

General Science Model Test Questions 23 With Answers [Physics - 8]

1. A person is moving towards a plane mirror with a velocity of 1 m/sec. The image will approach the moving person with a relative velocity of
(A) 0.5 m/sec. (B) 1 m/sec. **(C) 2 m/sec.** (D) 3 m/sec.
2. Which of the following would be the most suitable for making an electromagnet?
(A) Copper (B) Tungsten **(C) Soft iron** (D) Steel
3. An electric bulb has a filament made of
(A) Copper (B) Iron (C) Lead **(D) Steel**
4. The nucleus of an atom contains
(A) Protons and neutrons (B) Protons and electrons
(C) Neutrons and electrons (D) Neutrons only
5. Which of the following falls down faster in vacuum?
(A) Wooden ball
(B) Feather
(C) Steel ball
(D) All will fall down at the same speed because of no air resistance in vacuum
6. By keeping the door of refrigerator in a room open, while working
(A) The room gets cooled slightly
(B) The room gets more cooled
(C) The room gets warmed up slightly
(D) The room gets neither warmer nor cooler
7. Decibel is a unit to measure the
(A) Intensity of sound (B) Intensity of radiation
(C) Intensity of light (D) Intensity of heat
8. The Unit of astronomical distance is
(A) Angstrom (B) Kilometre (C) Nautical mile **(D) Light year**

9. One important difference between light wave and sound is that the former
- (A) Is a wave (B) Can be reflected
(C) Can travel around corner (D) **Can travel through empty space**
10. The Ventilators of buildings are necessary for
- (A) The entry of outside oxygen
(B) **Removing carbon dioxide exhaled and the water vapour evaporated from the bodies** of living things inside the building
(C) The entry of outside moisture
(D) The entry of light
11. What is the range of wavelength of visible spectrum?
- (A) 1300A-8000A (B) **3900A-7600A** (C) 2500A-5000A (D) 8000A-8500A
12. Distance of the stars is measured in
- (A) **Light year** (B) Decibels (C) Kilometers (D) Miles
13. The part where the image is formed in the eye is
- (A) Pupil (B) Blind spot (C) **Retina** (D) Lens
14. During the change of state (e.g. solid to liquid) the temperature of the solid
- (A) Increases (B) Decreases (C) **Remains constant** (D) Changes
15. Amplitude of a sound wave determines its
- (A) **Frequency** (B) Intensity (C) Phase (D) Wavelength
16. Short sight can be rectified by using
- (A) **Concave lens** (B) Convex lens
(C) Planoconvex lens (D) Planoconcave lens
17. Which of the following rays are produced by nuclear changes in the atom?
- (A) Ultraviolet rays (B) **Gamma rays**
(C) X-rays (D) Infrared rays
18. The nuclear of an atom contains

- (A) Neutrons and electrons (B) Protons and electrons
(C) Protons and neutrons (D) Neutrons only
19. The effective resistance of the three resistors 0.2Ω , 0.4Ω and 0.5Ω connected in parallel is
(A) $\frac{19}{2} \Omega$ **(B) $\frac{2}{19} \Omega$** (C) 1.1Ω (D) $\frac{1}{1.1} \Omega$
20. In a camera for a stationary object the shutter speed is
(A) $\frac{1}{30} s$ **(B) $\frac{1}{60} s$** (C) $\frac{1}{125} s$ (D) $\frac{1}{250} s$
21. When water solidifies to ice
(A) Heat is absorbed **(B) Heat is released**
(C) Temperature increases (D) Temperature decreases
22. The wavelength range of infrared rays is
(A) $10^7 m$ to $7.8 \times 10^3 m$ (B) $10^{-7} m$ to $7.8 \times 10^{-3} m$
(C) $10^{-3} m$ to $7.8 \times 10^{-7} m$ (D) $10^3 m$ to $7.8 \times 10^7 m$
23. Raindrops assume spherical shape due to
(A) Gravitational force **(B) Surface tension**
(C) Centrifugal force (D) Centripetal force
24. The frequency range of ultrasound is
(A) Below 20 kHz (B) Below 2 kHz
(C) Above 20 kHz (D) Above 20,000 kHz
25. When travelling at the speed of light, one can reach the moon in
(A) 5 seconds **(B) 2 seconds** (C) 5 minutes (D) One minute
26. When the velocity of a particle travelling with a velocity nearly equal to the velocity of light, increases, its mass
(A) Increases (B) Decreases **(C) Remains the same** (D) None of these
27. The type of ray that appears to originate outside the earth is
(A) X-ray **(B) Cosmic rays** (C) Alpha ray (D) Beta rays
28. In fluorescent tubelight

