Sr.	**Question**	**I**	**B**	**C**	**D**
1.	Error occurs due to negligence and inexperience of a person is:	Systematic Error	Random Error	Personal Error	None
2.	If I=0.84 ± 0.05A, R=6.2 ±0.5Ω and V=IR, then V is:	5.2 ±0.1 V	5.2 ±0.01 V	5.2 ±1.0 V	5.2 ±1.1 V
3.	An accurate measurement is one which has less	Percision	Absolute uncertainity	Fractional un certainity	Nonr
4.	In the first segment a force F acts through a distance L. in the second segment the force is increased to 3F and act through a distance of 2L. The ratio of work during the 1^{st} and 2^{nd} segment will be:	1:2	1:3	1:4	1:6
5.	Work done will be zero at angle	0°	90°	180°	270°
6.	The percentage uncertainty in radius of a circle is 2%. The percentage uncertainty in area of the circle is:	2%	4%	6%	8%
7.	Which pair of physical quantities has same dimensions?	Work and torque	G and g	Momentum and force	Time period and frequency

8.	The formula of time period T=Vl/g have same dimensions with	acceleration	Time	Velocity	Mass
9.	The dimensional formula for the quantity light yearis:	[$M^0 L^o$ T]	[M1LT]	[M^1LT}	None
10.	How many years in one second?	3.1 × 10-3years	3.1 × 10 -8years	3.1 × 10-6years	3.1 × 10-2years
11.	A 2 m tall man standing at the top of a 30 m tall tower raises a 1 kg mass 0.5 m above his head. The P.E of the raised mass may be considered to be:	4.9 J	24.5 J	316.5 J	All the above
12.	A worker pushes a wheelbarrow with a force of 50N over a levelled distance of 5m. If a frictional force of 43N acts on the wheelbarrow in a direction opposite to that of the worker, the net work done on the wheelbarrow is:	67J	55J	43J	35J
13.	Escape velocity on the surface of the earth is 11.2km/s. If mass and radius of the earth each is	5.6km/s	11.2km/s	22.4km/s	33.6km/s

	doubled, the escape velocity will be:				
14.	A man travels a distance of 10m in 2min and start pushing a wall for 5min. the work done on the wall is:	zero	5J	20J	50J
15.	Two waves of equal frequency travelling in opposite direction produce:	Interference	Stationary waves	Beats	Doppler`s Effect
16.	In the first segment a force F acts through a distance L. in the second segment the force is increased to 2F and act through a distance of 2L. The ratio of work during the 1st and 2nd segment will be:	1:2	1:3	1:4	1:6
17.	basic postulate of Einstein's theory of relativity is:	moving clocks run more slowly than when they are at rest	moving rods are shorter than when they are at rest	light has both wave and particle properties	Law of physics will same in all inertial frame of reference
18.	If 'λ' is the wavelength of sound wave in air column, in the first wavelength in the 3rd mode for closed pipe of length '/' will be:	$\frac{4l}{3}$	$\frac{4l}{5}$	$\frac{4l}{7}$	$\frac{2l}{3}$
19.	15. Light from some stars shows an apparent change in frequency because of:	Interference	Refraction by layers of air	Dopplers effect	Beats

20.	A satellite moving round the earth constitutes	An inertial frame of reference	Non inertial frame	Neither inertial nor non inertial	either inertial nor non inertial
21.	If a body of mass 10 kg is allowed to fall freely, its weight becomes.	0	9.8N	98N	10N
22.	Example of ductile substances is :	Lead	Copper	Wrought iron	None
23.	Two similar charges each of one coulomb placed in the air one meter apart repel each other with a force	9 x 109N	9.2 x 104N	9 x 109N	9 x 107N
24.	A hollow metallic sphere of 8cm diameter is charged with 4 x 10^8C. The potential on its surface will be	900 volts	9000 volts	90 volts	Zero
25.	A field in which the work done in a moving a body along closed path is zero is called	Electric Field	Electric Force	Frictional forces	Normal Forces
26.	An elevator weighting 3.5 N is raised to a height of 1000 cm in the absence of friction, the work done is :	35J	350 J	3.5 J	3500 J
27.	When the speed of a moving body is doubled, then.	Its K.E is doubled	Its acceleration is doubled	Its P.E is doubled	Its momentum is doubled
28.	A 2 m tall man standing at the top of a 30 m tall tower raises a 1 kg mass 0.5 m above his head. The P.E of	4.9 J	24.5 J	316.5 J	All of the above

