MDCAT Physics Chapter 1 Test Session

Sr	Questions	Answers Choice
1	Which of the following is not the unit of energy?	A. Calorie B. Joule C. Electron-volt D. Watt
2	The Dimension of acceleration is	A. [L²T] B. [LT²] C. [LT⁻²] D. None of these
3	The dimensions of Planck's constant is equal to that of	A. Energy B. Momentum C. Angular momentum D. Power
4	A student measured the diameter of a wire using a screw gauge with least count 0.001cm.The correct measurement is	A. 5.3 cm B. 5.32 cm C. 5.320 cm D. 5.3200 cm
5	The distance to the nearest galaxy is	A. 10²⁰ m B. 10²⁹ m C. 10³⁰ m D. 10³¹ m
6	High energy physics is the physics of	A. Nucleus B. Subatomic particles C. Plasma physics D. Astrophysics
7	Maximum value of solid angle for closed surface is	A. 2π rad B. 2π sr C. 4π sr D. 360°
8	Femto means	A. 10⁻¹⁵ B. 10⁻¹⁸ C. 10⁻² D. 10⁻¹²
9	Numerical value of magnitude of a physical quantity is	A. Independent of system of units B. Directly proportional to magnitude of the unit C. Inversely proportional to magnitude of the unit D. Either (B) or (C)
10	When the first condition for equilibrium is satisfied, if means that there is no	A. Linear acceleration B. Angular acceleration C. Both D. None of these
11	An accurate measurement is the one which has	A. Percertainity B. Less percentage uncertainty C. Less fractional uncertainty D. b and c
12	The biological sciences deal with the	A. Living things B. Non-living things C. Both D. None of these
13	The direction of a vector in a space is specified by	A. One angle B. Two angles C. Three angles D. Cannot be specified
		A. Atmosphere

14	M.K.S. unit of pressure	B. Dynes per sq.cm C. Meter D. Pascal
15	In torque when the force is kept constant and the moment arm increases, then the torque	A. Increases B. Decreases C. Remains constant D. None of these
16	A paratrooper is an example of	A. Static equilibrium B. Dynamic Equilibrium C. Both static and dynamic equilibrium D. None of these
17	Of the following quantities,which one has dimensions different from the remaining three	A. Energy per unit volume B. Force per unit area C. Product of voltage and charge per unit volume D. Angular momentum
18	The dimensional formula of light year is	A. LT⁻¹ B. T C. ML²T⁻² D. L
19	Base quantities are	A. Scalars B. Vectors C. Both D. None of these
20	Solid state Physics is the branch of physics deals with the	A. Atoms and molecules B. Structure C. Properties D. b and c
21	A person moves 30m north then 20m east then 30√2 m south west His displacement from the original position is	A. 14 m south west B. 28 m south C. 10 m west D. 15 m east
22	An are equal to radius of the circle subtended an angle of _____ at the center of circle	A. 1 rad B. 2 rad C. π rad D. 1/2π rad
23	When R_x and R_y are negative, the resultant lies in the third quadrant and its direction is	A. θ = 180 + Φ B. θ = 180 - Φ C. θ = 90 + Φ D. None of these
24	Which of the following quantity is dimensionless?	A. Gravitational constant B. Plank's constant C. Power of lens and gas constant D. None of these
25	The unit of focal power of a lens is	A. Watt B. Horse power C. Dioptre D. Kilo watt
26	One light year is equal to	A. 9.5 x 10¹⁵m B. 9.5 x 10¹⁵sec C. 9.5 x 10¹⁵km D. 9.5 x 10¹⁵cm
27	If two non-zero vector A and B are parallel to each other.then A .B is equal to	A. Zero B. AB C. A + B D. A-B
28	We are living in the age of	A. Technology B. Information technology C. Space age D. None of these
29	The time taken by the light to travel from Sun to Earth is	A. 4 min 20 sec B. 5 min 20 sec C. 8 min 20 sec D. 9 min 20 sec
30	In a experiment to determine acceleration due to gravity by simple pendulum a student commits 1 % positive error in the measurement of length and 3 % negative error in the measurement of time period The percentage error in the values of g will be	A. 7% B. 10% C. 4% D. 3%

31	When body is at rest or rotating with uniform angular velocity is has	A. Zero angular acceleration B. Rotationaly equilibrium C. Zero torque D. All are correct
32	Which quantity has different units from the others	A. Mass X velocity B. Force X time C. Energy / velocity D. Power X time
33	The body is in a dynamic equilibrium when it is	A. At rest B. In motion C. In uniform motion D. Acceleration motion
34	Vector A lies in XY plane. For what orientation with both of its rectangular components be negative ?	A. I-quadrant B. II-quadrant C. III-quadrant D. None of these
35	A null vector is defined as zero magnitude and its direction is	A. Specific B. Arbitary C. Undefined D. None of these
36	Period of typical radio waves is	A. 1 × 10⁻⁸ sec B. 1 × 10⁻⁸ sec C. 1 × 10⁻⁶ sec D. 1 × 10⁻⁵ sec
37	The vector sum of three vectors gives a zero resultant. What can be the orientations	A. 90^o B. 60^o C. 120^o D. 180^o
38	Dimension of coefficient of viscosity is	A. [MLT¹] B. [L⁻¹T^{1]} C. [ML⁻¹T^{1]} D. [M⁻¹L⁻¹T^{1]}
39	The unit of permittivity of free space $\varepsilon_\circ$ is:	A. Newton-metre²/coulomb B. Coulomb/Newtonxmetre C. Coulomb²/(Newtonxmetre)² D. Coulomb²/(Newtonxmetre)²
40	The dimensions of expression $V_f = V_i + at$. Taking the R.H.S	A. [LT] B. [LT²] C. [LT⁻¹] D. [LT⁻²]
41	Which of the following is the only vector quantity	A. Temperature B. Energy C. Power D. Momentum
42	The vector sum of two forces is perpendicular to their vector differences.In that case the forces	A. Are equal to each other in magnitude B. Are not equal to each other in magnitude C. Cannot be predicted D. Are equal to each other
43	Correction factor can be applied to	A. Personal error B. Systematic error C. Random error D. All
44	The volt/metre is the unit of:	A. Potential B. Work C. Force D. Electric field intensity
45	Two vectors have unequal magnitudes can their sum be zero ?	A. Yes B. No C. Can be zero D. None of these
46	Base quantities are those which	A. Remain the same B. Can be derived C. Further divided D. None of these
47	The resultant of two equal forces is double of either of the forces. The angle between them is	A. 120° B. 90° C. 60° D. 180°

48	When the both conditions are satisfied, then there is no	A. Linear acceleration B. Angular acceleration C. Linear acceleration and angular acceleration D. None of these
49	The value of solar constant in SI system is	A. 1340 watt/m² B. 1340 watt/m² C. 1340 m²/watt D. 1340 watt/m
50	The dimensional of density are	A. [MLT⁻³] B. [ML⁻³] C. [M³L] D. [ML³]
51	When the vectors are mutually perpendicular then the product is	A. Maximum B. Minimum C. Zero D. None of these
52	The dimensions of power are	A. [ML²T²] B. [ML²T⁻²] C. [ML²T⁻³] D. [M²LT⁻³]
53	The time taken by the light to travel from Pluto to Earth is	A. 4 hrs 20 sec B. 5 hrs 20 sec C. 6 hrs 20 sec D. 76 hrs 20 sec
54	If we have two vectors of magnitude 4 and 5 respectively and between them is 60°, what is magnitude of resultant	A. 4 B. 8 C. 2 D. 3
55	Time between the normal heart beats is	A. 8 × 10⁻¹ sec B. _{8 × 10}⁻²_{sec} C. 8 × 10⁻³ sec D. None of these
56	The unit vectors is not restricted to Cartesian coordinate system only. Unit vectors may have	A. Specific direction B. Any direction C. Not a and b D. None of these
57	The unit of surface energy per unit area may be expressed as	A. Nm⁻² B. Nm⁻¹ C. Nm D. Nm²
58	Solid Angle can be _____ only.	A. Practically measure B. theoretically measure C. Both a and b D. Sometimes practically measure and sometimes theoretically measure
59	The value of Faraday number is SI unit is	A. 9.65 Coulomb/kg/equivalent B. 9.65 x 10^{7 }Coulomb/kg/equivalent C. 9.65 x 10^{-7 }Coulomb/kg/equivalent D. 9.65 Coulomb/kg/equivalent
60	State the physical quantity represented by $[ML^2T^{-2}K^{-1}]$ where K is represents the unit temperature	A. Thermal capacity of the body B. Thermal conductivity C. Specific thermal capacity D. Entropy
61	If the acceleration due to gravity is 10 ms^{-2} and the units of length and time are changed to kilometer and hour respectively,the numerical value of acceleration is	A. 360000 B. 72000 C. 36000 D. 129600
62	The cross product of parallel vectors is zero when angle between	A. θ 0^o B. θ = 90^o C. θ = 180^o D. a and c
63	The fundamental unit of the quantity of matter is	A. Kg B. Mol C. Gm D. Meter
64	The number 1678.9 should be written in scientific notation as	A. 16.789 × 10³ B. 1.6789 × 10³ C. 1678.9 × 10³ D. None of these

