done is maximum when angle between force and displacement is	A. 0° B. 90° C. 180° D. None of these
1021	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
1022	The rate at which the free electrons pass through any section of a metallic wire from right to left is:	A. <p class="MsoNormal" style="text-align:justify">Greater than the speed at which they pass from left to right<o:p></o:p></p> B. <p class="MsoNormal" style="text-align:justify">Less than the speed at which they pass from left to right<o:p></o:p></p> C. <p class="MsoNormal" style="text-align:justify">The same speed at which they pass from left to right<o:p></o:p></p> D. <p class="MsoNormal" style="text-align:justify">Any of above<o:p></o:p></p> E. <p class="MsoNormal" style="text-align:justify">None of them<o:p></o:p></p>
1023	Curie is a unit of	A. reluctance B. resistivity C. binding energy D. radioactivity
1024	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
1025	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
1026	_____ 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
1027	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
1028	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
1029	Two sound waves of slightly different frequencies propagating in the same direction produce beats due to	A. Interference B. Diffraction C. Polarization D. Refraction

1030	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
1031	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
1032	The existence of position was predicted by Dirace in	A. 1920 B. 1925 C. 1930 D. 1928
1033	There is present in paraffin a large amount of:	A. Nitrogen B. Hydrogen C. Carbon D. Baryllium E. Lithium
1034	Static electricity is produced by the transfer of:	A. Electrons B. Protons C. One fluid D. Two fluid E. None of these
1035	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
1036	The inkjet printer eject a thin stream of:	A. Water B. Oil C. Ink D. Any above E. None of these
1037	The colour sequence in a carbon resistor in red, brown, orange and silver. The resistance of the resistor is	A. 21 x 10^3+ 10% B. 23 x 10^1+ 10% C. 21 x 10^3+ 5% D. 12 x 10^3+ 5%
1038	(CRO) Cathode ray oscilloscope is a device used for high speed	A. velocity B. graph plotting C. time-velocity D. none of these
1039	Second's pendulum is the pendulum whose time period is:	A. 1 second B. 2 second C. 3 second D. None of these
1040	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
1041	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 10^{20} B. 3 x 10^{10} C. 6 x 10^{20} D. 6 x 10^{10}
1042	The maximum displacement of a body on either side of its equilibrium position is called	A. frequency B. amplitude C. displacement D. time period
1043	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
1044	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
1045	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)
1046	All trigonometric functions (since, cosine tangent etc.) are positive in:	A. 1st Quadrant B. 2nd Quadrant

1046	All trigonometric functions (since, cosine tangent etc.) are positive in:	C. 3rd Quadrant D. 4th Quadrant
1047	Electron is a particle whose mass is:	A. Greater than that of a proton 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
1048	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
1049	Generally a temperature scale is established by	A. one fixed point B. two fixed point C. three fixed point D. four fixed point
1050	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
1051	Conversion of A.C. into D.C. is called:	A. Reftification B. Amplification C. Electric induction D. Magnetic induction E. None of these
1052	The electric field lines start from:	A. Positive charge B. Negative charge C. Either A and B D. Neutron E. An atom
1053	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
1054	Change in momentum is one second called.	A. Impulse B. Force C. Energy D. Work
1055	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
1056	Density is defined as:	A. Mass per volume B. Volume per mass C. Mass X volume D. Mass per length
1057	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
1058	Electric field lines emerge from the charge in:	A. One dimension B. Two dimensions C. Three dimensions D. Four dimensions E. None of them
1059	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}
		A. Sound waves B. Waves on plucked string

1060	Which of the following is the longitudinal waves?	B. Waves on plucked string C. Water waves D. Light waves
1061	Acceleration of a body is positive, if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
1062	Taking the earth to be a spherical conductor of diameter 12.8×10^3 km. Its capacity will be	A. $711\ \mu$F B. $611\ \mu$F C. $811\ \mu$F D. $511\ \mu$F
1063	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
1064	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
1065	In his experiment on nuclear reactions, Rutherford bombarded α particles on:	A. Nitrogen B. Hydrogen C. Lead D. Oxygen E. Krypton
1066	Swimming is based on the principle of	A. Newton's 1st law B. Newton's 2nd law C. Newton's 3rd law D. All
1067	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
1068	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
1069	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
1070	The e/m of an electron moving in a circular path in a magnetic field is equal to	A. V/Br B. V/B^2r^2 C. V^2/Br^2 D. V^2/Br
1071	One radian is equal to:	A. 30.3° B. 45.3° C. 50.3° D. 57.3°
1072	Balmer series was identified in:	A. 1685 B. 1785 C. 1885 D. 1985 E. 1585
1073	When the emitter-base junction of a transistor is reverse biased, collector current	A. Reverses B. Increases C. Decreases D. Stops
1074	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)

1075	Selenium is:	A. An insulator B. A conductor C. Both A and B D. Excellent conductor E. None of these
1076	Amplitude in SHM is equivalent to _____ in circular motion	A. Diameter B. Radius C. Circumference D. None of these
1077	In frequency modulation (FM), the carrier waves amplitude	A. Remains constant B. Increase C. Decreases D. None of these
1078	When quarter of a cycle is completed, the phase of vibration is:	A. $90°$ B. $180°$ C. $45°$ D. $360°$
1079	A relationship between Gauses of magnetic induction and Tesla(T) is given by	A. $G = 10^{-3}T$ B. $G = 10^{-2}T$ C. $G = 10^{-4}T$ D. $G = 10^{-1}T$
1080	The results of mechanical tests are usually expressed in terms of	A. stress B. strain C. stress and strain D. neither strees nor strain
1081	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
1082	Wavelength of light, on the average, is given by	A. $10^{-14}m$ B. $10^{-10}m$ C. $10^{-6}m$ D. $10^{-4}m$
1083	The doped semi-conductor materials are known as	A. intrinsic semi-conductor B. extrinsic semi-conductor C. either of them D. none of them
1084	Which instrument is expensive and difficult to use?	A. Voltmeter B. Potentiometer C. CRO D. Both A and C E. Both A and B
1085	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. Constant magnetic field B. Changing magnetic field

1086	An induced current can be produced by:	C. Varying magnetic field D. Constant electric field E. None of these
1087	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
1088	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
1089	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
1090	Those quantities which can be measured accurately are known as	A. Physical Quantities B. Scalar Quantities C. Vector Quantities D. Non Physical Quantities
1091	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
1092	Most OP-AMP operates with	A. +6 V supply B. +10 V supply C. +12 V supply D. +24 V supply
1093	For addition and subtraction purposes, absolute uncertainties are:	A. Added B. Subtracted C. Multipiled D. Divided
1094	The graph showing the variation of displacement with time is a:	A. Sine curve B. Straight line C. Parabola D. None of these
1095	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
1096	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
1097	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
1098	The unit of work in CGS system is	A. Joule B. Erg C. Dyne D. Watt
1099	Surface tension of water is reduced by adding	A. Detergents B. Camphor C. Plastic D. Both A and B
1100	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

1101	The charge carriers in gases are	A. electrons B. ions C. protons D. ions and electrons
1102	Magnetic induction is also called as:	A. `<p class="MsoNormal" style="text-align:justify"> <span style="font-size: 12pt; line-height: 107%; font-family: "Times New Roman", serif;">`Ampere's law`<b><o:p></o:p></b></span></p>` B. `<p class="MsoNormal" style="text-align:justify"> <span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">`Faraday's law`<o:p> </o:p></span></p>` C. `<p class="MsoNormal" style="text-align:justify"> <span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">`Lenz's law`<o:p> </o:p></span></p>` D. `<p class="MsoNormal" style="text-align:justify"> <span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">`Newton's law`<o:p> </o:p></span></p>` E. `<p class="MsoNormal" style="text-align:justify"> <span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">`Coulomb's law`<o:p> </o:p></span></p>`
1103	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
1104	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
1105	Force is a:	A. Scalar quantity B. Base quantity C. Derived quantity D. None of these
1106	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
1107	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)
1108	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
1109	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
1110	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
1111	At 'resonance' the transfer of energy from deriving source to the oscillator is	A. maximum B. minimum C. zero D. none of them
1112	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
		A. `<p class="MsoNormal" style="text-align:justify"> <span style="font-size:12.0pt; line-height:107%;font-family:"Times New`

1113	An electric field is generated along the wire when:	Roman","serif"">Its resistance is very high<o:p></o:p></p> B. <p class="MsoNormal" style="text-align:justify"> A constant potential is maintained across the wire<o:p></o:p></p> C. <p class="MsoNormal" style="text-align:justify"> Net current through the wire is zero<o:p></o:p></p> D. <p class="MsoNormal" style="text-align:justify"> A constant potential difference is maintained across the wire<o:p></o:p></p> E. <p class="MsoNormal" style="text-align:justify"> Either (A) or (D) <o:p></o:p></p>
1114	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
1115	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
1116	Energy is not carried by	A. Transverse progressive waves B. Longitudinal vibration C. Stationary waves D. Electromagnetic
1117	In L.C.R series A.C. circuit, the phase angle between current and voltage is	A. Any angle between 0 and <u>+</u><i style="box-sizing: border-box; color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 19.8px;">π</i>/2 B. <i style="box-sizing: border-box; color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 19.8px;">π</i>/2 C. <i style="box-sizing: border-box; color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 19.8px;">π</i> D. Any angle between 0 and<i style="font-family: "Times New Roman"; font-size: 19.8px; color: rgb(34, 34, 34); box-sizing: border-box;">π</i>/2
1118	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
1119	Physics is one of the branches of:	A. Social sciences B. Physical sciences C. Biological sciences D. Abstract art
1120	The smooth or steady streamline flow is known as	A. laminar flow B. turbulent flow C. both of them D. none of them
1121	Work has the dimension as that of:	A. Torque B. Angular momentum C. Linear momentum D. Power
1122	A body with frequency would complete one vibration in:	A. f seconds B. 1/f seconds C. 1 second D. f²second
1123	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

1124	Through which character we can distinguish the light waves from sound waves	A. Interference B. Refraction C. Polarization D. Reflection
1125	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
1126	The useful unit of angular replacement in SI unit is:	A. Degree B. Revolution C. Radian D. Metre
1127	The critical temperature of aluminium is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
1128	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
1129	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
1130	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
1131	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
1132	A body moving along the circumference of a circle of radius R completes one revolution. The radius of a covered path to the angle subtended at the centre is:	A. Radius of the circle B. Twice the radius C. Thrice the radius D. None of these
1133	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
1134	Angular velocity is a:	A. Scalar quantity B. Vector quantity C. Complex quantity D. None of these
1135	The quantity have dimension of ML^2T^{02} will have SI unit of:	A. Watt B. Newton C. Joule D. Metre
1136	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
1137	For Protium, the mass defect is:	A. Infinite B. Zero C. Very large D. A few grams E. None of these
1138	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
1139	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
1140	If electric and gravitational force on an electron in a uniform electric field will	A. E=mg/q B. E=q/mg

	be	C. E=,g/q D. E=qg/m
1141	Of the following, the option _____ reminds of longitudinal waves.	A. Sound waves B. Heat waves C. Electromagnetic waves D. Light waves
1142	Electromagnetic waves transmit energy equal to	A. $1/2\ mv^2$ B. $m_o c^2$ C. hf/c D. hf
1143	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
1144	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
1145	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
1146	At resonance, the impedance of RLC series circuit is	A. Maximum B. Zero C. Minimum D. Determinate
1147	At ordinary temperature, an increase in temperature increases the conductivity of	A. Conductor B. Semiconductor C. Insulator D. Alloy
1148	The linear momentum of the body is defined as	A. p=ma B. p=1/2ma C. p=mv D. p=1/2mv
1149	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
1150	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
1151	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
1152	Light has	A. Wave nature B. Dual nature C. Particle nature D. None of them
1153	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
1154	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°
1155	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
1156	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

1157	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
1158	The unit of flux density is also given by	A. Weber/m^2 or Wb . m^{-2} B. Weber/mor Wb . m C. Weber/mor Wb . m^{-1} D. Weber or Wb
1159	A P-N juction or semiconductor diode cannot be used as	A. A rectifier B. Detector C. Oscillator D. An amplifier
1160	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
1161	Stock's law holds for:	A. Motion through free space B. Motion through viscous medium C. Bodies of all shapes D. None of these
1162	Tesla is the unit of	A. Magnetic induction or flux density B. Magnetic flux C. Self inductance D. None of these
1163	The direction of the linear momentum is the direction of	A. speed B. velocity C. weight D. none of them
1164	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
1165	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
1166	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
1167	Blood pressure is measured by the instrument	A. stethoscope B. sphygmomanometer C. barometer D. none of them
1168	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
1169	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
1170	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
1171	When thorium nucleus emits aβ-particle, the daughter nucleus is called:	A. Protactinium B. Actinium C. Uranium D. Radium E. Redon
1172	F = I(L x B) is a	A. vector B. scalar C. unit vector D. none of these
		A. Weber B. Apmere