	the raised mass may be considered to be:				
29.	The waves that require a material medium for their propagation are called	Matter Waves	Electromagnetic wave	Carrier waves	Mechanical wave
30.	The speed of sound in air at is 0 ^{o}C 333m/s. The speed at 2^{o}C will be:	332.3 m/s	330 m/s	333.2 m/s	335 m/s
31.	In a stationary wave, the particle velocity at the node	Maximum	Minimum	Zero	Constant
32.	Two point charges q_1 and q_2 are placed at distance 'd'. The force of attraction between them is 'F'. At what distance apart should these charges be kept so that force between them is one quarter	d/4	d/2	2d	4d
33.		4E	2E	E	1/2E
34.	The intensity of a wave depends on the amplitude. The intensity is also proportional to the square of the frequency. A wave has frequency 3Hz, amplitude 1.5cm and intensity I. what is the intensity of a similar wave of frequency 6Hz and amplitude 0.5cm?	4/9I	4/3I	9/4I	36I

35.	Sound wave is emitted from a point source. The intensity of a sound wave is inversely proportional to the square of the distance from the source. At a distance r from the source, the amplitude of the wave is 8X. what is the amplitude at a distance 2r from the source?	8X	X	2X	4X
36.	When the light from two lamps falls on a screen, no interference pattern can be obtained because	The lamps are not point sources	The light from the lamps is not coherent	The lamps emit light of different amplitude	The light from the lamps is white
37.	19. Periodic alteration of sound between maximum and minimum loudness are called	Interference	Resonance	Dopplers`s effect	Beats
38.	Electric field strength between a pair of parallel plates is E. the separation of the plates is doubled and the potential difference between the plates is increased by a factor of four. The new electric field strength is	2E	E	4E	3E
39.	What is the value of the potential gradient at a point in an electric field?	The electrical potential energy of a unit positive	The electric field strength at that point	The force acting on a unit negative charge at that point	The work done to move unit negative charge from

		charge at that point			infinity to that point
40.	The distance between any two consecutive crests or troughs is called	Frequency	Period	Wavelength	Phase difference
41.	If velocity of a body becomes equal to '**c'** the velocity of light then its mass becomes:	0kg	1kg	$m=m_o$	m=infinity
42.	Beats can be heard when the difference of frequency is not more than:	8	4	6	10
43.	Two wave trains of the same amplitude and frequency travelling in opposite directions along the same path in the same medium produce:	Resonance	Beats	Standing wave	Musical notes
44.	Stationary waves are generated on a string of length "l", its fundamental frequency is given by:.	v/2l	V x l	2 (v X l)	2l/v
45.	The fixed ends of a vibrating string are	antinodes	Nodes	overtones	Neither nodes nor antinodes
46.	Stars moving towards the earth show:	Blue Shift	Red Shift	No shift	Longer wavelength
47.	Two up quarks and one down quark makes a:	Proton	Neutron	Photon	Meson

48.	Radar system is an application of:	Interference	Beats	Stationary	Doppler`s Effect
	A student measures value of g of simple pendulum error in measurement of length is 2% and in measurement of time period is 3%. The percentage uncertainty in resultant value of g will be:	1%	5%	7%	8%
50	In open organ pipe	Only even harmonics are present	Only odd harmonic are present	Both even and odd harmonic are present	Only selected harmonic are present
51.	Two bodies X of mass 4Kg and Y of mass 6Kg, have same Linear momentum. If K.E of Y is 48J then what would be the K.E of X:	48J	64J	72J	96J
52.	A 10Kg satellite completes 1 revolution around the Earth at height of 100Km in 108 minutes. What would be the Work done by the Earth's gravitational field:	100J	$\frac{100 \times 10}{108}$ J	$\frac{108 \times 10}{100}$ J	$108 \times 100 \times 10$ J
53.	Two electrons are brought together closer. What would be the effect on its P.E:	Become Zero	More	Less	Infinity
54.	The linear momentum of body is increased by 50 %. The K.E of body will increased by:	25 %	50 %	100 %	125 %

55	Which of the following does not have any effect on the speed of sound in gases?	Temperature	Density	Pressure	None of these
56.	If a person moves away from stationary source of sound with speed half of the speed of sound, then frequency of sound waves heard by person will be:	Doubled	Halved	Unchanged	Increase by 1.5 times
57.	A source of sound is moving towards a stationary observer with $\frac{1}{10}$ of the speed of sound.The ratio of apparent to -actual frequency of sound is	$\frac{10}{9}$	$\frac{11}{9}$	$\frac{11}{10}$	$\frac{9}{11}$
58.	The sonometer wire is vibrating in the second overtone. There are:	Two nodes and two antinodes	One node and two antinodes	Four nodes and three antinodes	Three nodes and three antinodes
59.	A tuning fork produces waves in a medium. If the temperature of the medium changes, then which of the following will change:	Amplitude	Frequency	wavelength	Time period
60.	If 'λ' is the wavelength of sound wave in air column, in the first wavelength in the 3rd mode for closed pipe of length '/' will be:	$\frac{4l}{3}$	$\frac{4l}{5}$	$\frac{4l}{7}$	$\frac{2l}{3}$