65	The dimensional formula of gravitational constant G is:	A. MLT⁻² B. ML³T⁻² C. M⁻¹L³T⁻² D. M⁻¹LT⁻²
66	The magnitude of j^2 in cross product is	A. Zero B. 1 C. Greater than 1 D. Less than 0
67	The dimensions of Einsteins Equation $E = mc^2$	A. [ML⁻²] B. [ML²T⁻²] C. [M²LT²] D. [MLT⁻¹]
68	Which of them is not a physical quantity	A. Density B. Impulse C. Energy D. Kilogram
69	The correct unit of Kinematic viscosity in SI system is	A. ra(D) s⁻² B. m².s⁻¹ C. g.s⁻² D. N .sm⁻²
70	One Pascal in SI is equal to	A. One newton metre B. One newton metre⁻¹ C. One newton metre⁻² D. One dyne cm²
71	Surface area is	A. Scalar B. Vector C. Neither scalar nor vector D. Both scalar and vector
72	When force F makes an angle θ with the position r relative to point O, then the toque will be	A. τ = 0 B. τ = rF cos 0 C. τ = rF D. rF sin θ
73	The dimensions of force are	A. [MLT⁻¹] B. [M^oLT⁻²] C. [MLT⁻²] D. [ML⁰T⁻²]
74	Dimensions of light year are	A. [LT⁻¹] B. [ML⁻¹T] C. [ML⁻¹] D. [M⁰L]
75	The magnitudes of vectors A.B and C are 3,4 and 5 units respectively.If A + B = C the angle between A and B is:	A. π/2 B. cos⁻¹ 0.6 C. tan⁻¹ 7/5 D. π/4
76	One second = _____.	A. 31 x 10⁻⁸years B. 3.1 x 10⁸years C. 3.1 x 10⁻⁸years D. 3.1 x 10⁻¹⁸years
77	The mass of Uranium atom is	A. 10⁻¹⁰ Kg B. 10⁻¹⁵ Kg C. 10⁻²⁰ Kg D. 10⁻²⁵ Kg
78	The component of a vector has its direction as	A. Same B. Opposite C. perpendicular D. None of these
79	Vectors are those physical quantities which requires	A. Magnitude B. Magnitude and directions C. Direction D. None of these
80	The Physical quantity which has the dimensional formula M^1T^{-3} is	A. Surface tension B. Solar constant C. Density D. Compressibility
81	Total mass when silver coins are added to box as 2.2 kg, 0.01001 Kg and 0.01002 Kg correct to appropriate precision	A. 2.3 Kg B. 2.2 Kg C. 2.43 Kg D. 2.67 Kg
82	Physics deals with the study of	A. Matter and Energy B. Outer atmosphere C. Matter and Energy and their

	Physics deals with the study of:	C. Matter and Energy and their relationship D. None of these
83	Which pair includes a base unit and a derived unit	A. Candela,mole B. Joule,pascal C. Kilogram,meter D. Second Newton
84	The dimensional formula for latent heat is:	A. M[°]L²T¹ B. ML²T⁻² C. MLT⁻² D. ML²T⁻¹
85	Two forces of 10N and 15N are acting simultaneously on an object in the same direction Their resultant is.	A. Zero B. 5N C. 25N D. 150 N
86	One poise = _____.	A. 0.1 Nsm⁻² B. 0.1 Pascal second C. 1.01 x 10⁵N D. both A and B
87	Two forces P and Q have a resultant Perpendicular to P.the angle between the forces is:	A. tan⁻¹ (-P/Q) B. tan⁻¹(P/Q) C. sin⁻¹(P/Q) D. cos⁻¹ (-P/Q)
88	The ratio of nuclear magneton and and Bohr magneton is	A. m_e/m_p B. m_p/m_e C. m_e/m_p D. 2m_p/m_{ez}
89	Which branch of physics deal with the structure and properties of solids	A. Atomic Physics B. Plasma Physics C. Molecular Physics D. Solid state Physics
90	Can you add zero to a null vector ?	A. No B. Yes C. Yes in some cases D. None of these
91	The number of significant figures in all the given number 25.12.2009,4.156 and 1.257×10^{-4} is	A. 1 B. 2 C. 3 D. 4
92	The units of modulus of elasticity are	A. Nm⁻² B. Nm² C. Torr D. Both B and C
93	Significant figure in 0.00110	A. One B. Two C. Three D. Four
94	One micron is equivalent to	A. 10⁻⁴m B. 10⁻⁶m C. 10⁴m D. 10⁶m
95	The angle between rectangular components of a vector is	A. 0° B. 60° C. 90° D. 120°
96	Which one of the following groups have quantities that do not have the same dimensions?	A. Velocity,speed B. Pressure,stress C. Force,impulse D. Work,energy
97	Pick out the wrong pair:	A. Charge-coulomb B. Temperature-thermometer C. Pressure-barometer D. sp.gravity-hygrometer
98	The error is constant for _____ error	A. Random B. Systematic C. Both (a) and (b) D. None of these
99	For a measuring scale having least count of 10 kg, how many significant figure are there in 7000 kg	A. 1 B. 2 C. 3 D. 4

100	Indicate which pair of physical quantities given below has not the same units and dimensions?	A. Momentum and impulse B. Torque and angular momentum C. Acceleration and gravitational field strength D. Pressure and modulus of elasticity
101	The perpendicular distance from the axis of rotation to the line of the action of force is called	A. Linear distance B. Angular distance C. Momentum arm D. None of these
102	Zero error of the instrument is a type of _____	A. Random error B. Personal error C. Systematic error D. Classified error
103	1 year = _____.	A. 3.1536 x 10⁷s B. 3.1536 x 10⁻⁷s C. 3.1536 x 10¹⁰s D. 3.1536 x 10⁻¹⁰s
104	The correct unit of power is	A. Kilowatt B. Dynes C. Joule D. Kilowatt-hour
105	The correct unit of electric current in SI system is	A. Ampere B. Ampere/sec C. Coulomb sec D. Coulomb / meter
106	Plasma physics is the branch of physics deals with the	A. Atoms B. Molecules C. Ions D. None of these
107	In coordinate axes the right ward forces are taken as	A. Positive B. Negative C. Just units only D. None of these
108	The dimensional formula for angular momentum is:	A. (M°L²T⁻²) B. (ML²T⁻¹) C. (MLT⁻¹) D. (ML²T⁻²)
109	The physical sciences deals with	A. Living things B. Non-living things C. Both D. None of these
110	Diameter of the nucleus is of the order of	A. 10⁻¹⁰m B. 10⁻¹²m C. 10⁻¹⁵m D. 10⁻¹⁸m
111	Which one is least multiple?	A. exa B. femto C. atto D. nano
112	The coordinate axes are those in which lines are drawn	A. Parallel B. Perpendicular C. At right angle D. All of them
113	Is it possible to add a vector quantity to a scalar quantity ?	A. No B. Yes C. Never D. None of these
114	At the present time, the main frontiers of fundamental science are	A. 2 B. 3 C. 4 D. 5
115	Physics is an important and basic part of physical sciences which is a	A. Mathematical science B. Experimental science C. Statistical science D. None of these
116	Which one is not correct representation?	A. 5N B. 3 Newton C. 5 Newton