- (A) Visible light is converted into visible light
(B) Visible light is converted into ultraviolet light
(C) Ultraviolet light is converted into ultraviolet light
(D) Ultraviolet light is converted into visible light
29. The radius of curvature of concave mirror is 20 cm. Its focal length is
(A) 5 cm **(B) 10 cm** (C) 20 cm (D) 40 cm
30. The electrical energy consumed by a 3 kW stove which is switched on for 6 hours is
(A) 2 units **(B) 18 units** (C) 0.5 units (D) 500 units
31. Which of the following are primary colours?
(A) Red, Green and Violet (B) Blue, Cyan and Magenta
(C) Red, Cyan and Blue **(D) Red, Green and Blue**
32. The relation between coefficient of linear expansion (α) and the coefficient of volume expansion (γ) is
(A) $\alpha = 3\gamma$ (B) $2\gamma = \alpha$ (C) $\gamma = 2\alpha$ **(D) $\gamma = 3\alpha$**
33. The radio-isotope used to check the effective functioning of heart is
(A) I^{131} **(B) Na^{24}** (C) Fe^{59} (D) P^{32}
34. Metals are electropositive because they
(A) Accept electrons **(B) Donate electrons**
(C) Are neutral (D) Have electrons
35. A body goes at 2 m/s towards north and after 10 seconds at 2 m/s toward east. Its acceleration is
(A) $\sqrt{2} \text{ ms}^{-2}$ **(B) $2\sqrt{2} \text{ ms}^{-2}$** (C) $0.2\sqrt{2} \text{ ms}^{-2}$ (D) 2 ms^{-2}
36. A motor boat is travelling with a speed of 30 ms^{-1} . If the force on its due to water is 500N, its power is
(A) 150 kW (B) 15 kW **(C) 1.5 kW** (D) 1500 kW
37. The weight of a body is maximum at
(A) Pole of the earth (B) Equator of the earth
(C) Centre of earth (D) Just above the earth
38. A patient's temperature ranged from 96.8° F to 105.8° during his illness, the temperature recorded in Celsius scale is

- (A) 16° to 41° (B) 26° to 41° (C) 46° to 51° (D) 36° to 41°

39. In a open organ pipe

- (A) All harmonics are present
 (B) Only odd harmonics are present
 (C) Only even harmonics are present
 (D) Only fundamental note is present

40. Match list-I with list-II correctly and select your answer using the codes given below:

List-I	List-II
(a) Millikan	1. Charge – mass ratio of electron
(b) J. J. Thomas	2. Quantum model of H_2 atom
(c) Chadwick	3. Charge of electron
(d) Neils Bohr	4. Neutron

Codes:

	a	b	c	d
(A)	3	1	4	2
(B)	1	3	4	2
(C)	2	4	1	3
(D)	4	3	2	1

41. TV antenna elements are made up of

- (A) Aluminium (B) Copper (C) Tin (D) Zinc

42. Consider the following statements:

Assertion (A) : Rusting of iron is quicker in sea water than in river water.

Reason (R) : Salinity helps in carrying current.

Now select your answer according to the coding scheme given below:

- (A) Both (A) and (R) are true, and (R) is the correct explanation of (A)
(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
 (C) (A) is true, but (R) is false
 (D) (A) is false, but (R) is true