61. Encircle the correct option i.e. A / B / C / D. All parts carry equal marks

i. The angle between $\vec{A}=2\hat{\imath}+3\hat{\jmath}+\hat{k}$ and $\vec{B}=\hat{\imath}+\hat{k}$ is:

(a) $\pi\backslash 8$ (b) $\pi\backslash 6$ (c) $\pi\backslash 4$ (d) $\pi/3$

62. The area of parallelogram formed by $\vec{A}$ *and* $\vec{B}$ as the two adjacent sides of it will be equal to:

(a)AB (b) AB cos Θ (c) ABSin Θ (d) AB tanΘ

63. The change In angular momentum of rod , when torque of 2.5 Nm is acted upon for 2 second ,is

(a) 1.25 Js (b) 2.5 Js (c) 5 Js (d) Zero

64. If x-component of vector is 3N and same is the y-component what angle would its resultant be making with x-axis:

(a) 30° (b) 45° (c) 60° (d) 135°

65. Area of parallelogram with adjacent sides of $\vec{A} = \hat{\imath}$ m2 and $\vec{\vec{B}} = 7\hat{\jmath}$ m2 will be:

(a) 0.14m2 (b) 4.3m2 (c) 5.19m2 (d) 7m2

66. The magnitude of dot and cross product of two vectors are $6\sqrt{3}$ and 6 respectively, the angle between the vectors is:

a) 90° b) 60° c) 30° d) 45°

67. What is moment of inertia of moment of thin rod.

(a) MR^2 (b) $1/12\ MR^2$ (c) $2/5\ MR^2$ (d) $\frac{1}{2}\ M^2\ R$

68. 2 radian = ?

(a)114.6^o (b) 57.3^o (c) 75.3^o (d) 37.5^o

69. The alternate unit to kgm/s is equal to

(a) js (b) Ns (c) Nm (d) N

70. The horizontal component of velocity of projectile motion is

(a) increases (b) decreases (c) remain same (d)moveswithuniform velocity

71. The horizontal Range of projectile at 30° with horizontal is same as that at angle of :

(a) 45° (b) 60° (c) 90° (d) 120°

72. Distance travelled by free falling object in first second is .

a) 4.9m b) 9.8m c) 19.6m d) 10m

73. TWO forces of 4N and 3N act upon a body, the resultant force can only be:

(a)Between 3N and 4N (b) More than 3N (c)Between 1N and 7N (d) Less than 3N

74. Which of the following pair has same dimension always?

A. Force, displacement (B) Force, velocity

B. Force, acceleration (D) Force, momentum

75. A projectile is thrown upward with initialvelocity vi making an angle θ with thehorizontal. The maximum horizontal rangeis given by:

(a)vi2/g. (b)vi2/2g (c) vi2sin2θ/g (d) vi2sin2θ/2g

76. Centripetal acceleration is also called _____ acceleration

(a) Tangential (b) Radial (c) Angular (d) Rotational

77. The angle of projection of projectile is 30° the ratio of a R/H is :

A. 4(3)½. B. 2(3)1/2 C. 3(4)1/2 D. 4

78. car travels east at constant velocity. The net force on the car is:

(a) east (b) West (c) up (d) Zero

79. Which of the following types of force can do no work on the particle on which it acts?

a) Elastic force b) Frictional force c) centripetal force d) Air resistance

80. When arrow is released from its bow, its energy is transformed from

(a)heat energy to kinetic energy (b) Elastic p. E to k. E
(c) chemical energy to elastic potential energy (d) kinetic to elastic p. E
81. What is the torque due to centripetal force about the axis of rotation
(a) . 1 (b) . Same Direction © Opposite Direction (d) . Zero
82. fly wheel gains a speed of 500 rev per min. Its angular velocity is
(A) . 1.666 π rad s-1.(B) . 106.66 π rad s-1 © . 16.666 π rad s-1(D) . 1000 π rad s-1
83. isothermal process, first law of thermodynamics can be written as:
(A) .Q = ΔU (B) .Q = -W © .Q = W (D) .Q = ΔU + W
84. If one mole of an ideal gas is heated at constant volume then:
(A) .ΔU = CVΔT (B) Q = CPΔT
© .W = CVΔT (D) QP = CVΔT
85. Sadi Carnot engine used:
(A) .Isothermalprocess(B).Adiabaticprocess © .Either a or b(D) .Both a and b
86. Which of the following is the state variable:
(A) .pressure (B) .volume © .entropy (D) .all of the above
87. .By addition of heat to system, the disorder of the system:
A.Remains constant (B) .increases © .decreases (D) .becomes zero
88 .A heat engine takes heat at 4270C and exhausts into low temperature reservoir at 770C, then its efficiency will be:
A) 75% (B) 50% © 100% (D) 25%