		D. both a and b
117	The coplanar forces acting on a body keep it in equilibrium so they be	A. Parallel B. Non=parallel C. Concurrent D. Non-concurrent
118	The cross product of parallel vectors has magnitude	A. Maximum value B. Minimum value C. Zero D. None of these
119	If L and R denote inductance and resistance respectively.then the dimensional formula of L/R is:	A. (M°L°T°) B. M°L°T° C. (M²L[°]T²) D. (MLT²)
120	The identity of an element is determined by:	A. the number of its protons B. the number of its electrons C. the number of its neutrons D. its atomic mass
121	For assessment of total uncertainty when percentage uncertainties are	A. Added B. Subtracted C. Divided D. Multiplied
122	The two vectors to be combined have magnitude 60 N and 35 N. Pick the correct answer from those given below and tell why is it the only one of the three that is correct. (i) 100 N (ii) 70 N (iii) 20 N	A. (i) is correct B. (ii) 20 N C. (iii) is correct D. (ii) may be correct
123	Period of audible sound waves is	A. 1 × 10⁻⁴ sec B. 1 × 10⁻³ sec C. 1 × 10⁻² sec D. 1 × 10⁻¹ sec
124	The positions of two aeroplanes at any instant are at A (2, 3, 4) and B(5, 6, 7) from the origin in km. Find the distance between the two aeroplanes.	A. 3.2 Km B. 4.9 Km C. 5.0 Km D. 5.2 Km
125	The SI unit of heat is:	A. Calorie B. Horse power C. Joule D. Watt
126	Minimum number of unequal forces whose vector sum can be zero is	A. 3 B. 4 C. 2 D. 5
127	The maximum and minimum magnitudes of the resultant of two given vectors are 17 units and 7 units respectively.If these two vectors are at right angles to each other.the magnitude of their resultant is	A. 14 B. 16 C. 18 D. 13
128	The unit of Stefan Boltzman constant σ is:	A. W/mK⁴ B. Cal/m³K² C. W/m²K⁴ D. K/m²K⁴
129	Dot product of two mutual perpendicular vector is:	A. 0 B. 1 C. ∞ D. None of these
130	Two forces of 4 dyne and 3 dyne act upon a body.The resultant force on the body can only be	A. Between 3 and 4 dyne B. Between 1 and 7 dyne C. More than 3 dyne D. More than 4 dyne
131	The most accurate measurement out of the following is	A. 2 cm B. 2.0 cm C. 2.00 cm D. 2.000 cm
132	Physical quantities are often divided into _____ categories	A. 3 B. 2 C. 9 D. 5
		A. Yes when the 2 vectors are same in magnitude and direction B. No

133	Can the resultant of 2 vectors be 0?	B. No C. Yes when the 2 vectors are same in magnitude but opposite in sense D. Yes when the 2 vectors are same in magnitude making an angle of 2π/3 with each other.
134	If a force of 20 N makes an angle of 60° with the y-axis,then its vertical component will be	A. 5 N B. 17.32 N C. 10 N D. 8.66 N
135	The body is in a state equilibrium when it is	A. At rest B. In motion C. In rotation D. None of these
136	Rectangular components are those which are	A. Right angle to each other B. Making angle of 90^O with each other C. Perpendicular to each other D. All of these
137	Physical quantities having no dimensions are called	A. Scalar B. Numerics C. Non physical Quantities D. None of these
138	Point out the element having atomic mass = 63.5465:	A. Br B. Zn C. Cu D. Ni
139	SI unit of temperature	A. Centigrade B. Celsius C. Kelvin D. All of these
140	The time of 30 vibrations of simple pendulum by stop water accurate upto one tenth of a second is 54.6 sec.	A. 1.82 ± 0.003 sec B. 2.82 ± 0.03 sec C. 2.82 ± 0.003 sec D. None of these
141	The angle between the vector 2i + 2j and the y-axis is	A. Tan⁻¹ (3/2) B. Tan⁻¹ (2/3) C. Sin⁻¹ (2/3) D. Cos⁻¹ (3/2)
142	If the direction of force acting on a body capable of rotating about a point is reversed than	A. Magnitude of torque changes and direction remains same B. Magnitude of torque changes and direction is reversed C. Magnitude and direction both changes D. Magnitude of torque remains same and direction is reversed
143	An airplane flies 400 m from north and then files 300 m south and then flies 1200 m upwards then net displacement is	A. 1200 m B. 1300 m C. 1400 m D. 1500 m
144	How many main frontiers are of fundamental science ?	A. One B. Two C. Three D. None of these
145	The vector product of two non zero vectors is zero when	A. They are parallel to each other B. They are perpendicular to each other C. They are equal vectors D. They are inclined at angle of 60°
146	Negative of vector can be made when	A. Magnitude is made negative B. Directions is reverse with negative magnitude C. Only direction is changed D. None of these
147	Smaller the least count of the instrument more is the measurement	A. Accurate B. Precise C. Accurate and precise D. None of these
148	Vector subtractions is made when vectors are just	A. Added B. First make it negative then add C. Only make it negative D. None of these
149	Two forces 3 N and 2 N are at an angle 0 such that the resultant is R.The first force is now increased to 6 N and the resultant becomes 2R.The value of θ is	A. 30° B. 60° C. 90°

		D. 120°
150	The uncertainty of any measurement may occur due to	A. Limitation to an instrument B. Natural vibrations of the object C. Natural imperfections of a persons sense D. All of these
151	For a quantity to be a vector it must has/have	A. Magnitude and direction B. Obey law of vector addition C. Both (a) and (b) D. Only (a)
152	Period of visible light waves is	A. 2 × 10⁻¹⁰ sec B. 2 × 10⁻¹¹ sec C. 2 × 10⁻¹⁴ sec D. 2 × 10⁻¹⁵ sec
153	Period of vibration of an atom in a solid is	A. 1 × 10⁻¹⁰ sec B. _{1 × 10}⁻¹³_{sec} C. 1 × 10⁻¹⁶ sec D. 1 × 10⁻¹⁹ sec
154	The fundamental unit which has same power in the dimensional formula of surface tension and viscosity is:	A. Mass B. Length C. Time D. None
155	Radian is the unit of	A. Solid Angle B. Plane Angle C. both a and b D. None of these
156	A null vector is defined as	A. Zero magnitude B. Arbitrary direction C. Fixed direction D. a and b
157	If two non zero vectors A and B obey the relation |A + B| = |A - B|.then the angle between them is:	A. 120° B. 90° C. 60° D. 0°
158	Radian is an angle which is	A. Solid angle B. Plane angle C. Angle D. None of these
159	How many the multiplications of vectors are ?	A. Three B. Two C. One D. None of these
160	According to the first condition for equilibrium, the vector sum of all the forces acting on a body must be equal to	A. The maximum value B. The minimum value C. A negative value D. Zero
161	If drag force is given by F = krv what could be the SI units of k	A. kgm²s⁻¹ B. kgm⁻²s⁻² C. kgm⁻¹s⁻¹ D. kgms⁻¹
162	The pair of quantities has same dimensions?	A. Power, Work B. Work, Torque C. Impulse, Linear momentum D. Both B and C
163	The error in the measurement of radius of sphere is 0.3% The maximum error in the measurement of its volume	A. 0.6% B. 0.9% C. 0.3% D. (4/3) π(0.3)²
164	The magnitude of torque determines its	A. Linear acceleration B. Angular acceleration C. Moment arm D. None of these
165	The dimensional formula of angular velocity is:	A. M[°]L[°]T⁻¹ B. MLT⁻¹ C. M[°]L[°]T⁻¹