1173	NmA^{-1} is commonly called:	C. Guass D. Coulomb E. None of these
1174	Frequency of red color as compared to that of violet color is:	A. Equal B. Smaller C. Greater D. None of these
1175	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
1176	Huygen principle is used to determine	A. Speed of light B. Location of wavefront C. About polarized and unpolarized light D. None of them
1177	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
1178	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
1179	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
1180	The SI unit of electric flux is	A. Weber B. Nm^{2}C^{-1} C. NmC^{-1} D. Nm^{-2}C
1181	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)
1182	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
1183	Electric flux is:	A. Cross product of two vector B. Dot product of two vectors C. A vector quantity D. A scalar quantity E. Both (B) and (D)
1184	An ordinary glass gradually softens into a 'paste -like' state before it becomes a very viscous liquid. It happens almost at:	A. 800°C B. 500°C C. 300°C D. 100°C E. None of these
1185	The displacement of body executing SHM is	A. x$_o$coswt B. x$_o$sinwt C. x$_o$sin^{2}wt D. Both A, B
1186	The speed of randomly moving electrons depends upon	A. pressure B. volume C. temperature D. mass

1187	The closed loop gain of the inverting amplifier is written as	A. $G = R_2/R_1$ B. $G = 1 + R_2/R_1$ C. $G = -R_2/R_1$ D. $G = 1 - R_2/R_1$
1188	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
1189	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 B. Set themselves tangential to the circle C. Point in the direction of E-W D. None of these E. Point in direction of S-E
1190	The direction of lines of force depends upon the direction of	A. voltage B. current C. charges D. none of these
1191	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
1192	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
1193	A full-scale deflection is obtained in a galvanometer with a current of few	A. ampere B. volts C. milliampere D. ohm
1194	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
1195	Electromagnetic -radiation means:	A. Photons B. protons C. Electrons D. Mesons E. None of these
1196	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
1197	One coulomb of charge is created by	A. 10 electrons B. 1.6×10^{-19} electrons C. 6.25×10^{18} electrons D. 6.25×10^{21} electrons
1198	Electron volt is the unit of.	A. Potential difference B. Energy C. Resistance D. Capacitance
1199	Every crystalline solid has	A. definite melting point B. different melting points C. may or may not be definite D. none of them
1200	The information from far side of the universe are gathered by:	A. Radio telescope B. Microscope C. Telescope D. Spectro scope

#	Question	Options
1201	Ohm is the unit of	A. current B. capacitance C. energy D. resistance
1202	The waves moving from a sitar to a listener in air are	A. Longitudinal progressive B. Longitudinal stationary C. Transverse progressive D. Transverse stationary
1203	Which of the following should remain constant if no torque acts upon a body.	A. Linear constant B. Momentum C. Angular momentum D. Charge
1204	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
1205	The SI unit of magnetic flux is	A. NmA^{-2} B. NmA^{-1} C. NAm^{-1} D. $Nm^{2}A^{-1}$
1206	Different radioactive material have	A. same half lives B. different half lives C. same mean lives D. same total lives
1207	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
1208	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
1209	Bernoulli's equation is important in the field of	A. Electrical circuit B. Magnetism C. Photoelectric effect D. Flow of fluids
1210	Angle between the ray of light and the corresponding wavefront is:	A. 0° B. 60° C. 90° D. 120°
1211	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
1212	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
1213	In case of metallic conductors, the charge carriers are	A. Protons B. Electrons C. Antiprotons D. Positrons E. Both A and B
1214	At high speed, fluid friction _____ and fuel consumption ___,:	A. Increases, decreases B. Increases, increases C. Decreases, increases

		D. None of these
1215	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
1216	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
1217	There is no way to detect:	A. Absolute uniform motion B. Accelerated motion C. State rest D. State of motion E. None of these
1218	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
1219	Ultraviolet region lies in _____ series	A. Layman B. Balmer C. P fund D. B racket
1220	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
1221	The maximum stress that a material can withstand, is known as	A. plastic point B. elastic limit C. yield point D. ultimate tensile strength
1222	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
1223	The waveform of alternating voltage is a:	A. Square B. Rectangular C. Saw-tooth D. Sinusoidal E. None of these
1224	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
1225	Which of the following does not obey ohm's law?	A. Copper B. Al C. Diode D. None
1226	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
1227	CRO deflects the beam of	A. proton B. a-particle C. electron D. neutron
1228	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)
1229	A heavily damped system has a fairly	A. sharp resonance curve B. flat resonance curve C. both of them D. none of them
1230	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
1231	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

#	Question	Options
1232	The current in LCR circuit will be maximum when ω is	A. As large as possible B. Equal to natural frequency of LCR system
1233	Which one is conservative force	A. Electric force B. Frictional force C. Normal force D. Air resistance
1234	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
1235	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
1236	The SI unit of magnetic induction is tesla which is equal to	A. Newton/ampere-meter or N/A-m B. Newton/ampere^2-meter or N/A^2-m C. Newton/ampere^2-meter^2 or N/A^2-m^2 D. Newton/ampere^2-meter^2 or N/A^2-m^2
1237	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
1238	Distance to nearest galaxy from earth is	A. 10^{10}m B. 10^{15}m C. 10^{40}m D. 10^{30}m
1239	SI unit of frequency is	A. second B. hertz C. revolution D. vibrations/sec
1240	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
1241	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
1242	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
1243	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
1244	SI Unit of work is	A. Nm^{-1} B. Joule C. Nms D. Both a and b
1245	The dimension of linear inertia is:	A. MLT^2 B. $ML°T^{-2}$ C. $ML°T°$

1246	The penetration power of β-particle is	A. zero B. less than α-particle C. equal to α-particle D. greater than α-particle
1247	The ability of the body to return to its original shape is called	A. deformation B. stretching C. compressing D. elasticity
1248	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
1249	The peak value of alternating voltage is given by	
1250	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
1251	The SI unit of flux density is	A. Newton/Amp-meter B. Newton-m/Ampere C. Newton-m/Amp^2 D. Newton-Amp/meter
1252	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
1253	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
1254	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
1255	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
1256	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
1257	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
1258	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
1259	Blood is an	A. Compressible fluid B. incompressible fluid C. hard D. none of them
1260	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
1261	A condenser of capacity 50 μF is charged to 10 V.The energy stored is	A. 1.25×10^{-3} J B. 3.75×10^{-3} J

	A conductor of capacity 50pF is charged to 10 V. The energy stored is	C. 2.5×10^{-3} J D. 5×10^{-3} J
1262	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
1263	A flywheel accelerates from rest to an angular velocity of 7 rad/sec in 7 seconds. Its average acceleration will be:	A. 49 rad/sec^2 B. 1 rad/sec^2 C. 0.16 rev/sec^2 D. Both A and C E. Both B and C
1264	The A.M. transmission frequency range from	A. 500-1000 KHz B. 540-1600 KHz C. 300-490 KHz D. 900-2040 KHz
1265	A solar cell is made from:	A. Iron B. Silicon C. Germanium D. Copper
1266	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
1267	The motion of molecules in gases is:	A. Orderly B. Random C. Circular D. All of these
1268	Work is a:	A. Scalar quantity B. Vector quantity C. Base quantity D. None of these
1269	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
1270	Work has the dimensions as that of	A. Torque B. Angular momentum C. Linear momentum D. Power
1271	The value of current gain of n-p-n transistor is of the order of	A. tens B. hundreds C. thousands D. ten thousands
1272	Three resistors of resistance R each are combined in various ways. Which of the following cannot be obtained?	A. $3R\ \Omega$ B. $2R/4\ \Omega$ C. $R/3\ \Omega$ D. $2R/3\ \Omega$
1273	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
1274	The range of projectile is 50 m when θ is inclined with horizontal at 15°. What is the range when θ becomes 45°?	A. 400 m B. 300 m C. 200 m D. 100 m
1275	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
1276	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

1277	The path described by a projectile is called its	A. orbit B. trajectory C. range D. distance
1278	Rate of change of momentum is called	A. Impulse B. Force C. Torque D. Momentum
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	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. 0.5 Ω C. 1.1 Ω D. 5.0 Ω
1281	The number of "Earth Stations" which transmit signals to satellites and receive signals fro them are	A. 3 B. 24 C. 126 D. 200
1282	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
1283	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
1284	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
1285	When a nucleus emits an alpha particles, its charge number decreases by	A. 3 B. 2 C. 6 D. 5
1286	Which quantity has different dimension:	A. Work B. Pressure C. Energy D. Torque
1287	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
1288	Light year is a unit of	A. Time B. Distance C. Velocity D. Intensity of light
1289	Average value of A.C voltage during one cycle is	A. 1 B. Zero C. Maximum D. Variable
1290	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
1291	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
1292	For an atom having atomic number 'Z' and atomic weight 'A', the number of neutrons in the nucleous is	A. A - Z B. A C. Z D. A + Z

1293	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)
1294	In gases, the charge carriers are:	A. Electrons B. Positive ions C. Negative ions D. Both A and C E. Both A and B
1295	A transistor has:	A. One region B. Two regions C. Three regions D. Four regions E. None is correct
1296	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
1297	High energy physics is branch of physics, which deals with:	A. Stars and galaxies B. Sub-atomic particles C. Light and sound D. Molecules
1298	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
1299	Which of the following quantities remain constant in step up transformer?	A. Current B. Voltage C. Power D. Heat
1300	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. $a = v/mm$
1301	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 veloctiy 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
1302	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
1303	Sadi carnot described an ideal heat engine in	A. 1820 B. 1840 C. 1860 D. 1880
1304	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
1305	Work done in lower and bucket into the well is:	A. Zero B. Positive C. Negative D. None of these
1306	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
1307	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
1308	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
1309	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

1310	The SI unit of conductivity is	A. ohm-m
		B. ohm^{-1}m^{-1}
		C. ohm-m^{-1}
		D. ohm^{-1}m

1311	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

1312	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

1313	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

1314	Huygen principle is used to determine:	A. Speed of light
		B. Location of wavefront
		C. About polarized or unpolarized light
		D. None of them

1315	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

1316	If speed of electron is 5 x 10^{5}m/s. How long does it take one electron to transverse 1 m?	A. 1 x 10^6
		B. 2 x 10^6
		C. 2 x 10^5
		D. 1 x 10^5

1317	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

1318	The year when A.H. compton was awarded Nobel Prize is:	A. 1923
		B. 1927
		C. 1931
		D. 1935
		E. None of these

1319	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

1320	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

1321	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

1322	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

1323	The ideal gas law is	A. P = nRT
		B. V = nRT
		C. PV =RT
		D. PV =nRT

1324	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

1325	The resistivity of a substance depends upon the	A. length
		B. mass
		C. area
		D. temperature

1326	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
1327	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)
1328	The mass of an object will be doubled at speed	A. $1.6 \times 10^8 \, ms^{-1}$ B. $2.6 \times 10^8 \, ms^{-1}$ C. $2.6 \times 10^7 \, ms^{-1}$ D. $2.6 \times 10^9 \, ms^{-1}$
1329	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
1330	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. $10 \, \Omega$ C. $1 \, \Omega$ D. $0.10 \, \Omega$
1331	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
1332	In the expression of force experienced by electron, the direction of both $\underline{v}$ and $\underline{B}$ are	A. parallel B. zero C. perpendicular D. none of them
1333	A massive object falls through a fluid:	A. Faster B. Slower C. Slowest D. None
1334	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
1335	Radioactivity is	A. self disruptive activity B. spontaneous activity C. exhibited by all elements under proper conditions D. both 'a' and 'b'
1336	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
1337	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
1338	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
1339	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
1340	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
1341	Above a certain velocity of a fluid is called	A. turbulent flow B. steady flow C. either of them D. both of them

1342	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
1343	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
1344	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
1345	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
1346	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
1347	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
1348	The consumption source if energy is:	A. Energy from biomass B. Hydroelectric energy C. Geothermal energy D. None of these
1349	Gaussian surface is always:	A. Rectangular B. Spherical C. Cylinder D. Box shape E. Any of these
1350	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
1351	Which of the following does not have the same units:	A. Work B. Heat C. Kinetic energy D. Power
1352	A resonance curve for RLC series circuit is a plot of frequency versus	A. Voltage B. Current C. Impedance D. Reactance
1353	Acceleration of a body is negative if the velocity of the body is	A. constant B. increasing C. decreasing D. none of them
1354	Certain light of wavelength 600 nm is used to view an object under the microscope. If the aperture of its objective is 1.22 cm, then the limiting angle of resolution will be:	A. 6×10^{-5} rad B. 7×10^{-5} rad C. 8×10^{-5} rad D. None of these
1355	The current that flows through the coil of a motor causes:	A. <p class="MsoNormal" style="text-align:justify"> Its shaft to revolve<o:p></o:p></p> B. <p class="MsoNormal" style="text-align:justify"> Its brushes to rotate<o:p></o:p></p> C. <p class="MsoNormal" style="text-align:justify"> Motor to move<o:p></o:p></p> D. <p class="MsoNormal" style="text-align:justify"> Its shafts to rotate<o:p></o:p></p> E. <p class="MsoNormal" style="text-align:justify">