43. Which of the following is used for crystal structure studios?

- (A) Infrared spectroscopy (B) Raman spectroscopy
(C) Atomic emission spectroscopy **(D) X- ray diffraction**
44. The scientist who first sent electromagnetic waves to distant places is
(A) James Clark Maxwell **(B) Heinrich Hertz**
(C) Thomas Alva Edison (D) Baird
45. In the electrical circuit of a house the fuse is used
(A) To regulate the current (B) To load
(C) As safety device (D) As step – down device
46. Hexadecimal is the number system with base
(A) 10 **(B) 16** (C) 8 (D) 2
47. The radius of an atom is
(A) 10^{-12} m (B) 10^{-15} m (C) 10^{-16} m **(D) 10^{-10} m**
48. The rays similar to X – rays but of smaller wavelength that are given off by radioactive substance are
(A) α - rays (B) β - rays **(C) γ - rays** (D) Cosmic rays
49. In which one of the following place is electricity generated from hydel power?
(A) Neyveli (B) Ennore (C) Tuticorin **(D) Mettur**
50. In an LCR circuit which will give a phase lead to current than voltage?
(A) L (inductance) **(B) C (capacitance)**
(C) R (resistance) (D) All together
51. A drop of water is spherical due to
(A) Surface tension (B) Low pressure
(C) Air resistance (D) Viscosity of water
52. The frequency of ultrasound wave is typically
(A) Above 20 KHz (B) Above 20,000 KHz
(C) Below 20 KHz (D) Below 2 KHz
53. Consider the following statements:
Assertion (A): A rocket that is sent to space has to given an extra force at certain distance from earth.
Reason (R): At a certain distance from earth, earth is encircled by a ring of vacuum.

Now select your answer according to the coding scheme given below:

(A) (A) and (R) are correct, and (R) is the not correct explanation of (A)

(B) Both (A) and (R) are correct, but (R) is the correct explanation of (A)

(C) (A) is correct, but (R) is not correct

(D) (A) is not correct, but (R) is correct

54. Match list-I with list-II correctly and select your answer using the codes given below:

List-I

- (a) Relationship between electricity and magnetism
- (b) Velocity of light
- (c) Radio waves
- (d) Structure of atom

List-II

- 1. Neils Bohr
- 2. Ampere
- 3. Foucault
- 4. Hertz

Codes:

	a	b	c	d
(A)	1	3	4	2
(B)	3	4	2	1
(C)	2	3	4	1
(D)	4	3	1	2

55. Fuel cells are used in

- (A) Aircraft (B) Electric locomotives **(C) Space crafts** (D) Submarines

56. The velocity of electromagnetic waves is

- (A) $3 \times 10^8 \text{ ms}^{-1}$** (B) 330 ms^{-1} (C) $30 \times 10^8 \text{ ms}^{-1}$ (D) $3 \times 10^{-8} \text{ ms}^{-1}$

57. Raindrops assume spherical shape due to

- (A) Gravitational force **(B) Surface tension**
 (C) Centripetal force (D) Centrifugal force

58. The unit for solid angle is

- (A) Radian **(B) Steradian** (C) Metre (D) No unit

59. The substance which undergoes the process of sublimation is

- (A) Wax (B) Ice (C) Sugar **(D) Iodine**

60. Which of the following is liquid at room temperature?

- (A) Iodine **(B) Bromine** (C) Invar (D) Duralumin
61. Inertia of a body has direct dependence on
(A) Area (B) Volume **(C) Mass** (D) Velocity
62. The radio isotope used in the treatment of cancer is
(A) Radio cobalt (B) Radioactive iron
(C) Radio iodine (D) Radioactive sodium
63. The path of a projectile is
(A) Ellipse (B) Straight line **(C) Parabola** (D) Circle
64. The minimum distance between the sound source and the object to produce clear echo is
(A) 5 m. (B) 10 m. **(C) 17 m.** (D) 25 m.
65. Unit of intensity of sound is
(A) Farad **(B) Decibel** (C) Ohm (D) Pascal
66. The volume of water is minimum at
(A) 0°C (B) 23°C **(C) 4°C** (D) 100°C
67. With the help of histogram one can prepare
(A) Frequency polygon (B) Frequency curve
(C) Frequency distribution **(D) All of these**
68. Among the following polymers, the strongest molecular forces are present in
(A) Elastomers (B) Natural fibres
(C) Thermoplastic polymers **(D) Thermosetting polymers**
69. An optical path difference of $\frac{\lambda}{2}$ is equal to a phase difference of
(A) 2π (B) 3π (C) π **(D) $\frac{\pi}{2}$**
70. _____ is used to find the depth of the sea.
(A) Spectrometer (B) Spherometer **(C) Fathometer** (D) Ammeter
71. TTL is
(A) Transistor-Transistor Logic (B) Transmission-Transmission Logic
(C) Transistor-Transmission Logic (D) None of these
72. Consider the following statements:

Assertion (A): The structure of the interior of the Earth is deduced with the help of seismic waves.

Reason (R): The 's' waves travel in solid, liquid and air while 'p' waves travel only in solid.