166	The computer chips are made from	A. Semiconductor B. Conductor C. Silicon D. Sand
167	Light year is the unit of	A. Speed B. Mass C. Distnace D. Time
168	Age of the Universe is	A. 5 × 10¹⁵ sec B. 5 × 10¹⁷ sec C. 5 × 10¹⁹ sec D. None of these
169	The percentage errors in the measurement of mass and speed are 3% and 4% respectively.The maximum error in the measurement of kinetic energy is:	A. 11% B. 10% C. 8% D. 9%
170	One mole of $(NH_4)_2 HOP_4$ contains _ moles of hydrogen atoms:	A. 1 B. 5 C. 6 D. 9
171	The precision of measurement in physics depends	A. Average values B. Least count of instrument C. Error free instrument D. b and c
172	What type of science is Physics	A. Living things B. Non-living things C. Experimental science D. None of these
173	The magnitude of vector A,B and C are respectively 12,5 and 13 units and A + B = C then the angle between A and B is	A. 0 B. π C. π/2 D. π/4
174	Three students measured the length of needle with a meter rod Which of the following is correct measurement	A. 0.2145 m B. 0.21 m C. 0.2142 m D. None
175	In SI system the correct unit of amount of substance is	A. Litre B. Mole C. Millilitre D. Gram
176	A boat which has a speed of 5 km/h in still water crosses a river of width 1 km along the shortest path in 15 minutes.The velocity of the river in km/s is:	A. 1 B. 3 C. 4 D. √41
177	Distance to nearest galaxy from earth is	A. 10¹⁰m B. 10¹⁵m C. 10⁴⁰m D. 10³⁰m
178	Diameter of the atom is of the order of	A. 10⁻¹⁰m B. 10⁻¹²m C. 10⁻¹⁵m D. 10⁻⁹m
179	$KWm^{-2}$is the unit of	A. Power B. Energy C. Intensity D. Energy per unit area
180	If A x B = B x A,then the angle between A and B is	A. π B. π/3 C. π/2 D. π/4
181	Light year is measured in	A. Time B. Length C. Speed D. None of these
182	Wb/m^2 is equal to	A. Henry B. Watt C. Tesla D. Dynes
183	The SI units of the intensity of light are	A. Lux B. candela C. Pois

		D. None of these
184	Which of the following is dimensionally correct	A. Pressure = energy per unit area B. Pressure = energy per unit volume C. Pressure = force per unit volume D. Pressure = Momentum per unit volume per unit time
185	If coplanar forces acting on a body form a closed polygon, then the body is said to be in equilibrium	A. yes B. False C. Sometimes in equilibrium D. None of these
186	For assessment if total uncertainly in case of division	A. Absolute uncertainly are added B. Absolute uncertainty are subtracted C. Percentage uncertainties are added D. Percentage uncertainties are substracted
187	Can the magnitude of a vector have a negative value ?	A. No B. Yes C. yes in same cases D. None of these
188	Curie is the unit of	A. decay constant B. activity C. half-life D. average life
189	The resultant of two forces.one double the other in magnitude,is perpendicular to the smaller of the two forces.The angle between the two forces is	A. 120° B. 60° C. 90° D. 150°
190	If the dot product of two non-zero vectors vanishes,the vectors will be	A. In the same direction B. Opposite to each other C. Perpendicular to each other D. Zero
191	The ratio of SI units to CGS units of gravitational constant G will be	A. 10⁻³ B. 10 C. 10² D. 10³
192	The instrument used to gather information from the far side of the Universe is	A. Compound microscope B. Radio telescope C. Astronomical Telescope D. Simple mircroscope
193	A person walks first 10 km north and 20 km east.then the resultant vector is	A. 22.36 km B. 22.46 km C. 25.23 km D. 20.36 km
194	S,I unit of magnetic flux is	A. Weber metre⁻² B. Weber C. Weber per metre D. Weber per metre⁴
195	Which pair of the following force will never give resultant force of 2N?	A. 2 N and 2 N B. 1 N and 1 N C. 1 N and 3 N D. 1 N and 4 N
196	Under what circumstance would a vector have components that are equal in magnitude ?	A. 45^o , 145^o , 245^o B. 135^o , 225^o C. 45^o , 135^o , 225^o and 315^o D. None of these
197	The magnitude of the scalar product can also written as	A. Magnitude of vector and effective component of vector B. Vector and effective component of vector C. Vector and perpendicular component of vice vector D. None of these
198	What are the rations among the volumes of gases of $^{32}O_2$, $^{2}H_2$ and $^{16}CH_4$, If they taken in equal masses?	A. 2 : 16 : 1 B. 2 : 16 : 2 C. 1 : 1 : 1 D. 1 : 16 : 2
199	The magnitude of X and Y component of P are 7 and 6.The magnitude of X and Y components of P + Q are 11 and 9 respectively. What is the magnitude of Q	A. 9 B. 8 C. 6 D. 5
		A. 0°

200	The angle between two vectors -2î + 3ĵ + k̂ and î + 2ĵ-4k̂ is:	B. 90° C. 180° D. None of the above
201	Age of the Earth is	A. 14 × 10¹⁷ sec B. 1.4 × 10¹⁹ sec C. 1.4 × 10¹⁷ sec D. 1.4 × 10¹⁵ sec
202	The symbol for radian is	A. rad B. Rad C. rd D. rdn
203	One day is equal to	A. 5 × 10⁷ sec B. 6.6 × 10⁴ sec C. 9.3 × 10³ sec D. None of these
204	The mks unit of Mechanical Equivalent of heat is	A. Joulex calorie B. Joule/ calorie C. Calorie x erg D. erg/ calorie
205	The percentage uncertainties are when current I is following 0.84 ± 0.05 A due to potential difference 5.2 ± 0.1 V. The uncertainty of R is	A. 7.72 ± 0.5 ohm B. 6.62 ± 0.5 ohm C. 6.6 ± 0.5 ohm D. None of these
206	Derived quantities are those which can	A. Be subdivided B. Be derived from other quantities C. Not derived D. None of these
207	If the line of action of force passes through the axis of rotation or origin then its torque is	A. Maximum B. Zero C. Negative D. Non-zero
208	The torque is maximum when the angle between F and r is	A. 0^o B. 90^o C. 180^o D. 275^o
209	A science student takes 100 observations in an experiment Second time he takes 500 observations in the same experiment By doing so the possible error becomes	A. 5 times B. 1/5 times C. Unchanged D. None of these
210	Under same environment the measurement of a physical quantity gives different values. The error in measurement is called	A. Random error B. Systematic error C. Physical error D. Uncertainty
211	The torque is zero when the angle between F and r is	A. 90^o B. 180^o C. 270^o D. 0^o
212	Color printing uses just _____ colors	A. Seven B. five C. three D. four
213	A chocolate cookie is a circular disk of diameter 8.5 ± 0.02 cm and thicknes 0.050 ± 0.005 cm the average volume in cm^3 is	A. 2.83 ± 0.3 B. 2.38 ± 0.27 C. 11.35 ± 1.2 D. 9.31 ± 1.12
214	The whole range of colour printing uses just	A. 4 colours B. 3 colours C. 2 colours D. Red, blue, gray
215	When there are number of forces acting on a body and the body is	A. At rest B. Motion C. Rest or moving with uniform velocity D. None of these
216	Reduce the given number up to three significant figures 64.6546	A. 64.6 B. 64.7 C. 64.66 D. 64.65
217	Age of earth is approximately	A. 1.4 x 10¹⁷years B. 5 x 10¹⁷s C. 1.4 x 10⁻¹⁷s D. 1.4 x 10⁷