1356	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
1357	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
1358	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
1359	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
1360	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
1361	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
1362	Tick the series which lie/s in. the infra-red region.	A. Pfund series B. Brackett series C. Paschen series D. All of these E. None of these
1363	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
1364	Waves transport energy	A. without transport energy B. with matter C. both of them D. none of them
1365	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
1366	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
1367	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
1368	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
1369	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
1370	Carnot heat engine only used	A. isothermal processes B. adiabatic processes C. both of them D. none of them
1371	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

1372	Dimensions of velocity are	A. [L]
		B. [T]
		C. $[LT^{-1}]$
		D. $[LT^{-2}]$
1373	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
1374	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
1375	The force experienced by a single charge carrier moving with velocity 'v' i magnetic field of strength 'B' is given by	A. F =q(v/B)
		B. F=q^2(v x B)
		C. F=q(v x B)
		D. F= vx B
1376	Wien's constant is measured in:	A. Metre per kelviin
		B. Metre kelvin
		C. Kelvin per meter
		D. Joules
		E. Dynes
1377	The current is measured in	A. volts
		B. watt
		C. ampere
		D. ohm
1378	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
1379	Astrophysics is a branch of physics, which deals with:	A. Sub-atomic particles
		B. Stars and galaxies
		C. Light and sound
		D. Music
1380	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
1381	Amperean path is a:	A. Closed path
		B. Rectangular path
		C. Circular path
		D. Any of above
		E. Broken path
1382	Ball pen functions on the principle of	A. Viscosity
		B. Boyle's law
		C. Gravitational force
		D. Surface tnesion
1383	Physics deals with the study of	A. Matter
		B. Energy
		C. Both of them
		D. Human Body
1384	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

#	Question	Options
1385	When a platinum wire is heated, it appears dull red at about	A. 500°C B. 900°C C. 1100°C D. 1300°C
1386	In the resonance condition, the amplitude of the oscillator becomes	A. very large B. very small C. zero D. any one of them
1387	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
1388	Magnetic lines of force:	A. Cannot intersect at all B. Intersect at infinity C. Intersect within magnet D. Intersect at Neutral Point E. None of these
1389	When the conductor moved across a magnetic field:	A. Emf induced is similar to that of a battery B. Emf induced gives rise to induced current C. An emf induced across its ends D. All are correct E. None of these
1390	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
1391	Astrophysics is a branch of physics, which deals with:	A. Sub-atomic particles B. Stars and galaxies C. Light and sound D. Music
1392	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
1393	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
		A. Wb/Am

1394	The permeability of free space is measured in:	B. Wb A/m C. Am/Wb D. m/Web A E. None of these
1395	When a stress changes length, it is called the	A. compressional stress B. tensile stress C. shear stress D. any one of them
1396	The obvious effect/s of current is/are:	A. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Heating effect<o:p></o:p></span></p>` B. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Magnetic effect<o:p></o:p></span></p>` C. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Chemical effect<o:p></o:p></span></p>` D. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Both (C) and (B)<o:p></o:p></span></p>` E. `<p class="MsoNormal" style="text-align:justify"><b><span style="font-size:12.0pt;line-height:107%;font-family:"Times New Roman","serif"">All of these</span></b></p>`
1397	The irregular and unsteady flow of the fluid is called	A. turbulent flow B. steady flow C. either of them D. both of them
1398	The current through a metallic conductor is due to the motion of	A. protons B. neutrons C. electrons D. free electrons
1399	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
1400	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
1401	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
1402	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
1403	If the stress increased beyond the elastic limit of the material. the deformation produced in the material will be	A. permanent B. temporary C. either of them D. none of them
1404	Which waves are used in sonography?	A. Microwaves B. Infra red waved C. Sound waves D. Ultrasonic waves
1405	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
1406	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}
1407	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
1408	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
1409	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
1410	For transmission of both transverse and longitudinal waves, we can use:	A. Solid B. Gas C. Plasma D. None of these
1411	The number of input terminals of an op-amp is:	A. One B. Two C. Three D. Four E. None of these
1412	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
1413	Plan of a coil makes an angle of 20º with the lines of magnetic field. The angle between B and vector area of plane of coil is:	A. Also 20º B. 70º C. 90º D. 180º E. None of these
1414	The average value of current and voltage over a cycle is	A. Positive B. Negative C. Zero D. May be positive or negative
1415	In a voltmeter the conduction takes place due to	A. Electrons only B. Holes only C. Electrons and holes D. Electrons and ions
1416	Synthetic materials fall into the category of	A. crystalline solids B. amorphous C. polymeric solids D. all of them
1417	Tick the conservation force:	A. Tension in a string B. Air resistance force C. Elastic spring D. Frictional force
1418	The ratio of shearing stress/shearing strain is called as	A. Modulus B. Pascal modulus C. Hooker's modulus D. Shear modulus
1419	Si units of time period is	A. second B. hertz C. revolution D. vibration/sec

1420	The expression F x t is called impulse if the time 't' is	A. zero B. very large C. very small D. infinite
1421	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
1422	The terms phase difference and path difference are	A. Same B. Different C. Equal D. none of these
1423	One KWh is equal to:	A. 3.6×10^2 J B. 3.6 KJ C. 3.6×10^1 KJ D. 3.6 MJ
1424	A resistance used in voltmeter is called	A. shunt resistance B. high resistance C. low resistance D. zero resistance
1425	Work done on a body by gravity in lifting it up to certain height is	A. Maximum B. Minimum C. Zero D. Negative
1426	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
1427	Solar cell converts sunlight directly into	A. potential energy B. thermal energy C. mechanical energy D. electrical energy
1428	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
1429	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
1430	Transverse waves can be set up:	A. Solids B. Liquids C. Gases D. All of them
1431	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
1432	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
1433	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
1434	The closed loop gain of the non-inverting amplifier is given by	A. $G = R_2/R_1$ B. $G = -R_2/R_1$ C. $G = 1 - R_2/R_1$ D. $G = 1 + T_2/R_1$
1435	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
1436	Radio telescope is used to gather information from	A. Earth B. Moon only C. Far side of the universe D. Sea water
		A. tiny regions

1437	Recent studies of ferromagnetism have shown that there exists in ferromagnetic substances small regions called	A. any regions B. domains C. vectors D. none of them
1438	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
1439	The energy acquired by a mass of 1g moving with the speed of light is	A. 3×10^{8} J B. 9×10^{13} J C. 3×10^{13} J D. 9×10^{16} J
1440	The isotope/s of hydrogen is /are:	A. Protium B. Deuterium C. Tritium D. Both (A) and (B) E. All of these
1441	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
1442	.Depletion region contains:	A. Protons B. Positive ions C. Negative ions D. Both (B) and (C) E. Both (A) and (C)
1443	The short distance between two points direction from its initial point to final point is called:	A. Velocity B. Displacement C. Speed D. Distance
1444	The emf is measured in:	A. Newton B. Volt C. J/C D. Both A and B E. Both B and C
1445	A mass of 5kg moves with an acceleration of 10m s^{-2} force applied is	A. 10 **N** B. 50 **N** C. 2 **N** D. 20 **N**
1446	Linear momentum is a	A. fixed quantity B. constant quantity C. scalar quantity D. vector quantity
1447	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
1448	An electron is accelerated through a potential difference of 50v. its de-Brogile wavelength is	A. 1.66×10^{-29} m B. 1.74×10^{-10} cm C. 17.4×10^{-6} m D. 1.74×10^{-10} m
1449	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
1450	In a transistor, the central region is called	A. collector B. emitter C. base D. none of them
1451	Time period of simple pendulum is independent of	A. length B. mass C. acceleration due to gravity D. none of them
1452	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
1453	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

1454	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
1455	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
1456	No spark plug is needed in	A. petrol engine B. diesel engine C. both of them D. none of them
1457	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
1458	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
1459	In case of point, source of light shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
1460	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
1461	Within each domain, the magnetic field of all the spinning electrons are	A. parallel B. antiparallel C. perpendicular D. all of them
1462	In a metal, the valence electrons are:	A. <p class="MsoNormal" style="text-align:justify">Attach to individual atoms<o:p></o:p></p> B. <p class="MsoNormal" style="text-align:justify">Not attached to individual atoms<o:p></o:p></p> C. <p class="MsoNormal" style="text-align:justify">Free to move within the metal<o:p></o:p></p> D. <p class="MsoNormal" style="text-align:justify">Both (A) and (C) <o:p></o:p></p> E. <p class="MsoNormal" style="text-align:justify">Both (B) and (C)<o:p></o:p></p>
1463	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
1464	You have 20 capacitors available with you, each of 15 F, You need a capacitor of around 1F in a circuit. You can achieve this value by connecting	A. 15 capacitors in parallel B. 15 capacitors in series C. 20 Capacitors in series D. 20 Capacitors in parallel
1465	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
1466	The earliest heat engine was	A. petrol engine B. diesel engine C. electric engine D. steam engine
1467	If the object is placed at 12 cm distance from a convex lens of focal length 6	A. Double the size B. Same size

| 1467 | cm, then we get an image of _____ as that of object: | C. Half the size |
| | | 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	Electrostatics is the branch of physics which deals with the study of electro charges:	A. At rest
		B. At rest under the action of electric forces
		C. In motion under the action of electric forces
		D. In motion
		E. At rest under the action of nuclear forces

1470	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

1471	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

1472	The pressure will be low where the speed of the fluid is	A. Zero
		B. High
		C. Low
		D. Constant

1473	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

1474	The special theory of relativity is based on:	A. Four postulates
		B. Three postulates
		C. Two postulates
		D. One postulate
		E. None of these

1475	The phase at the positive peak of an A.C. cycle is:	A. $0°$
		B. $90°$
		C. $180°$
		D. 0 and $ℶ$
		E. (continued)

#	Question	Options
1476	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
1477	In the same medium, velocity of the wave:	A. Goes on increasing B. Remains constant C. Goes on decreasing D. None of these
1478	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
1479	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
1480	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
1481	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
1482	The fluid which is incompressible and non viscous is called	A. Ideal fluid B. Non-ideal fluid C. Prefect fluid D. All
1483	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
1484	When quarter of a circle is completed, phase of vibration is:	A. 90° B. 180° C. 45° D. 360°
1485	Huygen's principle states that	A. Light travels in straight line B. Light has dual nature C. Either of these D. None of these
		A. <p class="MsoNormal" style="text-align:justify">

1486	When resistance of a current carrying wire increases due to rise in temperature, the drift velocity of electrons:	A. Decreases B. Increases C. Remains the constant D. Either of these E. None of these
1487	Heating effect caused by an electric circuit is written	A. $H = I^2Rt$ B. $H = I^2R$ C. $H = IR^2t$ D. $H = IR^2$
1488	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
1489	Mass of proton is of order of	A. 10^{-31}gm B. 10^{-27}kg C. 10^{-24}gm D. 10^{+27}kg
1490	The time taken to complete one vibration is called:	A. Frequency B. Amplitude C. Time D. Time period
1491	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
1492	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
1493	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
1494	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
1495	The He-Ne laser discharge tube is filled with:	A. 85% He B. 15% He C. 50% He D. 60% He E. 85% Ne
1496	The voltage increases linearly with	A. time B. velocity C. acceleration D. torque
1497	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 sphere B is greater
1498	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
1499	The potential difference across the conductors should be maintained constant by connecting the ends of wire to the terminal of a device called a	A. power B. current

1499	constant by connecting the ends of wire to the terminal of a device called a source of	C. resistance D. temperature
1500	Work done is lowering the bucket into the well is:	A. Zero B. Positive C. Negative D. None of these
1501	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
1502	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
1503	The conductivity of a superconductor is	A. Infinite B. Very large C. Very small D. Zero
1504	Bernoulli's equation is based upon law of conservation	A. Mass B. Momentum C. Energy D. None of these
1505	Which one is the least multiple	A. Pico B. Femto C. Nano D. Atto
1506	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
1507	The electric lines of force are	A. Imaginary B. Physically existing everywhere C. Physically existing near the charge D. All of the above
1508	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
1509	The power of an electric generating station is expressed in:	A. Kilo Jule B. Kilowatt-hour C. Kilo watt D. Watt
1510	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
1511	The root mean square voltage for alternating current is	D. All of these
1512	The value of relative permittivity of different dielectrics are:	A. <p class="MsoNormal">Equal</p> B. <p class="MsoNormal">Different</p> C. <p class="MsoNormal">Greater than one</p> D. <p class="MsoNormal">Smaller than one</p> E. <p class="MsoNormal">Both (B) and (C)<o:p></o:p></p>
1513	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
1514	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