89.At constant temperature, if pressure is halved than its volume becomes:
A) .constant (B) .halved
(C) .four times (D) .doubled
90.A refrigerator has a coefficient of performance 8. If the temperature in the freezer is -230C, the temperature at which it rejects heat is:
(A) 6.20C (B) 8.20C (C) 10.20C (D) 110C
91. The speed of randomly moving electron depends upon:
A.Pressure B.Temperature C.Volume. D.entropy
92. The device which converts heat into electrical energy is:
A.Solar cell B.Battery C.Cell D.Thermocouple
93. For an open circuit, the current flowing through the circuit will be:
A.Infinite. B.Finite C.Maximum D.Zero
94. The maximum power output is delivered to load resistance R, when internal resistance of source is:
A.r=R B.r=0 C.r= infinite D.r=R/2
95. Slide wire bridge is a practical form of:
A.Galvanometer B.Voltmeter C.Wheatstone bridge D.Potentiometer
96. Power dissipated in resistor can be calculated by:
A.P=VI B.P=I2R C.P=V2/R D.All of the above

97. SI unit of temperature coefficient of resistance is:
A.Ωm B.K-1. C.K D.ΩK
98.. The resistance of conductor at absolute zero (0K) is:
A.Zero B.Infinite C.Positive D.Negative
99. The resistivity of wire depends on its:
A.Length B.Area C.Shape D.Material (e) All
100. For an open circuit:
A.E=Vt B. E>Vt C. E<Vt. D. E=Vt+Ir
101. Resistance of semiconductor:
A.Increases with increase in temperature B.Remains constant
C.Decreases with increase in temperature D.Varies from material to material
102. The electron in the presence of electric field:
XXXXI.Drifts Velocity electron move
A. along the direction of field B.May drift in any direction
C.Does not move D.Drift opposite to direction of field
103. copper wire A has 2m length and copper wire B has 4m
length. Which wire has greater resistivity:
a)Wire A b) Wire B c) Both have same resistivity d) Either A or B wire
104. The current in 5x105Ω resistor having potential difference of
5x102V is:
A.10-3A B.103A C.10-7A D.107A
105 Acurrent carrying wire is surrounded by:
A. Electric field. B. Magnetic field
C. Both a and b D. Gravitational field
106. A current carrying conductor experiences maximum magnetic
force in a uniform magnetic field when it is placed:
A.At an angle of 600to the field B.Perpendicular to the field
C.Parallel to the field D.Antiparallel to the field
107. Two parallel straight wires carrying currents in opposite direction:
A.Repel each other B.Attract each other
C.Have no effect on each other D.They cancel out their individual magnetic fields
108. If the current passing through the wire in a magnetic field is
halved, the magnetic field would become
A.half. B.twice C.four times D.six times
109. 1T = _:
A.Wbm2 B.Wbm-2 C.Wbm-1 D. Wbm
110. magnetic effect near the current carrying conductor was
discovered by:
A.Coulomb B.Bohr C.Faraday. D.Hans Oersted
111. Acharged particle enters at 300
to the magnetic field, its path
becomes:
A.Helical. B.Circular C.Elliptical D.Straight line
112. Weber ampere per metre is equal to:

A.Joule B.Newton C.Watt. D.Henry

113. The unit of magnetic flux per unit area is:

A.Weber B.Tesla C. wb/m2. D.Both b and c

114. If the magnetic field points upward and current through a conductor is to your left, the force experienced by the conductor will be towards:

A.To your right B.To your left C.Towards you. D.Away from you

115.A current carrying loop as viewed from above carries current in counterclockwise sense. The direction of magnetic field inside the loop:

A.Circles the loop in clockwise direction B.Circles the loop in anticlockwise direction

C.Points straight up D.Points straight down

116.50.What current should pass through the solenoid that is 0.5m long with 10,000 turns of copper wire so that it will have a magnetic(n= N/l)

field of 0.4T?:

A.16A B. 12.8A C.8.9A D. 4.2A

117 Path followed by projectile is :

A. Ellipse. B. Trajectory. C. Both a and b D. None

118. Motion of rocket is based upon

A. 3rd law of motion b Conservation of momentum

B. Both a and b. D. NONE

119. A=2 i-j -2k then A magnitude is:

A. -1 B. 5 C. 3 D. 1

120. If A. B. = 0 then

A. Vectors are parallel B. Vectors are antiparallel

C. Vectors are perpendicular D. Vectors are equal