218	The SI unit gravitational potential is	A. Joule/Kg B. Kg/joule C. Joulex/Kg D. Joulex/Kg
219	For assessment of total uncertainty when added or subtracted the absolute uncertainties are	A. Multiplied B. Divided C. Added D. Subtracted
220	The SI units of torque is	A. Nm² B. Nm C. Nm⁻¹ D. Nm⁻²
221	How would the two vectors of the same magnitude have to be oriented. If they were to be combined to give a result equal to a vector of the same magnitude.	A. 60^o B. 120^o C. 270^o D. None of these
222	Torque is a turning effect of a	A. Body B. Momentum C. Force D. None of these
223	Which of the following are the units of intensity of light	A. Pois B. Lux C. Siemen D. candela
224	The travel time of light from Moon to Earth is	A. 2 min 10 sec B. 1 min C. 1 min 20 sec D. 3 min 30 sec
225	The dimensions of Young's Modulus are	A. [ML⁻¹T⁻¹] B. [ML⁻¹T⁻²] C. [MLT⁻²] D. [ML⁻²T⁻¹]
226	What quantity produces the angular acceleration in body	A. Momentum B. Inertia C. Moment of inertia D. Torque
227	How many ways vector can be represented	A. Bold letter B. Arrow over capital letter C. Graphically D. All ow them
228	The number 0.0023 should be expressed as	A. 0.023 × 10⁻² B. 0.23 × 10⁻⁴ C. 2.3 × 10⁻³ D. None of these
229	If the error in the measurement of radius of a sphere is 1% then the error in the measurement of volume will be	A. 1.1% B. 3% C. 5% D. 8%
230	When two axis are drawn at right to each other are called	A. Coordinate axes system B. Cartesian system C. Rectangular coordinate system D. All of these
231	The diameter of an atom is	A. 10⁻⁷ m B. 10⁻¹⁰ m C. 10⁻¹² m D. 10⁻¹⁴ m
232	The least count of stop watch is 0.10 sec,The time of 20 vibrations of pendulum is 40 sec The maximum possible percentage uncertainly in time period is	A. 0.016 B. 0.10 C. 0.001 D. 0.005
233	The derived unit of pressure is	A. kg/Ns B. kgm²/s² C. kg/m²s² D. kg/ms²
234	One ferms is equivalent to	A. 10⁻¹⁴ meter B. 10¹⁴ meter C. 10⁻¹⁵ meter D. 10¹⁴ meter
235	Reverse process of vector addition is called	A. Negative of a vector B. Subtraction of vector C. Resolution of a vector D. Multiplication of a vector

236	The number of seconds in one year are	A. 3.154 x 10⁶ B. 3.154 x 10⁵ C. 3.154 x 10⁴ D. 3.154 x 10⁷
237	In addition and subtraction	A. Percentage uncertainties are added B. Percentage uncertainties are subtracted C. Absolute uncertainties are added D. Absolute uncertainties are subtracted
238	According to equation $E = mc^2$ Kg mass is actually the enrgy	A. 8 × 10¹⁵ J B. 9 × 10¹⁷ J C. 9 × 10¹⁶ J D. 8 × 10¹⁵ J
239	The magnetic moment of electron is	A. 9.27 x 10⁻²⁴ joule/Tesla B. 9.27 x 10⁻²⁴ Tesla/joule C. 9.27 x 10⁻²³joule/Tesla D. 9.27 x 10⁻²³Tesla/joule
240	8.233 m, 2:105 m and 1.05 cm are the length, breadth and thickness respectively. Find volume of the sheet correct upto appropriate significant digits	A. 8.25 × 10⁻³ m³ B. 7.15 × 10⁻² m³ C. 7.85 × 10⁻² m³ D. None of these
241	The mass of electrons in Me V is	A. 1.02 Mev/C² B. 0.51 Mev/C² C. 51 Mev/C² D. 102 Mev/C²
242	The diameter of the milky way is	A. 10¹⁵ m B. 10¹⁷ m C. 10¹⁸ m D. 10²⁰ m
243	The unit of power is	A. Erg B. KW C. Watt D. both B and C
244	The dimensional formula of torque is:	A. [ML²T⁻²] B. [MLT⁻²] C. [ML⁻¹T²] D. [ML⁻²T⁻²]
245	A unit vector may be defined by the	A. Surface B. Direction by normal drawn vector C. Along the direction of surface D. a and b
246	Identify the correct unit of pressure among t bese	A. kgms⁻¹ B. kgm⁻¹s⁻² C. kgm²s⁻² D. kgm⁻²s⁻¹
247	The direction of torque is	A. Along F B. Along r C. Perpendicular plant formed by F and r D. None of these
248	The dimensional formula for modulus of rigidity is:	A. ML⁻¹T¹ B. ML⁻²T² C. MLT¹ D. ML⁻¹T⁻²
249	The Dimension of velocity is	A. [LT] B. [LT⁻¹] C. [L⁻¹T] D. None of these
250	Fractional error in a measured quantity is determined by	A. Measured value / Absolute error B. Absolute error / Measured value C. Measured value + Absolute error D. Measured value - Absolute error
251	Which of the following sets of concurrent forces may be in equilibrium?	A. F₁ - 3 N,F₂ - 5 N,F₃ = 6 N B. F₁ - 3 N,F₂ - 5 N,F₃ = 15 N C. F₁ - 3 N,F₂ - 5 N,F₃ = 1 N D. F₁ - 3 N,F₂ - 5 N,F₃ = 9 N
		A. Physical Quantities

252	Those quantities which can be measured accurately are known as	B. Scalar Quantities C. Vector Quantities D. Non Physical Quantities
253	Diameter of nucleus is	A. 10⁻¹² B. 10⁻¹⁵ C. 10⁻¹⁶ D. None of these
254	The SI unit of power is terms of base unit is	A. Watt B. Kgm²s⁻³ C. Kgm⁻²s⁻³ D. Kgm²s³
255	Five equal forces of 10N each are applied at one point and all are lying in one plane.If the angles between them are equal,the resultant force will be:	A. Zero B. 10 N C. 20 N D. 10 √2 N
256	If Rx is positive and Ry is negative, the resultant lies the fourth quadrant and its direction is	A. θ = 180 + Φ B. θ = 360 + Φ C. θ = 360 - Φ D. None of these
257	Position vector is a vector which is drawn	A. From one point to another B. From origin to that point C. Always from origin to that point D. None of these
258	The dimensions of pressure are	A. [ML²T⁻²] B. [ML-1T-2] C. [M²LT⁻¹] D. [M²LT⁻²]
259	Two forces of magnitude 7 N and 5 N act on a particle at an angle θ to each other.θ can have any value.The minimum magnitude of the resultant force is	A. 12 N B. 8 N C. 2 N D. 5 N
260	The example of vector product is	A. Torque B. Tangential velocity C. Angular momentum D. All of these
261	The difference between two separated positions are given as X_1 = 10.5 ± 0.1 cm and X_2 = 26.8 ± 0.1 cm. What is their absolute uncertainty	A. 1.63 ± 0.1 cm B. 16.3 ± 0.2 cm C. 3 ± 0.1 cm D. 16.3 ± 0.05 cm
262	Planck's constant has the dimensions of:	A. Energy B. Momentum C. Frequency D. Angular momentun
263	The Dimensions of volume is	A. [V³]⁻¹ B. [L⁻³] C. [L]³ D. None of these
264	If the resultant of n forces of different magnitudes acting at a point is zero, then the minimum value of n is	A. 1 B. 2 C. 3 D. 4
265	The percentage errors in the measurements of mass and speed are 2% and 3% respectively.How much will be the maximum error in the estimate of the kinetic energy obtained by measuring mass and speed.	A. 11% B. 8% C. 5% D. 1%
266	The expression of scientific notation is	A. One non-zero digit left of decimal B. One zero digit left of decimal C. Two zeros and one non-zero digits left of the decimal D. None of these
267	In CGS system the units of dynamic viscosity are	A. Nsm⁻² B. Poise C. Nm⁻² D. None of these
268	Rectangular components of a vector are those which have angle between them	A. 30^o B. 60^o C. 90^o D. 0^o
269	A boy walks uniformly along the sides of a rectangular park of size 400 m x 300 m.starting from one corner to the other corner diagonally opposite.Which of the following statements is incorrect?	A. He has traveled a distance of 700 m B. His displacement is 700 m C. His displacement is 500 m D. His velocity is not uniform throughout the

