ECAT Pre General Science Online Test

Sr	Questions	Answers Choice
1	Physics details with the study of:	A. Matter B. Energy C. Both of them D. Human body
2	The time taken by light to travel from moon to earth is:	A. 80 sec B. 500 sec C. 1.802 X 10⁴sec D. Aerophysics
3	The quantity have dimension of ML^2T^{02}will have SI unit of:	A. Watt B. Newton C. Joule D. Metre
4	Which quantity has different dimensions:	A. Work B. Pressure C. Energy D. Torque
5	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
6	Significant figures in 0.0010 are:	A. Four B. Three C. Two D. One
7	Which one of the least multiple:	A. Pico B. Femto C. Nano D. Atto
8	1 gm-$cm^{-3}$is equal to:	A. 10³kg-m⁻³ B. 10⁻³kg-m⁻³ C. 1 kg-m⁻³ D. 10⁶kg-m⁻¹
9	Light year is a unit of:	A. Time B. Distance C. Velocity D. Intensity of light
10	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
11	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
12	In case of metallic conductors, the charge carriers are	A. Protons B. Electrons C. Antiprotons D. Positrons E. Both A and B
13	The results of spectra obtained by Blamer were expressed in 1896 by	A. Bohr B. Rydberg C. Planck D. Rutherford E. Coulomb
14	The range of wavelengths for lines in the visible region is	A. 140 nm to 456 nm B. 10 nm to 56 nm

14	The range of wavelengths of colours in the visible colours is	C. 410 nm to 656 nm D. 910 nm to 956 nm E. None of these
15	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
16	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
17	Electric field lines emerge from the charges in	A. One dimension B. Two dimensions C. Three dimensions D. Four dimensions E. None of these
18	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
19	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
20	Electric lines of force	A. Intersect each other B. Are always parallel C. Are always anti-parallel D. Never intersect E. None of these
21	The electric field lines start from	A. Positive charge B. Negative charge C. Either A or B D. Neutron E. An atom
22	The SI unit of charge is	A. Ampere B. Watt C. Coulomb D. Volt E. Joule
23	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
24	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
25	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
26	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
27	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
28	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

28	Referring to above figure, current in the coil P grows from zero to its maximum value	C. When switch is kept open D. All of above E. Neither of above
29	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
30	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
31	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
32	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
33	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
34	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
35	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
36	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
37	Amplitude in SHM is equivalent to _____ in circular motion	A. Diameter B. Radius C. Circumference D. None of these
38	The graph showing the variation of displacement with time is a	A. Sine curve B. Straight line C. Parabola D. None of these
39	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
40	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
41	The SI unit of spring constant is identical with that of	A. Force B. Surface tension C. Pressure D. Loudness
42	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
43	The unit of spring constant is	A. J-sec B. Metre C. Nm⁻¹ D. None of these
44	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
45	One radian is	A. Greater than one degree B. Less than one degree C. Equal to one degree D. None of these
46	Centripetal acceleration is also called _____ acceleration	A. Tangential B. Radial C. Angular D. None of these
47	Direction of motion _____ in circular motion	A. Changes off and on B. Changes continuously C. Does not change D. None of them
48	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
49	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
50	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
51	Tick the conservative force	A. Tension in a string B. Air resistance C. Elastic spring D. Frictional force
52	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
53	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
54	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
55	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
56	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°
57	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
58	Work done is maximum when angle between force and displacement is	A. 0° B. 90° C. 180° D. None of these
59	Radio telescope is used to gather information from	A. Earth B. Moon only C. Far side of the universe D. Sea water
		A. Hydrodynamics

60	Aerodynamics is a branch of	B. Thermodynamics C. Both of them D. Statics
61	Silicon can be obtained from	A. Lead B. Uranium C. An isotope of oxygen D. Sand
62	Particles have the mass smallest of following is	A. Electron B. Proton C. Neutron D. Quark
63	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
64	Astrophysics is a branch of physics, which deals with	A. Sub-atomic B. Stars and galaxies C. Light and sound D. Music
65	The information from far side of the universe are gathered by	A. Radio telescope B. Microscope C. Telescope D. Spectro scpe
66	Physics deals with the study of	A. Matter B. Energy C. Both of them D. Human Body
67	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
68	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
69	The concept of electric field theory was introduced by	A. Michael Faraday B. Newton C. Dalton D. Kepler E. Einstein
70	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.
71	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
72	In a transistor, collector current is controlled by	A. Collector voltage B. Base current C. Collector resistance D. All of the above
73	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
74	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
75	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
76	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

77	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
78	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
79	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
80	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
81	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
82	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
83	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
84	In case of metallic conductors, the charge carriers are	A. Protons B. Electrons C. Antiprotons D. Positrons E. Both A and B
85	SI unit of current describes the flow of charge at the rate of	A. One ampere per second B. One coulomb per second C. One electron per second D. 6.25 x 10¹⁸electrons per second E. Both B and D
86	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
87	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
88	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
89	INTELSAT operates at frequencies 4, 6, 11, 14 having unit of	A. KHz B. MHz C. GHz D. BHz
90	The number of "Earth Stations" which transmit signals to satellites and receive signals fro them are	A. 3 B. 24 C. 126 D. 200
91	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
92	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
93	Work has the dimensions as that of	A. Torque B. Angular momentum C. Linear momentum D. Power
94	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
95	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
96	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
97	Work is a	A. Scalar quantity B. Vector quantity C. Base quantity D. None of these
98	Which one is the least multiple	A. Pico B. Femto C. Nano D. Atto
99	Significant figures in 0.0010 are	A. Four B. Three C. Two D. One
100	1 gm-cm^{-3}is equal to	A. 10³kg-m⁻³ B. 10⁻³kg-m⁻³ C. 1kg-m⁻³ D. 10⁶kg-m⁻¹