1515	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
1516	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
1517	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
1518	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
1519	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
1520	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
1521	Significant figures in 0.2020 are:	A. Two B. Three C. Four D. Five
1522	The vertical and horizontal range will be equal id angle of projection is	A. $76°$ B. $45°$ C. $60°$ D. $120°$
1523	A flywheel accelerates from rest to an angular velocity of 7 rad/sec in 7 seconds. Its average acceleration will be:	A. 49 rad/sec^2 B. 1 rad/sec^2 C. 0.16 rev/sec^2 D. Both A and C E. Both B and C
1524	Step up transformer has a transformation ratio of 3:2. What is the voltage in secondary, if voltage in primary is 30V:	A. 45 V B. 15 V C. 90 V D. 300 V
1525	The value of E_0 in coulomb's law is:	A. 9 x 10^{9}Nm^{2}C^{-2} B. 8.85 x 10^{-12}C^{2}N^{-1}m^{-2} C. 8.85 x 10^{-12}Nm^{2}C^{-2} D. 9 x 10^{9}C^{2}N^{-1}m^{-2}
1526	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
1527	The unit of decay constant is	A. sex B. sec^2 C. sec^{-1} D. sec^{-2}
1528	A body whose momentum is constant must have constant	A. Acceleration B. Velocity C. Force D. None of these
1529	When a platinum wire is heated, it appears white at	A. 1600$°C$ B. 900$°C$ C. 1100$°C$

		family: arial, sans-serif; font-size: small;">°C D. 1300°C
1530	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
1531	During the upward motion of the projectile, the vertical component of velocity.	A. Decreases B. Increases C. Remains constant D. None of these
1532	Blood has a density	A. Equal to water B. Greater then water C. Lesser then water D. None of these
1533	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
1534	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
1535	A shunt resistance parallel to the galvanometer is used to convert it into	A. avometer B. millimeter C. voltmeter D. none of these
1536	If 250V is the RMS value of alternative voltage, then its peak value V_o will be:	A. 353.5V B. 250V C. 175V D. zero E. 400V
1537	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
1538	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. 10^5 m C. 10^{-10}N D. 10^8N
1539	Gamma rays consist of steam of	A. electron B. proton C. photons D. all of these
1540	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
1541	The pointer of a magnetic compass:	A. Is affected only by permanent magnets B. Align itself parallel to the applied magnetic field C. Vibrates in the magnetic field of the current D. Aligns itself perpendicular to the magnetic field E. Both (C) and (D)

1542	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
1543	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
1544	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
1545	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
1546	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
1547	The power factor of resonant series circuit is	A. 1 B. 0 C. -1 D. 0.5
1548	The relation V = IR represents	A. Ampere law B. Faraday's law C. Ohm's law D. Len's law
1549	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
1550	A black body is	A. an ideal absorber B. an ideal radiator C. both of them D. none of them
1551	The direction of the streamlines is the same as the direction of the	A. force B. torque C. velocity D. weight
1552	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
1553	Earth is considered to be	A. a non-inertial frame B. an inertial frame C. an accelerated frame D. none of the above
1554	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
1555	Work is product of:	A. Force and velocity B. Heat and energy C. Force and displacement D. None of these
1556	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
1557	The types of mechanical energy is/are:	A. Kinetic energy B. Potential energy C. Both of these D. None of these
1558	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

1559	Avo-meter is used of measure the	A. current, voltage B. voltage, resistance C. resistance, current D. current, voltage and resistance
1560	A ball falls on the surface from 10 m height and rebounds to 2.5 m. if the duration of contact with the floor is 0.01 seconds then the average acceleration during contact is	A. 2100 m/s^2 B. 1400 m/s^2 C. 700 m/s^2 D. 400 m/s^2
1561	γ-rays are	A. electrostatic waves B. electromagnetic waves C. heavy particles D. longitudinal waves
1562	When quarter of a circle is completed, the phase of vibration is:	A. 90° B. 180° C. 45° D. 360°
1563	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
1564	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
1565	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
1566	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
1567	In case of an ideal gas, the P.E associated with its molecule is	A. maximum B. zero C. minimum D. not fixed
1568	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
1569	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
1570	The electric field due to an infinite long thin wire at a distance R varies as	A. 1/R B. 1/R^2 C. R D. R^2
1571	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
1572	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

1573 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

1574 In the region surrounding a current carrying wire:
A. A magnetic field is setup
B. The lines of force are elliptical
C. Direction of lines of forces depends upon direction of current
D. Both (A) and (C)
E. All of these

1575 In SHM, the acceleration is _____ when velocity is _____:
A. Zero, smallest
B. Smallest, zero
C. Zero, zero
D. Zero, greatest

1576 Conventionally the angular velocity is directed to an angle of:
A. 90° to the axis of rotation
B. 30° to the axis of rotation
C. 0° to the axis of rotation
D. None of the above

1577 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

1578 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.

1579 The vast majority of solids are in the form of
A. amorphous structure
B. polymeric structure
C. crystalline structure
D. all of them

1580 At resonance, the phase angle for RLC series resonance circuit equals
A. 0°
B. 90°
C. 180°
D. 270°

1581 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

A. 45°
B. 60°

1582	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	B. 60° C. 50° D. 40°
1583	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
1584	The positive charge moving in one direction is equivalent in all external affects to a:	A. Negative charge is moving in the same direction B. Positive charge is moving in the opposite direction C. Negative charge moving in the opposite direction D. Positive charges moving in the same direction E. None of these
1585	How much time, the α-particle more massive than an electron	A. 600 B. 7000 C. 5000 D. 15000
1586	In case of metallic conductors, the charge carriers are	A. Protons B. Electrons C. Antiprotons D. Positrons E. Both A and B
1587	Swimming becomes possible because of_____law of motion.	A. First B. Second C. Third D. None of these
1588	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
1589	Triple point of water is	A. 273.16°F B. 372.16K C. 273.16°F D. 273.16
1590	Most practical application of electricity involve	A. Charges at the rest B. Charges in the motion C. Electrons at rest D. Atoms in

motion<o:p></o:p></p>
E. <p class="MsoNormal" style="text-align:justify">
<span style="font-size:12.0pt; line-height:107%;font-family:"Times New
Roman","serif"">Molecules in
motion<o:p></o:p></p>

#	Question	Options
1591	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
1592	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
1593	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
1594	Which of the following material has smaller has life	A. uranium B. polonium C. radium D. radian
1595	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
1596	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
1597	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
1598	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
1599	When two protons are brought closer potential energy of both of them:	A. Increases B. Decreases C. Remains same D. None of these
1600	During the steady flow, different streamlines	A. cannot across each other B. can across each other C. either of them D. neither of them
1601	The concept of electric field theory was introduced by	A. Michael Faraday B. Newton C. Dalton D. Kepler E. Einstein
1602	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
1603	When platinum wire is heated, it appears cherry red at	A. 1600°C B. 900°C C. 1100°C D. 1300°C
1604	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
		A. zero

1605	The circuit in which current and voltage are in phase, the power factor is	B. 1 C. negative D. 0.83
1606	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
1607	In a semi-conductor material, current flows due to	A. positive charge B. negative charge C. both of them D. none of them
1608	Maximum work is done when force and displacement are	A. Parallel B. Antiparallel C. Perpendicular D. Both a and b
1609	The minimum resistance that can be obtained by connecting 5 resistance of $1/4\,\Omega$ each is	A. $4/5\ \Omega$ B. $5/4\ \Omega$ C. $20\ \Omega$ D. $0.05\ \Omega$
1610	Significant figures in 0.0010 are:	A. Four B. Three C. Two D. One
1611	transverse wave motion is possible in:	A. Air B. A mixture of NH_3 and O_2 C. Strings D. All of these
1612	At absolute temperature, the kinetic energy of the molecules	A. Becomes zero B. Becomes maximum C. Becomes minimum D. Remain constant
1613	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. 1.5_1 D. There is no refracted ray
1614	Another mean of electric potential energy per unit charge is given by:	A. Electric intensity B. Potential gradient C. Electric Flux D. Potential difference E. None of these
1615	The distance covered by the wave during one period is called its:	A. Wave number B. Frequency

1615	The distance covered by the wave during one period is called its:	C. Wavelength D. Time period
1616	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)
1617	Neutron was discovered by	A. Curie B. Roentgen C. Chadwick D. Rutherford
1618	de-Broglies hypthesis was experimentally verified by	A. Maxwell B. Compton C. Einstein D. Davison and Germer
1619	Mass of proton is	A. 1.67×10^{-27} kg B. 1.67×10^{-31} kg C. 1.66×10^{-34} kg D. 1.67×10^{-17} kg
1620	The change of magnetic flux through a circuit will produce	A. Magnetic Field B. Electric Field C. emf D. a.c
1621	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
1622	When angular acceleration is positive, the body rotates:	A. Slower B. Slowest C. Faster D. None of these
1623	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
1624	Which force is not a conservative force?	A. Frictional force B. Gravitational force C. Electric force D. Elastic spring force
1625	magnetic field is a:	A. Vector quantity B. Scalar quantity C. Scalar as well as scalar quantity D. Any of (A) or (B) E. Neither (A) nor (B)
1626	Bernoulli's equation is based upon law of conversation	A. Mass B. Momentum C. Energy D. None of these
1627	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)
1628	OP-AMP has the following input terminals	A. one B. two C. three D. four
1629	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

	atoms and are not free, are known as	C. semi conductors D. all of them
1630	In an adiabatic expansion, the temperature of the gas	A. increases B. becomes zero C. decreases D. decreases rapidly
1631	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
1632	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°
1633	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
1634	One coulomb per second is equal to	A. One volt B. One ampere C. One hom D. One henry
1635	As the current flow through the wire:	A. It generates heat in the wire B. It produces sound in the wire C. Resistance of the wire decreases D. Voltage across the ends is increased E. None of these
1636	When a fluid is in motion, its flow can be considered as	A. turbulent B. streamline C. either or them D. neither of them
1637	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
1638	The Boltzman constant has the value	A. $1.38 \times 10^{-23} JK^{-1}$ B. $1.28 \times 10^{-23} JK^{-1}$ C. $1.38 \times 10^{-26} JK^{-1}$ D. $1.28 \times 10^{-26} JK^{-1}$
1639	Which one of the following is dimensionless.	A. Acceleration B. Velocity C. Density D. Angle
1640	The velocity of sound is greatest in	A. Water B. Air C. Vacuum D. Metal
1641	Diameter of the nucleus s of the order of	A. 10^{-10}m B. 10^{-12}m C. 10^{-15}m D. 10^{-18}m
1642	A resistance used in galvanometer to make it voltmeter is called	A. shunt resistance B. high resistance C. zero resistance D. none of these

1643	The time required to complete on vibration is called	A. frequency B. total time C. time period D. velocity
1644	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
1645	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
1646	When two spherical conducting balls at different potentials are joined by a metallic wire, after some time:	A. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Both the conductors are at the same potential<o:p></o:p></span></p>` B. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Potential difference across the conductors remain constant<o:p></o:p></span></p>` C. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Potential difference across the conductors becomes zero<o:p></o:p></span></p>` D. `<p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">Both (A) and (B)<o:p></o:p></span></p>` E. `<p class="MsoNormal" style="text-align:justify"><span style="font-size: 12pt; line-height: 107%; font-family: "Times New Roman", serif;">Both (A) and (C)<b><o:p></o:p></b></span></p>`
1647	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
1648	The application of Bernoulli's equation is	A. Torricelli's theorem B. Venture relation C. Binomial theorem D. Both a and b
1649	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
1650	A flowing liquid possess	A. K.E B. P.E C. Pressure Energy D. All
1651	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
1652	A swing has	A. one natural frequency B. two natural frequencies C. three natural frequencies D. four natural frequencies
1653	The SI unit of magnetic flux is.	A. weber B. Nm⁻¹A⁻¹ C. tesla D. gauss
1654	There is a regular arrangement of molecules in a	A. amorphous solids B. polymeric solids C. crystalline solids D. none of them
1655	All trigonometric functions (sine, cosine, tangent etc) are positive in:	A. 1st quadrant B. 2nd quadrant C. 3rd quadrant D. 4th quadrant
1656	In order to make a voltmeter, high resistance is connected with galvanometer in	A. perpendicular B. may be paralled or pendicular C. series