		walk.
270	The Dimension of length is	A. [L]⁰ B. [L]⁻¹ C. [L] D. None of these
271	In coordinate axes, the left ward forces are taken as	A. Positive B. Negative C. Just units only D. None of these
272	Aerodynamics is a branch of physics deals with the	A. Thermodynamics B. Hydrodynamics C. Dynamics D. None of these
273	The velocity v of a particle at time t is given by: v = at + b/t + c The dimensional formula of a, b and c care respectively:	A. L²;T and LT² B. LT²; LT and L C. LT²; L and T D. L;LT and T⁻²
274	The number of significant figures in 5850 is	A. 3 B. 4 C. 5 D. 2
275	The fundamental quantities which form the base for the SI systems are:	A. Mass, energy and time B. Mass, force and time C. Mass, length and time D. Force, length and time
276	One watt-hour is equivalent to	A. 3.6 x 10³ joule B. 3.6 x 10⁻³ joule C. 6.3 x 10³ joule D. 6.3 x 10⁻³ joule
277	The motion without consideration of its cause is studied in:	A. Kinematics B. Mechanics C. Statics D. Modern Physics
278	Three bodies are of masses m_1 = 2.2 kg, m_2 = 10.02 g and m_3 = 10.01 g, the sum of their masses up to the appropriate is	A. 2.2 kg B. 2.203 kg C. 2.023 kg D. 2.0202 kg
279	Identify the vector quantity	A. Heat B. Angular momentum C. Time D. Work
280	The magnitude of i^2 in scalar product is	A. Zero B. 1 C. Less than 1 D. Greater than 0
281	Multiplication of a vector is carried out by a	A. Number B. Direction C. Number and direction D. None of these
282	If unit of length mass and time each be doubled the unit of work done is increased by	A. 4 times B. 6 times C. 8 times D. 2 times
283	Which of the following lists of physical quantities consists only of vectors:	A. Time,temperature,velocity B. Force,volume,momentum C. Velocity,acceleration,mass D. Force,acceleration,velocity
284	The dimensions $[MLT^{-2}]$ refer to the quantity	A. Acceleration B. Velocity C. Force D. Momentum
285	How many wavelengths of Kr^{86} are these in one metre?	A. 1553164.13 B. 1650763.73 C. 2348123.73 D. 652189.63
286	A force of 10N is acting along y-axis.Its component along x-axis is	A. 10N B. 20N C. 100N D. ZeroN
		A. Torque B. Momentum

287	The rotational analogue of force is	B. Momentum C. Moment of inertia D. None of these
288	A component of a vector has its	A. Normal value B. Effective value C. Given direction D. b and c
289	Supplementary unit/units in S.I. Units are	A. Radian B. Steradian C. Candela D. a and b
290	The second condition for equilibrium describes that	A. ΣFx = 0 B. ΣF_y = 0 C. ΣF = 0 D. Στ = 0
291	The body is in equilibrium when it is in a state of	A. Accelerated motion B. Uniform motion C. Rest or uniform motion D. None of these
292	When the second condition for equilibrium, is satisfied then there is no	A. Linear acceleration B. Angular acceleration C. Both D. None of these
293	Prefix pico stands for	A. 10⁻⁹ B. 10⁻⁶ C. 10⁻¹⁵ D. 10⁻¹²
294	Angular momentum is	A. A scalar B. A vector C. Neither A.nor B. D. Either A.or B.
295	The horizontal component of a force at an angle 60° with it is 50N. The value of force is	A. 43.3 N B. 50 N C. 100 N D. 120 N
296	If (a x b) points along positive z-axis,then the vectors a and b must lie in.	A. yz-plane B. zx-plane C. xy-plane D. None of the above
297	Steradian is an angle of	A. One dimensional angle B. Two dimensional angle C. Three dimensional angle D. None of these
298	The relativistic mechanics in which object move	A. Less than C B. Greater than C C. Equal to C D. Approach to C
299	Number of supplementary units are	A. three B. two C. seven D. five
300	nuclear physics deals with	A. Atom B. Atomic nuclei C. Elementary particles D. Light
301	From the following pairs,choose the pair that does not have identical dimensions	A. Angular momentum and Planck's constant B. Moment of inertia and Moment of force C. Work and Torque D. Impulse and Momentum
302	When R^x is negative and R^y is positive, the resultant lies in the second quadrant and its direction is	A. θ = 90 + Φ B. θ = 180 - Φ C. θ = 180 + Φ D. None of these
303	Two forces are acting together on an object.The magnitude of their resultant is minimum when the angle between the force is:	A. 0° B. 60° C. 120° D. 180°
304	The angle between A and B is θ.The value of the triple product A,(B x A) is:	A. A²B B. Zero C. A²B sin θ D. A²B Cos θ
		A. Its unit is N/m²

305	The correct statement about poissons ratio is	A. Its unit is NM² B. It is dimensionless C. Its unit is Newton D. Its dimensions MLT²
306	Systematic error refers to an effect that influences particular quantity for the measurements which are	A. All B. Some C. None D. a and b
307	Which of the following is a scalar quantity	A. Density B. Displacement C. Torque D. Weight
308	Torque is zero if	A. Moment arm is zero B. Body is at rest C. Uniform angular acceleration D. None of these
309	How many wave lengths of Kr^{86} are contained in one meter	A. 1553164.13 B. 652189.63 C. 2347127.23 D. 1650763.73
310	If resultant of two forces (F and F) acting on a point is F,then the angle between two forces is.	A. 0° B. 45° C. 60° D. 120°
311	The magnitude of the scalar product is	A. AB sin Φ B. AB cos Φ C. AB D. None of these
312	SI Unit of power is	A. Joule B. Pound C. Watt D. Dyne
313	The study of nature has been classified into branches are:	A. Two B. Three C. Four D. None of these
314	Physical sciences deals with	A. Living things B. Nonliving things C. Both living and non- living D. Non of these
315	The branch of physics which concerned with the ultimate particles of which the universe is composed is known as	A. Solid state Physics B. Particle Physics C. Nuclear Physics D. Atomic physics
316	In integers such as 8,000 Kg, significant zeros are determined by the instrument when least count is 1 Kg	A. 8.00 × 10³ Kg B. 8.000 × 10³ Kg C. 8.00 × 10³ Kg D. 8.0 × 10³ Kg
317	Random error occurs when repeated measurements of the quantity under the same conditions gives	A. Equal values B. Different values C. Increasing values D. None of these
318	If C and R denote capacity and resistance,the dimensional formula of CR is	A. M°L°T⁻¹ B. M°L°T° C. M°L°T° D. Not expressible in terms of MLT
319	SI unit of water equivalent of electrons is	A. Kg B. Kg² C. Kg³ D. Kg¹
320	A precise measurement is the one which has	A. Absolute uncertainty B. Less absolute uncertainty C. More absolute uncertainty D. None of these
321	The siemens is the SI unit of	A. Resistance B. Specific Resistance C. Conductance D. Inductance
322	The Dimension of Force is	A. [MLT⁻²] B. [MLT²] C. [ML²T⁻²] D. None of these

323	The dimensions [MLT^{-1}] refers to the quantity	A. Momentum B. Angular frequency C. Angular displacement D. Angular acceleration
324	Which of the given quantity is a vector	A. Pressure B. Momentum C. Kinetic energy D. Volume
325	The cross product of two perpendicular vectors has magnitude	A. Maximum value B. Minimum value C. Zero D. None of these
326	In SI system the correct unit of Planck's constant is	A. Kelvin B. Js C. Lux D. Candela
327	Mathematically the first condition for equilibrium can be expressed as	A. ΣF_x = 0 B. ΣF_y = 0 C. ΣFx = 0 and ΣF_y = 0 D. ΣFx = 0 or ΣF_y = 0
328	Coplanar forces are those, which act on a	A. Single plane B. All planes C. Common plane D. None of these
329	In the measurement 12.7 measures	A. One accurately known digit B. Tow accurately known digit C. Two accurately known digit and one doubtfull D. None of these
330	Length can not be measured by	A. Fermi B. Debye C. Micron D. Light year
331	When three forces acting at a point are in equilibrium then	A. Each force is numerically equal to the sum of the other two B. Each force is numerically greater than the sum of the other two C. Each force is numerically greater than the difference of the other two D. None of the above
332	The torque is taken as positive when it is	A. Clockwise B. Anticlockwise C. Both D. None of these
333	One year is equal to	A. 4.3 × 10¹⁰ sec B. 4.4 × 10⁸ sec C. 3.12 × 10⁷ sec D. 3.2 × 10⁶ sec
334	If we keep the moment arm, fixed while change the force, then, the torque is	A. Changed B. Does not change C. Some what change D. None of these
335	Can a vector have a component greater than the vectors magnitude ?	A. yes B. No C. yes in some cases D. None of these
336	Which one is numeric quantity?	A. Strain B. Plane Angle C. Impulse D. both A and B
337	Total number of base units are	A. three B. five C. seven D. nine
338	The minimum number of unequal forces whose vector sum can be zero is	A. 3 B. 2 C. 1 D. 4
339	The dimensions of the coefficient of viscosity are	A. [ML⁻¹T¹] B. [MLT] C. [M⁻¹L⁻¹T¹] D.