Now select your answer according to the coding scheme given below:

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A)

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

(C) (A) is true, but (R) is false

(D) (A) is false, but (R) is true

73. The electric charge for electrode deposition of 1 gram equivalent of a substance is
(A) 1 ampere per second (B) 96,500 coulomb per second
(C) 1 ampere per one hour **(D) Charge on one mole of electrons**
74. For short sight, we use
(A) Concave lens (B) Convex lens (C) Glass plate (D) Prism
75. A tunnel is dug from one end to the other end of the earth through its centre. If a stone is dropped in it, it
(A) Executes SHM (B) Comes out from the other end
(C) Stops at the centre (D) Stops at same distance
76. Two trains travelling in opposite direction cross each other in 20 secs. If the length of both the trains are 300 m each and the speed of one of them is 50 kmph, what would be the speed of the other train?
(A) 27 kmph. (B) 72 kmph. **(C) 58 kmph.** (D) 50 kmph.
77. Movement of a substance against a concentration gradient is called
(A) Passive transport **(B) Active transport**
(C) Diffusion (D) Osmosis
78. When the speed of a body is doubled, its kinetic energy becomes
(A) Doubled (B) Half **(C) Quadruple** (D) One-fourth
79. When a body moves with uniform velocity its acceleration is
(A) Doubled (B) Trpled **(C) Zero** (D) Maximum
80. The principle of Dynamo was discovered by
(A) Sir Humphry Davy **(B) Michael Farady**
(C) Albert Einstein (D) Max Planck
81. the electric fittings are earthed so that

- (A) Electricity may not leak
(B) There may be a smooth flow of electricity
(C) Current may pass to the earth in case of a short circuit, without causing any harm
(D) To prevent short circuit
82. When common salt is mixed with ice, the melting point
(A) Is lowered (B) Is raised
(C) Remains the same (D) Is first lowered and then raised
83. The weight of iron is more after rusting, because
(A) It has expanded into a greater volume
(B) Rust contains twice as many iron atoms
(C) Of the additional oxygen it contains
(D) Iron undergoes reduction
84. A galvanometer can be converted into ammeter by connecting
(A) Low resistance in parallel (B) Low resistance in series
(C) High resistance in parallel (D) High resistance in series
85. If c is the velocity of light and r is the frequency of the photon, the momentum associated with the photon is
(A) $h\gamma c$ **(B) $h\gamma / c$** (C) γ / c (D) $h\gamma / \gamma$
86. The propagation of light through optical fibres is based on
(A) Diffraction (B) Refraction
(C) Total internal reflection (D) Reflection
87. A disadvantage of the laser printer is
(A) It is quieter than an impact printer (B) The output is of the lower quality
(C) It is very slow **(D) None of these**
88. Nuclei with equal number of neutrons are
(A) Isotopes (B) Isobars (C) Isomers **(D) Isotones**
89. The bifocal lens was invented by
(A) Galileo **(B) Benjamin Franklin** (C) Snell (D) Alessandro volta
90. When oil is poured on the surface of water its surface tension

- (A) Increases (B) Decreases
(C) Remains constant (D) Increases first and then decreases

91. A blotting paper absorbs ink because of
(A) Surface tension (B) Viscosity (C) Cohesive force (D) Capillary action
92. X-ray cannot pass through
(A) Glass (B) Gold (C) Carbon (D) Oxygen
93. A generator is a device which converts
(A) Electrical energy into mechanical energy
(B) Electrical energy into light energy
(C) Mechanical energy into electrical energy
(D) Magnetic energy into electrical energy
94. Klystron produces
(A) Gamma rays (B) Infrared rays (C) Radio waves (D) Microwaves
95. The S.I. unit of power of a lens is
(A) Metre (B) Dioptre (C) Watt (D) Calorie
96. A large number of free electrons exist in
(A) Insulator (B) Semi-Conductor (C) Non-Metals (D) Metals
97. The excess of pressure inside a spherical bubble of radius r of a liquid of surface tension T is
(A) $\frac{T}{r}$ (B) 0 (C) $\frac{2T}{r}$ (D) $\frac{4T}{r}$
98. The refractive index of diamond is
(A) 1 (B) 1.33 (C) 1.6 (D) 2.42
99. The digital camera is an input device mainly used to ----- images
(A) Capture (B) Convert (C) Connect (D) None of these
100. Radioactivity was discovered by
(A) Pierre Curie (B) Madam Curie (C) Rutherford (D) Henri Becquerel