C. series

D. none of these

1657	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
1658	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
1659	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
1660	Rate of flow can be expressed in	A. litre/sec B. litre-sec C. sec/litre D. sec/litre-m
1661	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
1662	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
1663	A beam of electrons is provided by an	A. electron gun B. Suppray C. Injection D. None of these
1664	The density of blood is nearly equal to that of	A. mercury B. sodium C. water D. honey
1665	A metal road of length 1m is moving at a speed of 1 ms^{-1} In a direction making angle of 30° 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
1666	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. 1.66×10^{-10}m C. 1.66×10^{-29}cm D. 1.66×10^{-29}m
1667	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
1668	Truth of kinetic energy is confirmed by:	A. Diffusion of gases B. Brownian motion C. Both A and B D. None of these
1669	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)
1670	The free electrons in metals:	A. `<p class="MsoNormal" style="text-align:justify"> <span style="font-size: 12pt; line-height: 107%; font-family: "Times New Roman", serif;">`Are in random motion and their speed depends upon temperature`<b><o:p></o:p></b></span></p>` B. `<p class="MsoNormal" style="text-align:justify"> <span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">`Move in particular direction`<o:p></o:p></span></p>` C. `<p class="MsoNormal" style="text-align:justify"> <span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">`Move with speed of light`<o:p></o:p></span></p>` D. `<p class="MsoNormal" style="text-align:justify"> <span style="font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"">`Move such that their

1671	The entity which measures the quantity of motion in a body is called	A. force B. energy C. momentum D. power
1672	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
1673	If water in a closed bottle is taken up to the moon and opened, the water gets	A. Freeze B. Boiled C. Dissociated into O_2 and H_2 D. Evaporated
1674	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
1675	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
1676	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
1677	Centripetal acceleration is also called _____ acceleration	A. Tangential B. Radial C. Angular D. None of these
1678	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
1679	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
1680	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
1681	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)
1682	Alfa particles are	A. hydrogen nuclei B. helium nuclei C. electrons D. photons
1683	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
1684	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
1685	The half lie of radium-226 is	A. 238 years B. 4.5×10^9 days C. 1620 years D. 332 years
1686	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

1687	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
1688	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
1689	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
1690	Braking radiation causes:	A. Continuous spectrum B. Line Spectrum C. Band spectrum D. Discrete specturm E. All of these
1691	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
1692	The flux through a closed surface depends upon:	A. Shape of geometry of the closed surface B. Charge enclosed C. Nature of the medium D. Both (A) and (B) E. Both (B) and (C)
1693	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
1694	The peak voltage in a 220 volt A.C. supply is nearly	A. 220 volt B. 253 volt C. .311 volt D. 440 volt
1695	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
1696	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
1697	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
1698	Which one of the following is an example of resonance	A. swing B. tuning a radio C. microwave oven D. all of them

1699	The nuclei of an element having the same charge number but different mass numbers are called:	A. Isobars B. Isotopes C. Isomers D. Isobaric E. Isothermal

1700. Heating effect of current utilized in:

A. Electric motor
B. Electric toaster
C. Electroplating
D. Electric kettle
E. Both (B) and (D)

1701. An important part of inkjet printer is:

A. Toner
B. Drum
C. Deflection plates
D. Heated roles
E. None of these

1702. 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

1703. 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

1704. Which of the following is not thermo dynamical function?

A. Enthalpy
B. Work done
C. Gibb's energy
D. Internal energy

1705. A mass spectrograph sort out

A. molecules
B. atoms
C. elements
D. isotopes

1706. 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. $I_B + I_E = I_C$

1707. The charge carriers in electrolyte are positive and negative

A. protons
B. electrons
C. ions
D. none of these

1708. The practical application of the phenomenon of Mutual induction is

A. Transformers
B. Generator
C. Motor
D. All of these

1709	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 the stationary observer is	A. 1.66 m B. 1.0 m C. 0.66 m D. 2.66 m
1710	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
1711	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
1712	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
1713	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
1714	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
1715	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
1716	Which of the following phenomenon proves the particle nature of light	A. interference B. diffraction C. photoelectric effect D. none of these
1717	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
1718	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
1719	The maximum distance of body from mean position when body is executing SHM is called	A. Time period B. Displacement C. Amplitude D. Frequency
1720	The number if neutrons in the nucleus of $_{92}U^{235}$ are	A. Infinite B. 92 C. 235 D. 143
1721	The unit of conductance is	A. ohm B. meter C. mho D. ohm-meter
1722	Absolute temperature can be calculated by	A. Means squares velocity B. Motion of the molecule C. Both A and B D. None of these
1723	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
1724	Acceleration in a body is always produced in the directin of:	A. Velocity B. Weight C. Force D. Botha B and C
1725	Speed of light in vacuum depends upon	A. Frequency B. Wavelength C. Amplitude

		C. Amplitude
		D. None of these
1726	Which of the following forces is responsible for SHM	A. Applied force B. Restoring force C. Fractional force D. Elastic force
1727	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
1728	When a platinum wire is heated, it appears orange red at	A. $500\,°C$ B. $900\,°C$ C. $1100\,°C$ D. $1300\,°C$
1729	We can express the work in term of	A. directly measurable variables B. indirectly measurable variables C. either of them D. both of them
1730	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
1731	The magnetic field in the middle of a solenoid due to current is	A. weak B. strong and uniform C. none-uniform D. zero
1732	Electromagnetic waves transport	A. Energy only B. Momentum only C. Both A and B D. None is correct
1733	The quantity F x t is called as	A. momentum B. velocity C. acceleration D. impulse
1734	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^3 gives the:	A. Force B. Density C. Work done D. Pressure
1735	Angle between ray of light and the corresponding wavefront is	A. 0^0 B. 60^0 C. 90^0 D. 120^0
1736	Silicon can be obtained from	A. Lead B. Uranium C. An isotope of oxygen D. Sand
1737	Semi-conductor elements have atoms with	A. 2 valence electrons B. 3 valence electrons C. 4 valence electrons D. 5 valence electrons
1738	Electrons are	A. positive charged B. negatively charged C. massless D. neutral
1739	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
1740	In series RC circuit when $R=X_C$, then the phase angle is	A. $0\,°$ B. $90\,°$ C. $70\,°$ D. $45\,°$
1741	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

1742	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
1743	The kinetic energy of one molecule of a gas at normal temperature and pressure will be (k = 8.31 J/mole K) :	A. 1.7×10^3 J B. 10.2×10^3 J C. $3..4 \times 10^3$ J D. 6.8×10^3 J
1744	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
1745	Depletion region contains:	A. Protons B. Positive ions C. Negative ions D. Both (B) and (C) E. Both (A) and (C)
1746	Two samples A and B of a gas initially of the same temperature and pressure are compressed from a volume V to a volume V/2 such that A is compressed isothermally and B adiabatically. The final pressure	A. A greater than than of B B. A is equal to that of B C. A is less than that of B D. A is twice the pressure of B
1747	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
1748	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
1749	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
1750	An isochoric process is one which take place at	A. Constant internal energy B. Constant entropy C. Constant volume D. Constant pressure
1751	Silicon is one of the mot commonly used:	A. onductor B. Dielectric C. Insulator D. Semiconduction E. Both (B) and (C)
1752	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=e^{2}V/B C. F=e/VB D. F=B^2/ev
1753	Bodies failing freely under gravity provide good example of motion under	A. non-uniform acceleration B. uniform acceleration C. variable acceleration D. increasing acceleration
1754	The decrease in velocity per unit time is called	A. deceleration B. acceleration C. uniform acceleration D. variable acceleration
1755	Electromagnetic waves emitted by hot bodies are called:	A. Photoelectrons B. Alpha rays C. Thermal radiation D. None of these
1756	Weber is a unit of	A. magnetic flux B. magnetic filed intensity C. magnetic induction D. magnetic flux density
1757	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}
1758	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
1759	Which type of wave can be set up in solids	A. longitudinal waves B. transverse waves C. both of them D. none of them
1760	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)
1761	The force exerted on a conductor of length L, carrying current I when placed in a magnetic field B is given by	A. $F=IB/L$ B. $F= L \times B/I$ C. $F = IL \times B$ D. $F = IL . B$
1762	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
1763	In rotational motion, analogue of force F us called:	A. Couple B. Torque C. Mass D. Moment of intertia
1764	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
1765	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
1766	Physical quantities are often divided into _____ categories	A. 3 B. 2 C. 9 D. 5
1767	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
1768	A typical rocket consumes about	A. 100 kg s^{-1} of fuel B. 1000 kg s^{-1} of fuel C. 10000 kg s^{-1} of fuel D. 100000 kg s^{-1} of fuel
1769	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
1770	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
1771	Uncertainty is of following type/types:	A. Absolute B. Fractional C. Percentage D. All of these
1772	When heat is added into the system then change in entropy is	A. negative B. positive C. zero D. any one of them
1773	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
1774	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
		A. $+5 \times 10^{1}$ J

#	Question	Options
1775	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 10^{1}J B. +5 x 10^{2}J C. +5 x 10^{3}J D. +5 x 10^{4}J
1776	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
1777	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 B. Potential difference across the conductors remain constant C. Potential difference across the conductors becomes zero D. Both (A) and (B) E. Both (A) and (C)
1778	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
1779	Fluid A is more viscous than fluid B. While flowing through a pipe of the same dimensions and material which fluid takes longer to travel at 25$°C$?	A. fluid B B. fluid A C. both take the same time D. not possible to determine from given information
1780	The number of translation degress of freedom for a diatomic gas is	A. 2 B. 3 C. 5 D. 6
1781	1 J = _____?	A. 10^{7}erges B. 10^{-7}erges C. 10^{5}erges D. 10^{-5}erges
1782	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
1783	Which one of the following has larger value of relative permitivity E$_r$ at room temperature?	A. Vaccum B. Air C. Glass D. Water
1784	Electric lines of force	A. Intersect each other B. Are always parallel C. Are always anti-parallel D. Never intersect E. None of these
1785	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
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
		A. 60°

1787	When the magnitude of two component vectors are equal to that of their resultant, then the angle between the components is:	B. 90° **C. 120°** D. 150°

1788	Which quantity has different dimension?	**A. Tension** B. Work C. Energy D. Torque

1789	An inertial frame is that frame in which	A. a>0 **B. a=0** C. a<0 D. none of these

1790	The mass of the object is a quantities measure of its	A. speed B. velocity C. acceleration **D. inertia**

1791	Glass and high carbon steel are the examples of	**A. brittle substances** B. ductile substances C. plastic substances D. elastic substances

1792	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

1793	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

1794	The vector in space has:	A. One component B. Two components **C. Three components** D. None of these

1795	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)

1796	Coulomb force, when any material medium is placed between two charges	A. Increases **B. Decreases** C. Remain unchanged D. None of these

1797	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

1798	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°

1799	Proton was discovered by Rutherford in	A. 1915 B. 1906

1799	Proton was discovered by Rutherford in	C. 1910 D. 1920
1800	In solids, only following type/s of wave can travel:	A. Transverse B. Longitudinal C. Both A and B D. None of them
1801	Internal friction of fluid is called	A. Surface tension B. Viscosity C. Resistance D. Cohesive force
1802	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
1803	Centripetal force performs:	A. Maximum work B. Negative work C. Positive work D. None of these
1804	When radioactive nucleus emits aβ-particle, the proton-neutron ratio	A. decrease B. increase C. same D. none of these
1805	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
1806	The stopping voltage for a certain metal is 100 volts, then the work function for the cathode plate is	A. 100 J B. 1.6×10^{-17}J C. 100 eV D. 1.6×10^{-17}eV
1807	Electrolysis is the study of conduction of electricity through:	A. Solids B. Liquids C. Gases D. Plasma
1808	Which of the following has the greatest coefficient of viscosity?	A. water B. gasoline C. honey D. tar
1809	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
1810	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
1811	Work done is maximum when angle between force and displacement is:	A. 0° B. 90° C. 180° D. None of these
1812	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)
		A. covalent

1813	The bonding between the semi-conductor materials is	A. covalent B. ionic C. either of them D. none of them
1814	The work is stored in the inductor as	A. Electric potential energy B. Elastic potential energy C. Magnetic energy D. Absolute potential energy
1815	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
1816	A body with frequency of would complete one vibration in:	A. f seconds B. 1/f seconds C. 1 second D. f^2 second
1817	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
1818	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
1819	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
1820	If x-component of a vector is -3 N and y-component is 3 N, then angle of resultant vector will x-axis is:	A. 45° B. 315° C. 135° D. 225°
1821	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
1822	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
1823	Direction of angular momentum is determined by:	A. Right hand rule B. Head to tail rule C. Left hand rule D. None of them
1824	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
1825	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