		[M⁰L⁰T⁰]
340	In colour printing, the entire range of colours uses just	A. Three colours B. Four colours C. Five colours D. None of these
341	The dimensions of velocity gradient are same as that of	A. Frequency B. Time period C. Angular accelerations D. Accelerations
342	The unit of Planck's constant h is same as that of	A. Energy B. Work C. Linear momentum D. Angular momentum
343	When 400.1 is added to 20.54 we get	A. 420 B. 420.65 C. 420.1 D. 420.6
344	Length of a metal cylinder with the help of a vernier callipers of least count 0.01 cm is 5.35 cm. Its percentage uncertainty in length is	A. 2% B. 2.3% C. 0.2% D. 0.3 %
345	The error of any measurement may occur due to	A. Negligence B. Faulty apparatus C. Inappropriate method D. All of these
346	The ratio of the atomic radius to nuclear radius is	A. 10⁴ B. 10⁻⁴ C. 10² D. 10⁻²
347	To decrease timing uncertainly	A. Increase number of vibration B. Decrease number of vibration C. Increase length of pendulum D. Decrease length of pendulum
348	The maximum value of plane angle is	A. 2π radian B. 360° C. One revolution D. All of these
349	Two equal forces (P each) act at a point inclined to each other at an angle of 120°.The magnitude of their resultant is	A. P/2 B. P/4 C. P D. 2P
350	The dimension of gravitational constant G are	A. [ML²T⁻²] B. [M⁻¹L³T⁻²] C. [M⁻¹L²T⁻¹] D. [M⁻¹L⁻²T⁻²]
351	The formula for the volume of a sphere is	A. 4 π² B. 4/3 π³ C. 4/3 π² D. 5/3 π³
352	Dimensions of refractive index	A. [M°L°T°] B. [MLT] C. [ML⁻¹T⁻¹] D. None
353	The dimensions of co-efficient of viscosity are	A. [ML⁻¹T⁻¹] B. [ML⁻²T⁻¹] C. [ML²T⁻³] D. [ML³T⁻¹]
		A. 4 N

354	Two forces of 12 N and 8 N act upon a body.The resultant force on the body has a maximum value of:	A. 4 N B. 0 N C. 20 N D. 8 N
355	Dimension of G are	A. [ML³T²] B. [M⁻¹L²T²] C. [M⁻¹L³T²] D. [M⁻¹L³T²]
356	The dimension stands for the nature of a physical quantity which is	A. Quantitative B. uantitative C. Numerical D. None of these
357	A body in equilibrium implies that it is no moving nor rotating	A. True B. False C. Sometimes in equilibrium D. None of these
358	Pascal is a unit of	A. Mass B. Power C. Pressure D. Intensity of light
359	The sum of two forces acting at a point is 16 N.if the resultant force is 8 N and its direction is perpendicular to minimum force then the forces are	A. 6 N and 10 N B. 8 N and 8 N C. 4 N and 12 N D. 2 N and 14 N
360	If L and R represent inductance and resistance respectively,then dimensional formula of L/R will be	A. ML°T° B. M°L°T C. M°L°T⁻² D. M°LT⁻²
361	The energy equivalent to the mass of one Kilogram is	A. 3 x 10⁸j B. 931 Mev C. 9 x 10¹⁶m D. 25 Mev
362	$N\text{-}kg^{-1}$ is the unit of	A. Velocity B. Force C. Acceleration D. None of these
363	Which pair of quantities are not derived quantities?	A. Charge, Current B. Current, Intensity of Light C. solid angle, plane angle D. None of these
364	The units of the temperature coefficient of resistant are	A. ΩK⁻¹ B. K⁻¹ C. ΩK D. (ΩK)⁻¹
365	Pico is the prefix for	A. 10⁻¹⁰ B. 10⁻¹² C. 10⁻¹⁵ D. 10⁻¹⁸
366	Scientific notation which can be expressed in the	A. Negative powers B. Powers of ten C. Decimals D. None of these
367	An are equal to half of the radius subtend angle of _____ at the center of circle.	A. .π rad B. 2π rad C. 1/2π rad D. 1/2 rad
368	Which color is not used in the combination of colors for color printing?	A. cyan B. magenta C. green D. yellow
369	The dimensions of $\frac{1}{2}at^2$ are of	A. length B. Velocity C. Acceleration D. Tlme
		A. MLT⁻²

370	Demension of torque is	B. ML²T⁻¹ C. ML²T⁻² D. ML²T²
371	When a vector is multiplied by a scalar, the product of the quantity will be	A. A new vector quantity B. New direction C. Same direction D. a and c
372	A physical quantity which has both magnitude and direction but does not satisfies parallelogram law of addition	A. Must be a vector B. May be both scalar and vector C. Scalar D. None
373	Identify the pair whose dimensions are equal	A. Torque and work B. Stress and energy C. Force and stress D. Force and work
374	The magnitude of work is zero when the angle between force and displacement is	A. 0^o B. 90^o C. 10^o D. None of these
375	A body is in complete equilibrium when	A. ΣF = 0 B. Στ = 0 C. SF = 0 and Στ = 0 D. None of these
376	The compound having highest %age of oxygen is:	A. CH₃COOH B. C₂H₅OH C. H₂O D. CH3COCH₃
377	Accuracy of a measurement depends on	A. Percentage uncertainty B. Fractional uncertainty C. Less absolutely D. None of these
378	Which of the following quantities is a vector	A. Volume B. Temperature C. Displacement D. Density
379	The torque is taken as negative when it is	A. Clockwise B. Anticlockwise C. Both D. None of these
380	The SI unit of gravitational constant G is:	A. m³kg⁻¹s⁻² B. m²kg⁻² C. Jmkg⁻¹ D. None of these
381	In the self-cross product the angle is	A. 0° B. 45° C. 90° D. 180°
382	The dimensions $[ML^2T^{-2}]$ refers to the quantity	A. Work B. Spring constant C. Torque D. Both A and C
383	One electrostatic unit (esu) of charge is equivalent to	A. 3.3 x 10 coulomb B. 3.3 x 10⁻⁹coulomb C. 3.3 x 10⁻¹⁰coulomb D. 3.3 x 10⁻¹¹coulomb
384	The self product of two vectors in cross product is	A. Zero B. Square of vector C. Only same vector D. None of these
385	If a body has zero acceleration, it means that it is	A. At rest B. Uniform velocity C. Both D. None of these
386	If the error in the measurement radius of a sphere is 1% then the error in the measurement of volume will be	A. 8% B. 5% C. 3% D. 1%
387	Two forces are such that the sum of their magnitudes is 18 N and their resultant is perpendicular to the smaller forces and the magnitude of resultant is 12.Then the	A. 12 N,6 N B. 13 N,5 N C. 10 N,8 N

	magnitude of the forces are	D. 16 N,2 N
388	One light year = _____.	A. 9.5 x 10⁻¹⁵m B. 9.5 x 10¹⁵m C. 9.5 x 10⁻¹²m D. 9.5 x 10¹²m
389	Si system is based upon _____ kind of units	A. One B. Two C. Three D. Four
390	If the unit of length, mass and time each be doubled, the unit of work is increased by	A. 2 times B. 6 times C. 4 times D. 8 times
391	Unit of universal gas constant is SI is:	A. W K⁻¹ mol⁻¹ B. J/Nk⁻¹ mol⁻¹ C. Jk⁻¹ mol⁻¹ D. erg K⁻¹ mol⁻¹
392	If one of the rectangular components of a vector is not zero, can its magnitude be zero	A. It is zero B. It if not zero C. It may be negative D. None of these
393	A unit vector is defined as	A. Whose magnitude is one B. Show the given direction C. Opposite direction D. a and b
394	Which of the following quantities has not been expressed in proper units?	A. Stress/Strain= Newton/metre² B. Surface tension = Newton/metre C. Energy = kg m/s D. Pressure = newton/metre²
395	Debye is the unit of	A. Magnetic dipole moment B. Electric dipole moment C. Density D. RMS velocity
396	Travel time of light from sun to earth is	A. 8 hours 20 minutes B. 8 minutes 20 seconds C. 1 minutes 20 seconds D. 5 hour 20 seconds
397	Radian and Steradian are _____ units.	A. Base B. Derive C. Supplementary D. None of these
398	The dot product of two vectors is negative when	A. They are parallel vectors B. They are anti-parallel vectors C. They are perpendicular vectors D. None of the above is correct
399	The rectangular components of force 5 dyne are	A. 3 and 4 dyne B. 2.5 and 25 dyne C. 1 and 2 dyne D. 2 and 3 dyne
400	The number 134.7 should be written as	A. 13.47 × 10² B. 1.347 × 10² C. 13.47 × 10³ D. None of these
401	The dimensions of intensity of energy are	A. MLT⁺²⁷T¹ B. MLT²T² C. ML³ D. MLT⁻²T³
402	By dimensional analysis, we can find	A. Correctness of formula B. Derivation of formula C. Physical nature D. All of these
403	The direction of torque can be determined by	A. Head to tail rule B. Right hand rule C. Left hand rule D. None of these
404	The percentage uncertainty in measuring the volume of sphere measured by calipers callipers is when r = 2.25 ± 0.01 cm with least count ± 0.01 cm	A. 46.7 ± 0.5 cm² B. 47.7 ± 0.5 cm³ C. 47.7 ± 0.6 cm³ D. 477.6 ± 0.6 cm³
		A. 5 x 10¹⁷ sec

405	The age of universe is	B. 1.4 x 10¹⁷ sec C. 3.2 x 10⁷ sec D. 8.6 x 10⁴ sec
406	The system international (SI) is built from _____ kind of units	A. Two B. three C. four D. five
407	Light year is a unit of	A. Distance B. Speed C. Acceleration D. intensity
408	The distance from Earth to Sun is	A. 10⁹ m B. 10⁸ m C. 10¹⁰ m D. 10¹¹ m
409	Which of the following is a scalar quantity?	A. Displacement B. Electric field C. Acceleration D. Work
410	What are the base units of Planks constant h Remember the energy of a photon is given by h*f* where *f* element the frequency	A. kgms⁻¹ B. kgm²s⁻¹ C. kgm²s⁻² D. kgm²s⁻³
411	Vector A lies in the XY-plane. For what orientation will its components have opposite signs ?	A. II-quadrant B. III-quadrant C. IV-quadrant D. a and c
412	The dimensions $[MLT^{-1}]$ refers to the quantity	A. Force B. Momentum C. Impulse D. None of these
413	Torque is a physical quantity which is	A. Scalar quantity B. Vector quantity C. Constant quantity D. None of these
414	An axis which is at right angle to both X and Y and Y axes direction is in space is called	A. Unit vector axis B. Zero vector axis C. Z-axis D. None of these
415	Which of the following is the smallest unit?	A. Millimeter B. Angstrom C. Fermi D. Metre
416	The angle subtended at the center of sphere by an area of its surface equal to the half of square of its radius is	A. 1 sr B. 2 sr C. 1/2 sr D. none of these
417	Equal vectors are said to be equal if by have	A. Same magnitude and direction B. Same magnitude and opposite C. No position of initial points D. Direction a and b
418	Which of the following quantity is expressed as force per unit area?	A. Work B. Pressure C. Volume D. Area
419	Find the angle between two forces of equal magnitude of their resultant is also equal to the magnitude of either of these forces	A. 60^o B. 120^o C. 180^o D. 360^o
420	Computer chips are made from	A. Conductors B. Semiconductors C. Insulators D. Both A and B
421	Astrophysics is the branch of physics deals with the	A. Physics of oceans B. Physics of stars and galaxies C. Physics of earth crust D. None of these
422	Position vector is a vector, which describes the	A. Location of a point with respect to origin B. Location of point with respect to any point C. Location of a point with respect to some related point D. None of these

423	The dimensions of the quantities in one of the following pairs are the same.identify the pairs.	A. Torque and work B. Angular momentum and work C. Energy and Young's modulus D. Light year and time
424	Two equal, antiparallel and non-collinear forces are called	A. Net force B. Couple C. Torque D. None of these
425	The resultant of two equal forces is double of either of the force.The angle between them is	A. 0° B. 60° C. 90° D. 120°
426	Which of the following is equal to: joule x ohm /volt x second?	A. Ampere B. Volt C. Watt D. Tesla
427	Unit of solid angle is	A. Radian B. Degree C. Steradian D. Revolution
428	Steradian is a unit of	A. Radius B. Plane angle C. Solid angle D. None of these
429	The dimensions of torque is	A. [MLT⁻²] B. [ML²T⁻²] C. [ML²T⁻¹] D. [MLT]
430	Which of the following pairs of electrical units are the units equivalent?	A. Coulomb; As⁻¹ B. Farad ; C⁻¹V C. Pascal: Nm⁻² D. Volt ; JC
431	Precision or absolute uncertainty and the least count have the relation in which absolute	A. uncertainties is double the least count B. Equal the least count C. Half the least count D. None of these
432	The length breadth and thickness of a block are given by 1= 12 cm b= 6 cm and t= 2.45 cm.the volume of the block according to the idea of significant figures should be:	A. 1 x10² cm³ B. 2 x 10² cm³ C. 1.763 x 10² cm³ D. None of these
433	The dimensions of work are	A. [MLT⁻²] B. [ML²T⁻¹] C. [ML²T²] D. [ML²T⁻²]
434	Two forces of 6 N and 8 N can produce a resultant of	A. 0 N B. 1 N C. 10 N D. 18 N
435	Types of physical quantities are	A. one B. Two C. Three D. None of these
436	The principle characteristics of an ideal standard are	A. Inaccessible and invariable B. accessible and invariable C. Accessible and variable D. None of these
437	In the assessment of total uncertainties when power factor is involved, the percentage uncertainty is	A. Added B. Multiplied by that power C. Divided by that power D. None of these
438	Reduce the following figure up to three significant figure 64.4567	A. 64.5 B. 64.4 C. 64.3 D. None
439	The unit of inductance is equivalent to	A. V xs/A B. V xA/s C. V x s/v D. V/A x s
440	Volume of metal cylinder with the help of a vernier callipers of least count 0.01 cm when diameter is 1.22 cm and length 5.35 cm. Find its uncertainty as	A. 6.02 ± 0.1 cm³ B. 6.2 ± 0.1 cm³ C. 6.25 ± 0.1 cm²

		D. 6.3 ± 0.1 cm³
441	Which of the following is not the unit of time	A. Leap year B. Lunar month C. Solar day D. Parallactic second
442	Solid angle is	A. Two dimensional angle B. Three dimensional angle C. One dimensional angle D. Multi-dimensional angle
443	Which of the following is not measured in units of energy	A. Couple (angle turned through) B. Moment of inertia (angular velocity) ² C. Force (distance) D. Force (time)