1826	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
1827	What temperature is the same on Celsius scale as well as on Fahrenheit scale?	A. $32\,^\circ C$ B. $-32\,^\circ C$ C. $-40\,^\circ C$ D. $-212\,^\circ C$
1828	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
1829	The total energy of spring mass system is	A. zero B. changing with time C. constant D. none of them
1830	Work done by the force of friction is always	A. Positive B. Zero C. Negative D. Maximum
1831	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. $+5 \times 10^1$ J B. $+5 \times 10^2$ J C. $+5 \times 10^3$ J D. $+5 \times 10^4$ J
1832	One joule is equal to	A. 1.6×10^{19} eV B. 6.25×10^{18} eV C. 1.6×18^{18} eV D. 6.25×10^{19} eV
1833	Biomass includes:	A. Crop residue B. Natural vegetation C. Animal dung D. All of these
1834	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
1835	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
1836	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
1837	The SI unit of spring constant is identical with that of:	A. Force B. Surface tension C. Pressure D. Loudness
1838	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
1839	The error may occur due to:	A. Negligence B. Faulty apparatus C. Inappropriate method D. all of these
1840	Examples of physical quantities are:	A. Length B. Color C. Effect of music D. All of these
1841	Wave nature of particle was proposed by	A. Einstein B. Plank C. De-Brogile D. Max well
1842	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

D. elastic substances

1843	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
1844	Tick the one which is not a crystalline solid:	A. Zirconia B. Glass C. Copper D. Ceramic solid E. An ionic compound
1845	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
1846	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
1847	The example of mechanical wave is	A. waves in ropes B. waves on water surface C. waves in air D. all of them
1848	Centripetal acceleration is also called _____ acceleration:	A. Tangential B. Radial C. Angular D. None of them
1849	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
1850	Direction of motion_____ in circular of motion:	A. Changes off and on B. Changes continuously C. Does not change D. None of them
1851	The electric field lines start from	A. Positive charge B. Negative charge C. Either A or B D. Neutron E. An atom
1852	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
1853	In the doping process, the ratio of the doping atoms to the semi conductor atom is	A. 1 to 10 B. 1 to 10^3 C. 1 to 10^6 D. 1 to 10^9
1854	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
1855	Which of the following material has longer half life	A. radium B. polonium C. radium D. uranium
1856	Rate of decay is actually described by.	A. Half line B. Decay constant C. Mean life D. Total life E. None of these
1857	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
1858	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
1859	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

1860	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
1861	In the formula $P = N_0KT$, N_0 denotes:	A. Number of molecules per unit per volume B. Number of moles C. Number of molecules D. None of these
1862	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
1863	The decrease in velocity per unit time is called:	A. Variable Acceleration B. Average Acceleration C. Retardation D. None of these
1864	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
1865	The dimensions of viscosity are:	A. $M^2L^{-1}T^{-2}$ B. $M^{-1}L^1T^{-1}$ C. $M^{-1}L^{-1}T$ D. $ML^{-1}T^{-1}$
1866	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
1867	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
1868	When a stress changes the shape, it is called the	A. compressional stress B. tensile stress C. shear stress D. any one of them
1869	Moment of inertia depends upon:	A. Mass B. Selection of axis of rotation C. Both of them D. None of these
1870	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
1871	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
1872	INTELSAT operates at frequencies 4, 6, 11, 14 having unit of:	A. KHz B. MHz C. GHz D. BHz
1873	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
1874	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
1875	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
1876	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
1877	If a vector lies in second quadrant, than B_x and B_y are:	A. -,+ B. +,- C. +,+

D. -,-

1878	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
1879	Which quantity has the same units as impulse	A. force B. work C. linear momentum D. acceleration
1880	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
1881	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
1882	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
1883	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
1884	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
1885	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
1886	The device which can convert heat energy into electrical energy is called:	A. Thermistor B. Thermometer C. Thermostat D. Thermocouple E. Both (C) and (D)
1887	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
1888	Current is measured in	A. volts B. watt C. ohm D. ampere
1889	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
1890	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
		A. 3×10^8 ms^{-1}

1891	In free space, the speed of electromagnetic waves is	B. 3×10^6 ms^{-1} C. 4×10^7 ms^{-1} D. 3×10^9 ms^{-1}
1892	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
1893	The example of irreversible process is	A. slowly liquification B. slowly evaporation C. an explosion D. all of them
1894	Tick the conservation force:	A. Tension in a string B. Air resistance string C. Elastic spring force D. Frictional force
1895	The diameter of an atom is of the order	A. 10^{-125} m B. 10^{-11} m C. 10^{-10} m D. 10^{-9} m
1896	Electromagnetic waves transport:	A. Energy only B. Momentum only C. Both A and B are correct D. None of is correct
1897	One complete round trip of the body about its mean position is called	A. displacement B. vibration C. a complete motion D. an acceleration
1898	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. $a = m/k\ x$
1899	Resistor is a device which convert electric energy to	A. Heat energy B. Chemical energy C. Elastic energy D. All of the above
1900	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
1901	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
1902	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
1903	The electric flux through any surface depends upon:	A. Intensity of electric field B. Area of the surface C. Angle between intensity and area D. All of these E. None of these
1904	A.C. can be measure with the help of	A. Nuclear effect B. Magnetic effect C. Chemical effect D. Heating effect
1905	The concept of entropy was introduced into the study of thermodynamics in	A. 1856 B. 1865 C. 1656

1905	The concept of entropy was introduced into the study of thermodynamics in	C. 1650 D. 1685
1906	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
1907	The time period of pendulums of different lengths would be	A. same B. different C. both of them D. none of them
1908	The locus of all points in a medium having same phase of vibration is called	A. Crest B. Trough C. Wavelength D. Wave-front
1909	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
1910	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
1911	10^6 electrons are moving through a wire per second, the current developed is	A. 1.6×10^{-19} B. 1 A C. 1.6×10^{-15} A D. 10^6 A
1912	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)
1913	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
1914	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
1915	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
1916	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
1917	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
1918	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
1919	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
1920	The relation between charge 'Q' and current 'I' is given by	A. Q = I/t B. Q = It C. Q = I^2t D. Q = I^2/t
1921	The time period of pendulum, at center of earth.	A. Zero B. Infinite C. Maximum D. Minimum
1922	Example of progressive wave is	A. transverse waves B. longitudinal waves C. both of them

		D. none of them
1923	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
1924	Vibratory motion is always under	A. Applied force B. Restoring force C. Periodic force D. Gravitational force
1925	Such oscillations in which the amplitude decreases steadily with time, are called	A. resonance B. force oscillations C. large oscillations D. damped oscillations
1926	The SI unit of permitivity is	A. Nm^2C^2 B. $N^{-1}m^{-2}C^2$ C. NmC^2 D. Nm^2C^{-1}
1927	One radian is equal to:	A. $30.3°$ B. $45.3°$ C. $50.3°$ D. $57.3°$
1928	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
1929	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
1930	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
1931	The energy stored int he water of the dam is:	A. Electric energy B. Kinetic energy C. Potential energy D. None of these
1932	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
1933	Electric field lines emerge from the charges in	A. One dimension B. Two dimensions C. Three dimensions D. Four dimensions E. None of these
		A. In electric motor B. To detect current

#	Question	Options
1934	Magnetic effect of current is used:	current<o:p></o:p></p> C. <p class="MsoNormal" style="text-align:justify">To measure current<o:p></o:p></p> D. <p class="MsoNormal" style="text-align:justify">All of these<o:p></o:p></p> E. <p class="MsoNormal" style="text-align:justify">None of these<o:p></o:p></p>
1935	In the equation $E=mc^2$ value of c is:	A. 1,86,000 miles per hour B. 1,86,000 miles per sec C. 3×10^8 m/sec D. Both A and C E. Both B and C
1936	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
1937	The field around a moving charge is called	A. magnetic field B. conservative field C. non-conservative field D. none of these
1938	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
1939	Current varies with voltage	A. Inversely B. as square root C. Directly D. None of these
1940	In the equation $E=mc^2$ value of c is?	A. 186000 miles per hour B. 186000 miles per sec C. 3×10^8 m/sec D. Both A and C E. Both B and C
1941	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)
1942	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
1943	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
1944	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
1945	The number of vibrating body at any instant from its equilibrium position is called	A. displacement B. frequency C. amplitude D. time period
1946	The L-C parallel circuit the capacitor draws a	A. leading current B. lagging current C. main current D. none of these
1947	Particles have the mass smallest of following is	A. Electron B. Proton C. Neutron D. Quark
1948	Which of the following are the units of intensity of light	A. Pois B. Lux C. Siemen D. Candela

1949	The unit of resistance is	A. volt B. ampere C. ohm D. coat
1950	The SI unit of stress is	A. N/m^2 B. Nmc C. dynes/m D. N
1951	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
1952	The unit of spring constant is	A. J-sec B. Metre C. Nm^{-1} D. None of these
1953	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°
1954	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
1955	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
1956	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
1957	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
1958	Resistance of a conductor is increased, the currant will	A. Decrease B. Increase C. Remain the same D. None of these
1959	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
1960	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
1961	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)
1962	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
1963	The smallest three dimensional basic structure in a crystalline solid is called	A. lattice point B. crystal lattice C. cubic crystal D. unit cell
1964	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
1965	Silicon can be obtained from:	A. Lead B. Uranium C. An isotope of oxygen D. Sand

1966	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
1967	The unit of induced emf is:	A. Volt B. Nm/As C. Joule coul^{-1} D. Both A and C E. All of these
1968	Density is defined as:	A. Mass per volume B. Volume per mass C. Mass x volume D. Mass per length
1969	The third band of the colour code:	A. Gives the number of zeroes B. Is decimal multiplier C. Gives the resistance tolerance D. Gives the third digit E. Both (A) and (B)
1970	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
1971	A potential barrier of 0.7 V exists across p-n junction made from:	A. Germanium B. Silicon C. Arsenic D. Gallium E. Indium
1972	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
1973	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
1974	Transmitting antenna emits	A. Magnetic waves B. Electric waves C. Electromagnetic waves D. Sound waves
1975	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
1976	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
1977	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
1978	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
1979	Free oscillations are always produced by:	A. An applied force B. Gravitational force C. Restoring force and inertia D. Inertia only
1980	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
1981	Which of the following is not mechanical wave?	A. Sound wave B. Light wave C. wave produced in spring D. None of them

1982	The direction of the acceleration is the same as that of	A. speed B. velocity C. both of them D. none of them
1983	The number of field lines passing through unit area held perpendicular to the field lines represent:	A. Flux in that region B. Intensity of the field C. Charge D. Area of the region E. None of these
1984	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
1985	Tick the conservative force:	A. tension in a string B. Air resistance C. Elastic spring force D. Frictional force
1986	The threshold frequency of sodium is 6×10^6 MHz. The cut-off wavelength for this metal will be	A. 500 m B. 500 nm C. 500 km D. 500 cm E. None of these
1987	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
1988	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
1989	Which of the following quantity for particle executing SHM is non-zero at mean position	A. Force B. Acceleration C. Velocity D. Displacement
1990	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
1991	Two point charges A and B separated by a distance R attract each other with a force of 12×10^{-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
1992	Examples of crystalline solids are:	A. Cooper B. NaCl C. Zirconia D. Both (A) and (B) E. All of these
1993	One radian is	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of these
1994	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
1995	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

#	Question	Options
1996	A voltmeter is used to measure the	A. potential difference B. current C. temperature D. resistance
1997	The projectile attains maximum horizontal range when it is projected at an angle of	A. 30° B. 45° C. 60° D. 75°
1998	The charge carries in the electrolyte are:	A. Positive ions B. Negative ions C. Either (A) or (B) D. Both (A) and (B) E. Neither (A) nor (B)
1999	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
2000	A current carrying conductor sets up its own:	A. Electric field B. Nuclear field C. Magnetic field D. Both (A) and (C) E. All of these
2001	When brakes are applied to a fast moving car, the passengers will be thrown:	A. Forward B. Backward C. Downward D. None of these
2002	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
2003	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
2004	Fluids can transmit:	A. Transverse wave B. Compressional wave C. Both of them D. None of them
2005	When brakes are applied to a fast moving car, the passenger will be thrown:	A. Forward B. Backward

2005	When brakes are applied to a fast moving car, the passenger will be thrown:	C. Downward D. none of these
2006	Light waves are	A. Mechanical waves B. Electromagnetic waves C. Any of above D. None of above
2007	Astrophysics is a branch of physics, which deals with	A. Sub-atomic B. Stars and galaxies C. Light and sound D. Music
2008	Work is a:	A. Scalar quantity B. Vector quantity C. Base quantity D. None of these
2009	The emission of radiations take place in elements, having charge number greater than	A. 109 B. 82 C. 69 D. 52
2010	N s m^{-2} is unit of:	A. Drag force B. Pressure C. Surface tension D. Coefficient of viscosity
2011	Flux through a closed surface of any shape and flux through the surface of a sphere drawn around a charge are:	A. Different B. Same C. Such that it is greater in the first case D. Such that it is greater in the second case E. None of these
2012	Two forces each of 10 N act on a body, if the force are inclined at 30° and 60° respectively with x-axis, then x-component of their resultant is:	A. 20 N B. 13.66 N C. 10 N D. 8.66 N
2013	Drag force increases if speed of the object moving through the fluid:	A. Increases B. Decreases C. Remains constant D. None of these
2014	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
2015	Light has:	A. Wave nature B. Particle nature C. Dual nature D. None of these
2016	Laser is a beam of:	A. Visible light B. Infra red light C. Ultra violet light D. Violet light only E. yellow light only
2017	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. +e^2(v x B) D. -e(v^2 x B)
2018	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
2019	The terms phase difference and path difference are:	A. Same B. Different

	The terms phase difference and path difference are:	C. Equal D. None of these
2020	The liquid which conduct current is known as	A. heating effect B. chemical energy C. electrolyte D. ohm's law
2021	The principle characteristics of an ideal standard are	A. Inaccessible and Invariable B. Accessible and Invariable C. Accessible and Variable D. None of these
2022	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
2023	Amplitude in SHM is equivalent to _____ in circular motion:	A. Diameter B. Radius C. Circumference D. None of these
2024	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
2025	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
2026	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
2027	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
2028	Centripetal acceleration is also called _____ acceleration:	A. Tangential B. Radial C. Angular D. None of them
2029	Which quantity has different dimensions:	A. Work B. Pressure C. Energy D. Torque
2030	In wilson cloud chamber, the air becomes saturated with:	A. Alcohol vapours B. Water C. Helium gas D. Nitrogen gas E. None of these
2031	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
2032	When a vector is multiplied by a negative number, its direction:	A. Remains the same B. Changes C. Changes by $180°$ D. None of these
2033	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
2034	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
2035	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
2036	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
2037	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
2038	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 B. Less than the speed at which they pass from left to right C. The same speed at which they pass from left to right D. Any of above E. None of them
2039	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
2040	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
2041	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
2042	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
2043	A stone is dropped from rest from the top of a tower 19.6 m high. The distance traveled during the last second of its fall is (giving g=9.8 m/s^S)	A. 9.8 m B. 14.7 m C. 4.9 m D. 19.6 m
2044	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
2045	In an inelastic collision between two bodies, following is reserved.	A. Energy B. Both A and B C. Momentum D. None
2046	Watt x second is unit of:	A. Force B. Work C. Power D. None of these
2047	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

2048	Angular momentum is a:	A. vector quantity B. Imaginary quantity C. Complex Quantity D. Scalar Quantity
2049	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
2050	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
2051	When current passes through a solenoid coil, it behaves like a	A. loop B. circle C. bar magnet D. none of these
2052	The wave nature of light was proposed by	A. Newton B. Thomas Young C. Huygen D. None of these
2053	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
2054	The emitter-base junction of a transistor is forward-biased and collector-base junction is reverse-biased. If the base current is increased, its	A. I_c will decrease B. V_{CE} will increase C. I_C will increase D. V_{CC} will increase
2055	Power is a :	A. Vector quantity B. Base quantity C. Scalar quantity D. None of these
2056	The direction of vector in space is specified by:	A. One angle B. Two angles C. Three angles D. None of these
2057	The first super conductor was discovered in	A. 1811 B. 1890 C. 1901 D. 1911
2058	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
2059	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
2060	The power dissipation in a pure inductive or capacitance circuit is	A. maximum B. positive C. zero D. none
2061	Mass of neutron is	A. 1.67×10^{-31} kg B. 1.67×10^{-27} kg C. 9.1×10^{-31} kg D. $1.67 \times 10^{-}$19kg
2062	The percentage of available heat energy converted into work by a diesel engine is roughly	A. 35 %` B. 40 % C. 35 - 40 % D. 25 %
2063	Position was discovered by Carl Anderson in	A. 1920 B. 1925 C. 1928 D. 1932
2064	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
2065	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
2066	The least distance of distinct vision is:	A. 10 cm B. 25 cm C. 50 cm D. 100 cm
2067	Work done is independent of path followed in _____	A. Gravitational field B. Magnetic field C. Electric field D. All of these
2068	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
2069	An object in SHM will have maximum speed when its displacement from equilibrium position is:	A. Infinity B. Maximum C. Zero D. Minimum
2070	The angle between centripetal force and displacement of the body moving in a circle is:	A. 0° B. 90° C. 180° D. None of these
2071	During the whole carnot cycle	A. Thermal equilibrium is maintained B. mechanical equilibrium is maintained C. both the thermal and mechanical equilibrium is maintained D. both the thermal and mechanical equilibrium is not maintained
2072	The SI unit of capacitance is	A. Farad B. Henry C. Ohm D. Volt
2073	Amorphous solids are also called as	A. crystalline solids B. polymeric solids C. glassy solids D. any one of them
2074	Electromagnetic radiation or photons interact with matter in	A. two distinct ways B. three distinct ways C. four distinct ways D. five distinct ways
2075	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
2076	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
2077	In 1932 Chadwick discovered	A. proton B. neutron C. photon D. electron
2078	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

2079	An oscillating body oscillates due to:	A. Applied force B. Restoring force C. Frictional force D. None of these
2080	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
2081	Silicon can be obtained from	A. Lead B. Uranium C. An isotope of oxygen D. Sand
2082	0.0001210 has _____ significant figures.	A. Four B. Three C. Seven D. Eight
2083	White light is directed at a diffraction grating at an angle normal to the grating starting at the normal to the grating (0°), the order of red, green and blue lights in the diffracted spectrum is.	A. Red, green, blue B. Green, blue, Red C. Red, blue, green D. Blue , green, red
2084	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
2085	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
2086	Electric generators which convert mechanical energy into	A. solar energy B. thermal energy C. kinetic energy D. electrical energy
2087	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
2088	The SI unit of viscosity is	A. $kg\ m^{-1}s^{-1}$ B. $kg\ ms^{-1}$ C. $kg\ m^{-1}s^{-2}$ D. $kg\ m^{-1}s$
2089	The range of β-particle in air is greater than that of α-particle by	A. 1000 times B. 100 times C. 15 times D. 10 times
2090	In a capacitive circuit	A. Current leads voltage by phase of $\pi/2$ B. Voltage leads current by phase of $\pi/2$ C. Current and voltage are in same phase D. Sometime current and sometime voltage leads
2091	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
2092	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
2093	Converse of pair production is known as	A. Compton effect B. annihilation of matter C. photoelectric effect D. none of these

#	Question	Options
2094	How many isotopes of helium are present?	A. 1 B. 2 C. 3 D. 4
2095	The energy of a photon is represented by	A. h/c^2 B. h/T C. hc^2 D. hf/c^2
2096	The S.I unit of frequency is	A. Vibrations s^{-2} B. Ms^{-1} C. Hertz D. s^{-1}
2097	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
2098	Which one of the following physical quantities changes with relativistic speed	A. Length B. Mass C. Time D. All of the above
2099	A digital system deals with quantities or variables which have	A. only one state B. only two discrete states C. three discrete states D. four discrete states
2100	If the distance between two charges is doubled, the force between them will become:	A. Double B. Half C. One third D. One fourth
2101	The work done on the system by the environment is considered as	A. positive B. negative C. zero D. any one of them
2102	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 B. Mid points of the wire only C. Every point within the wire D. At nodes only E. Both (B) and (D)
2103	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
2104	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
2105	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
2106	Nucleon means:	A. Only electrons B. Only neutrons C. Only protons D. Both (A) and (C) E. Both (B) and (C)
		A. photo diode

2107	Which of the following diode is used to derive the current in external circuit when light is incident in the circuit	B. light emitting diode C. photo voltaic cell D. none of these
2108	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
2109	The rate change of area expressed is expressed in:	A. None of these B. ms^{-1} C. m^2s^{-2} D. ms^{-2} E. m^2s^{-1}
2110	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
2111	Electric intensity at a place due to a charged conductor is a	A. Scalar quantity B. Vector quantity C. Semi vector and semi scalar D. Dimensionless quantity E. Both A and D are true
2112	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
2113	Heat travels through vacuum by	A. Conduction B. Convection C. Radiation D. Both A and B
2114	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
2115	In equation F=ma, then mass 'm' is	A. rest mass B. variable mass C. inertial mass D. gravitational mass
2116	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
2117	Gaussian surface is always:	A. Rectangular B. Spherical C. Cylindrical D. Box shape E. Any of these
2118	Number of supplementary units are	A. Three B. Two C. Seven D. Five
		A. KHz B. MHz

2119	INTELSAT operates at frequencies 4, 6, 11, 14 having unit of	D. MHz C. GHz D. BHz
2120	The half life of radioactive substances depends upon	A. amount of substance B. energy of substance C. state of substance D. temperature of substance
2121	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
2122	Polymers are the chemical combination of carbon with:	A. Nitrogen B. Oxygen C. Hydrogen D. All of these E. None of these
2123	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
2124	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
2125	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
2126	The value of the metastable state for Neon is	A. 20.66eV B. 20.61eV C. 19.23eV D. 18.70eV
2127	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
2128	Specific resistance of a wire depends upon	A. Length B. Cross-section area C. Mass D. None
2129	The strength of magnetic field at certain points around a wire depends upon:	A. Value of current passing B. Distance from the current element C. Color of the material D. Both (A) and (B) E. Both (B) and (C)
2130	When the temperature of source and sink of a heat engine become equal entropy change will be	A. Zero B. Max C. Min

2131	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
2132	Two electric bulbs of 200 W and 100 W have same voltage. If R_1 and R_2 be their resistance respectively then	A. $R_1 = 2R_2$ B. $R_2 = 2R_1$ C. $R_2 = 4R_1$ D. $R_1 = 4R_2$
2133	The projectile motion is composed of	A. horizontal motion only B. vertical motion only C. horizontal and vertical motion D. none of them
2134	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
2135	The SI unit of magnetic permeability is	A. WB $A^{-1}m^{-1}$ B. WB mA^{-1} C. WB Am^{-1} D. None of these
2136	Polymeric solids have	A. low specific gravity B. high specific gravity C. either of them D. none of them
2137	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
2138	X-ray are also known as	A. Roentgen rays B. Maxwell rays C. Plank range D. Einstein rays
2139	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
2140	By convention, torques producing clockwise rotation are taken as:	A. Positive B. Nagative C. Zero D. None of these
2141	Electron gun consist of	A. three anodes B. heating cathode C. three anodes D. three anodes , heating cathode, grid
2142	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)
2143	When a falling body hits ground, its KE changes to _____ energy.	A. Potential B. Chemical C. Mechanical D. sound and heat
2144	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
2145	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
2146	In a three phase a.c. generator, there are	A. 2 coils B. 3 coils C. 1 coild D. No coil
2147	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

2148	The magnitude of chemical Effects depends upon:	A. Nature of liquid B. Quantity of Electricity passed through the liquid C. Color of the liquid D. Both (A) and (C) E. Both (A) and (B)
2149	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
2150	Glycerin has viscosity _____ the viscosity of water:	A. More than B. Equal to C. Less than D. None of these
2151	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
2152	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
2153	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
2154	The unit of resistivity is	A. ohm B. ohm-m^2 C. ohm-meter D. ohm-m^{-1}
2155	An object moving through a fluid experiences a retarding force called a	A. frictional force B. terminal force C. opposing force D. drag force
2156	The internal pressure of the blood is	A. less than the external atmospheric pressure B. greater than the external atmospheric pressure C. equal to the external atmospheric pressure D. none of them
2157	The total charge of any nucleus is given as	A. Ze^2 B. Z^{2}e C. Z/e D. Ze
2158	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
2159	Charge on neutron is	A. 1.6 x 10^{-19}C B. zero C. -1.6 x 10^{-19}C D. 1.2 x 10^{-19}C
2160	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)

A. Moisture contents in air

2161	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
2162	There is no net transfer of energy by particle of medium in	A. Longitudinal wave B. Transverse wave C. Progressive wave D. Stationary wave
2163	Hold the solenoid in the right hand with fingers curling in the direction of current. The direction of the field will be given by:	A. Thumb B. Curled fingers C. Middle finger D. Arm of right hand E. None of these
2164	The product of force and time is called change in:	A. Momentum B. Impulse C. Force D. Both a and b
2165	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
2166	When two protons are brought closer potential energy of both of them:	A. Increases B. Decreases C. Remains same D. None of these
2167	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
2168	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
2169	The efficiency of diesel engine is	A. 25% B. 25 - 30% C. 35% D. 35 - 40%
2170	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. $900\,°C$
2171	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
2172	Which of the following options correctly states the equation of continuity for an ideal fluid?	A. $A_1 A_2 = V_1 > V_2$ B. $A_1/A_2 = V_2/V_1$ C. $A_1/A_2 = V_1/V_2$ D. none of the above
		A. $7.71\ m\ s^{-2}$

2173	A body starting from rest covers a distance of 0.45 Km and acquires a velocity of 300 Kmh^{-1}. its acceleration will be	B. 0.5m s^{-2} C. 0.15m s^{-2} D. 0.092m s^{-2}
2174	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
2175	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
2176	Amorphous solids are also more like	A. crystalline solids B. gases C. liquids D. any one of them
2177	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
2178	Total number of base units are	A. Three B. Five C. Seven D. Nine
2179	When a platinum wire is heated, it appears yellow at	A. 1600°C B. 900°C C. 1100°C D. 1300°C
2180	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
2181	The impedance of RLC series resonance circuit at resonant frequency is	A. Greater than R B. Equal to R C. Less than R D. None of these
2182	When heat is removed from the system	A. negative B. positive C. zero D. any one of them
2183	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
2184	The wave motion set up in any medium depends upon:	A. Elasticity B. Inertia C. Density D. All of these
2185	Bernoulli's equation is applicable for	A. turbulent flow B. streamline flow C. both (a) and (b) D. all kinds of flows
2186	Which of the following substances has got positive temperature coefficient of resistance?	A. Carbon B. Germanium C. Silicon D. Aluminium E. None of these
2187	The number of isotopes of hydrogen are	A. 2 B. 1 C. 3 D. 4
2188	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
2189	A semi-conductor in its extremely pure form is known as	A. extrinsic semi-conductor B. intrinsic semi-conductor C. either of them D. none of them
2190	SI unit of current describes the flow of charge at the rate of	A. One ampere per second B. One coulomb per second C. One electron per second D. 6.25×10^{18} electrons per second

2191	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
2192	Biomass includes:	A. Crop residue B. Natural vegetation C. Animal dung D. All of these
2193	A solar cell converts energy of the Sun into:	A. Heat energy B. Magnetic energy C. Light energy D. Sound energy
2194	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
2195	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
2196	The size of the domain is such that they can contain	A. 10^2 to 10^4 atoms B. 10^4 to 10^8 atoms C. 10^8 to 10^{12} atoms D. 10^{12} to 10^{16} atoms
2197	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
2198	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
2199	In a cubic crystal, All solids meet at:	A. 60° B. 90° C. 109° D. 30° E. 10°
2200	Adiabatic change occurs when the gas	A. expands B. compressed C. expands or compressed D. expands or compressed rapidly
2201	Radioactivity was discovered by:	A. Becquerel B. Marie curie C. Pierre curie D. All of them E. None of these
2202	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
2203	Monochromatic light means wave of	A. Same frequency B. Same colour C. Same Wavelength D. All of them
2204	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
2205	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
2206	S.I. unit of planks constant is	A. J-s^{-1} B. J.s C. J.s^{-2} D. J.s^2
2207	Which of the following friction is self-adjusting force.	A. Static B. Dynamic C. Limiting D. Sliding

2208	The dimension of linear inertia is:	A. MLT^2 B. ML^0T^{-2} C. ML^0T^0 D. MLT^{-1}
2209	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
2210	The most suitable material for permanent magnet is	A. cobalt B. iron C. steel D. alaminium
2211	Tick the one which is not polymer solid:	A. Zirconia B. Polythene C. Nylon D. Synthetic rubber E. None of these
2212	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
2213	The definite number of significant figures in 5000 is:	A. Four B. Three C. Two D. One
2214	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
2215	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
2216	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
2217	A thermistor is a resistor which is:	A. Light Sensitive B. Heat Sensitive C. Sound Sensitive D. All of these E. None of these
2218	One radian is:	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of these
2219	Which one of the least multiple:	A. Pico B. Femto C. Nano D. Atto
2220	Structure of the nucleus was explained by	A. J.J Thomson B. Bohr C. Millikan D. Rutherford
2221	Lenz's law is the consequence of	A. Mass B. Energy conservation C. Momentum conservation D. Charge
2222	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
2223	The minimum wavelength of X-rays produced of 1KV potential difference is applied across the anode and cathode of the tube is	A. 1.24×10^{-10}m B. 7.92×10^{-20}m C. 2.78×10^{-14}m D. 3.88×10^{-11}m
2224	Angular momentum	A. Scalar B. Axial vector C. Polar vector D. At 45<span style="color: rgb(84, 84, 84); font-

2225	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
2226	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
2227	The critical temperature of tin is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
2228	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)
2229	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
2230	The value of the plank's constant 'h' is given by	A. 1.6×10^{-19} J B. 1.67×10^{-27} Kg C. 6.63×10^{34} Js D. 6.63×10^{-34} Js
2231	The time rate of change of displacement is called:	A. Time B. Acceleration C. Speed D. Velocity
2232	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
2233	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%
2234	The number of countries who manage the largest satellite system is:	A. 3 B. 24 C. 126 D. 200
2235	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
2236	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
2237	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
2238	1 gm-cm^{-3} is equal to	A. 10^{3} kg-m^{-3} B. 10^{-3} kg-m^{-3} C. 1kg-m^{-3} D. 10^{6} kg-m^{-1}
2239	The quantity having dimension of $ML^{2}T^{02}$ will earth is:	A. 80 sec B. 500 sec C. 1.802×10^{4} sec D. Aerophysics
2240	A weakly damped system has fairly	A. sharp resonance curve B. flat resonance curve C. both of them D. none of them
2241	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

2242	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
2243	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
2244	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
2245	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
2246	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
2247	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
2248	Neutrons are	A. positive charge B. negatively charged C. massless D. neutral
2249	The only significant motion possessed by the mono-atomic gas represented is:	A. Translatory B. Rotatory C. Vibratory D. None of these
2250	The density of water is 10^3kg/m^3. The water pressure on a submarine is 2.0 x 10^7N/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
2251	Cosine of an angle is positive in:	A. 2nd quadrant B. 3rd quadrant C. 4th quadrant D. All of these
2252	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
2253	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
2254	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
2255	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 fv^2 C. pgh D. none of them
2256	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
2257	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
2258	SI unit of wave length is:	A. Kilometer B. Metre C. Centimetre D. Hertz

#	Question	Options
2259	Huygen's principles states that:	A. Light has dual nature B. Either of these C. None of these D. Light travels in straigth line
2260	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/sec^2 B. -10 rav/sec^2 C. -10 rad/sec^2 D. -5 rav/sec^2
2261	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
2262	A field is uniform and much stronger:	A. Inside a long solenoid B. Outside a long solenoid C. At the end of a long solenoid D. At the central point of long solenoid E. None of these
2263	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
2264	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
2265	Which one of the following relations is correct?	A. 1 Wb-m^2= Nm^{-1}A^{-1} B. 1 tesla = 104 gausses C. 1 Wb-m^2= 1 tesla D. All of the above
2266	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
2267	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° D. All of these are correct
2268	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
2269	The conduction band in a solid	A. may be empty B. cannot be empty C. should be filed D. all of them
2270	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

2271	The blood pressure of a person	A. decrease with age B. increase with age C. has no effect with age D. none of them
2272	Smaller the damping, greater will be the	A. frequency B. wavelength C. amplitude D. none of them
2273	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
2274	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
2275	Which of the following is not a unit of power:	A. J-sec B. Watt C. N m/sec D. Horsepower
2276	Work done along a closed path in a gravitational field is:	A. Maximum B. Minimum C. Zero D. Unity
2277	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
2278	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
2279	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
2280	The second law gives the relationship between	A. mass and velocity B. force and acceleration C. velocity and acceleration D. mass and weight
2281	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
2282	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
2283	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
2284	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
2285	A car battery has e.m.f 12 volt and internal resistance 5×10^{-2}ohm. If it draws 60 ampere current, the terminal voltage of the battery will be	A. 5 volt B. 3 volt C. 15 volt D. 9 volt
2286	Newton published laws of motion in his famous book "principia" in	A. 1867 B. 1667 C. 1676 D. 1687
2287	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
		A. Greater than one degree

2288	One radian is:	B. Less than one degree C. Equal to one degree D. None of them
2289	The concept of direction is purely:	A. Absolute B. Relative C. Relative to stars always D. Relative to the sun always E. None of these
2290	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
2291	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 B. Different C. Opposite to each other D. At 60º with each other E. Both (B) and (C)
2292	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
2293	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
2294	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
2295	The work done moving a body between two points in a conservation field is independent of the:	A. Direction B. Force applied C. Path followed by the body ` D. Power
2296	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
2297	The energy stored in a charge capacitor	A. $1/2CV^2$ B. $1/2C^2V$ C. $1/2C/V^2$ D. None of these
2298	Xerography means:	A. Dry writing B. Wet writing C. Poor writing D. Excellent writing E. Both (A) and

2299	Fluid friction is _____ the friction between two solid surfaces:	A. Greater than B. Smaller than C. Equal to D. None of these
2300	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
2301	A process is a reversible process, if the entropy of the system	A. increases B. decreases C. remains constant D. none of them
2302	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
2303	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 %
2304	In the expression F x t, the force F is	A. total force B. instantaneous force C. average force D. all of them
2305	Neutron was disvovered by:	A. Rutherford in 1920 B. Chadwick in 1922 C. Bohr in 1913 D. Compton in 1927 E. None of these
2306	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
2307	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
2308	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. $W=1/2Kx^2_o$ D. $W=4Kx_o$
2309	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
2310	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
2311	1 amu is equal to.	A. 1.66×10^{-24}kg B. 1.66×10^{-19}kg C. 1.66×10^{-24}kg D. 1.66×10^{-27}kg
2312	The charge per unit time through any cross-section of a conductor is called	A. capacitance B. electric power C. current D. potential difference
2313	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
2314	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)
2315	The natural arrangement of colours in the spectrum of white light spectrum is	A. VIBGYOR B. ROYBGIV C. ROYBIGV D. BIGROYV

2316	A grating with high resolving power can distinguish _____ difference in wavelengths :	A. Larger B. Zero C. None of these D. Smaller
2317	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
2318	Moment of linear momentum is called.	A. Moment arm B. Moment of inertia C. Inertia D. Angular momentum
2319	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
2320	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
2321	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
2322	When a nucleus emits an alpha particle, it atomic mass decreased by	A. 2 B. 1 C. 4 D. 3
2323	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
2324	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
2325	Significant figures in 0.0010 are	A. Four B. Three C. Two D. One
2326	The magnetic field outside the solenoid due to current is	A. strong B. zero C. weak D. uniform
2327	A charged particle moving at right angle to the magnetic field will experience	A. minimum force B. maximum force C. zero D. moderate force
2328	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
2329	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
2330	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. $10\,\mu F$ B. $20\,\mu F$ C. $30\,\mu F$ D. 15<span style="color: rgb(34, 34, 34); font-family:

2331	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
2332	The nature of capacity of electrostatic capacitor depends on	A. Shape B. Size C. Thickness of plates D. Area
2333	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
2334	Battery is charged in motor cars, which is based on	A. Chemical effect B. Magnetic effect C. Electric effect D. None
2335	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
2336	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
2337	Charge to mass ratio (e/m) of an electron is given by the relation	A. e/m = 2V/Br^2 B. e/m = 2V/B^{2}r C. e/m = 2V/B^{2}r^2 D. e/m = V/2B^{2}r^2
2338	The SI unit of spring constant is identical with that of	A. Force B. Surface tension C. Pressure D. Loudness
2339	Ethanol (alcohol) is a type of:	A. Electric fuel B. Bio fuel C. Nuclear fuel D. None of these
2340	SI unit of impedance is	A. hertz B. henry C. ampere D. ohms
2341	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
2342	The curve representing an isothermal process is called	A. adiabat B. isotherm C. fixed temperature D. none of them
2343	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.
2344	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
2345	Energy stored in the spring of a watch is called	A. Potential energy B. Kinetic energy C. Nuclear energy D. Elastic potential
2346	The half life of uranium-238 is	A. 6.2 x 10^9 years B. 4.5 x 10^9 days C. 4.5 x 10^9 years D. 1.3 x 10^6 years
2347	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

2348	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
2349	Which of the following is a state variable	A. entropy B. pressure C. volume D. all of them
2350	The resistance of a conductor does not depend on its	A. mass B. resistivity C. length D. cross-sectional area
2351	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
2352	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
2353	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
2354	The expression of Hook's law is	A. F=ma B. F=kx C. F= -kx D. -kx=ma
2355	In case of metallic conductors, the change carries are:	A. <p class="MsoNormal" style="text-align:justify">Protons<o:p></o:p></p> B. <p class="MsoNormal" style="text-align:justify">Electrons<o:p></o:p></p> C. <p class="MsoNormal" style="text-align:justify">Antiprotons<o:p></o:p></p> D. <p class="MsoNormal" style="text-align:justify">Positrons<o:p></o:p></p> E. <p class="MsoNormal" style="text-align:justify">Both (A) and (B)<o:p></o:p></p>
2356	An vector of 10 N makes an angle of 45° with x-axis. Angle between its rectangular components with be:	A. 45° B. 90° C. 135° D. Zero
2357	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