General Science Model Test Questions 20 With Answers [Physics - 5]

1. The smallest planet in the solar system is
   (A) Venus           (B) Earth           (C) Uranus           (D) Pluto

2. The device used to measure voltage, current and resistance is called
   (A) An A.F. Amplifier   (B) A detector
   (C) A galvanometer     (D) A multimeter

3. The radio isotope used for locating brain tumor is
   (A) Phosphor          (B) Cobalt        (C) Iodine          (D) Sodium

4. Electric bulbs are filled with the gas
   (A) Oxygen           (B) Carbon di oxide   (C) Argon           (D) Nitrogen

5. X-rays travel with the velocity of
   (A) Light           (B) Sound          (C) Positive rays   (D) Alpha rays

6. A loudspeaker converts
   (A) Electrical energy into sound energy
   (B) Sound energy into electrical energy
   (C) Small sound into a large sound
   (D) None of these

7. The transverse wave nature of light was proved by
   (A) Interference     (B) Diffraction    (C) Polarisation    (D) Refraction

8. Electric iron takes a long time to cool because of
   (A) Greater emissivity  (B) Lesser emissivity
   (C) Less absorptive power  (D) More absorptive power

9. Density of the matter is defined as
   (A) Mass / Volume      (B) Mass x volume
   (C) Volume / mass      (D) None of these

10. The resultant upthrust on a body partly immersed in liquid acts through

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(A) The centre of gravity (B) The metacentre
(C) The centre of pressure (D) None of these

11. A transverse wave travels along the z-axis. The particles of the medium must move along
(A) z-axis (B) x-axis (C) y-axis (D) in x-y plane

12. Joule–Thomson cooling is
(A) Temperature dependent
(B) Temperature independent
(C) Dependent on the molecular weight of the gas
(D) Dependent on the total mass of the gas

13. The principle of action of points is used in
(A) Capacitors (B) Inductors (C) Resistors (D) Lightning arresters

14. A jet engine works under the principle of
(A) Mass (B) Energy (C) Linear momentum (D) Angular momentum

15. To find the temperature of the sun, the following law is used
(A) Charles law (B) Stefan’s fourth power law of radiation
(C) Boyle’s law (D) Kirchhoff’s law

16. The blood circulation in muscles is due to
(A) Thin density of blood (B) Viscosity of blood
(C) Capillary action (D) Absorption

17. Radio carbon dating is used
(A) Find diseases (B) Find the age of relics
(C) Find the carbon in the atmosphere (D) None of these

18. Frequency modulation is more advantageous than amplitude modulation because
(A) There will be no distortion (B) Distortion will be maximum
(C) No internal noises produced (D) Internal noises can be filtered

19. A thin film of liquid is enclosed between two glass plates. It is difficult to separate the plates on account of
20. Sound is not audible in moon. Why?
   (A) There is no plantation in moon  \[\text{B) Moon does not have atmosphere}\]
   (C) Moon is smaller than earth  \[\text{D) None of these}\]

21. Transmission of heat from the sun to the earth is by
   (A) Conduction  \[\text{B) Convection}\]
   (C) Radiation  \[\text{D) Absorption}\]

22. The output of a microphone is
   (A) A.C. Signal  \[\text{B) D.C. Current}\]
   (C) Sound  \[\text{D) Speech}\]

23. Breeder reactor is in
   (A) Trombay  \[\text{B) Rajasthan}\]
   (C) Kalpakkam  \[\text{D) Tarapur}\]

24. Electrons carry
   (A) A negative charge  \[\text{B) A positive charge}\]
   (C) No charge  \[\text{D) Both charge}\]

25. An electric fan working at constant speed consumes electric energy because
   (A) Of induction  \[\text{B) Of its inertia}\]
   (C) Of friction  \[\text{D) None of these}\]

26. The defect of short sight is corrected by
   (A) Concave lens  \[\text{B) Convex lens}\]
   (C) Spherical lens  \[\text{D) Cylindrical lens}\]

27. Mirage is due to the phenomenon of
   (A) Reflection  \[\text{B) Refraction}\]
   (C) Total internal reflection  \[\text{D) Diffraction}\]

28. A person can jump higher at the moon’s surface than on the earth’s surface. Since,
   (A) The moon’s surface is rough
   (B) The temperature of the moon is less
   (C) The moon has no atmosphere
   \[\text{D) The value of acceleration due to gravity on the moon’s surface is less}\]

29. Rising or setting sun appears reddish due to the fact that
(A) The sun is colder at sunrise and sunset

(B) Diffraction causes red to reach the earth at sunrise and sunset

(C) Reflection of light rays takes place at sunrise and sunset

(D) Scattering of light rays takes place at sunrise and sunset

30. The nature of fuse wire is

(A) High resistance and low melting point  
(B) High resistance and high melting point  
(C) Low resistance and high melting point  
(D) Low resistance and low melting point

31. Heat waves are otherwise known as

(A) Infra – red rays  
(B) Ultra – violet waves  
(C) Solar radiation  
(D) X-rays

32. The time taken by the light from the nearest star α - centauri to reach the earth is

(A) 4.3 years  
(B) 3.1 years  
(C) 2.2 years  
(D) 1 year 2 months

33. When an object is transferred from the moon to the earth

(A) Its weight decreases and its mass increases on the earth  
(B) Its weight increases and its mass decreases on the earth  
(C) Its weight and mass remain constant on the earth  
(D) Its weight increases and its mass remains constant on the earth

34. On adding salt to water, the boiling point and freezing point of water will

(A) Increase  
(B) Increase and decrease respectively  
(C) Decrease  
(D) Decrease and increase respectively

35. Vehicle tyres are inflated properly

(A) To ensure smooth running  
(B) To allow the vehicle to take more load  
(C) To avoid skidding and to minimize friction  
(D) To go fast and save fuel

36. Discovery of x – ray was made by
37. When a body is negatively charged by friction, it
   (A) Loses electrons         (B) Loses neutrons
   (C) **Gains electrons**     (D) Gains neutrons

38. The unit of electrical conductivity is
   (A) **Mho**                  (B) Ohm        (C) Faraday     (D) Coulomb

39. Find the odd man out
   (A) Hayley                 (B) Hale – Bopp  (C) Huyakutake   (D) Shoemaker – Levy

40. If the diameter of a blood vessel is halved, then the speed of blood flow will increase by
   (A) 2                      (B) 3        (C) 4          (D) 6

41. What is the value of 0° absolute in Fahrenheit scale?
   (A) -40°                   (B) -459.4°   (C) -100°       (D) -300°

42. Analyse the statements and choose the correct answer.

   **Assertion (A):** A particle moves along a circle.
   **Reason (R-I):** Speed is uniform.
   (R-II): Velocity is changing.
   (A) R-I is correct, R-II is wrong
   (B) R-I is wrong, R-II is correct
   (C) R-I and R-II are wrong
   (D) Both are correct

43. Force = mass x acceleration is got from
   (A) Newton’s II\textsuperscript{nd} law        (B) Faraday’s law
   (C) Joule’s law                        (D) Coulomb’s law

44. A sensitive balance has an object on left pan and equal weights on its right pan. Now air is blown fast below the left pan. Then the left pan will
   (A) Come down                   (B) Go up    (C) Not be disturbed        (D) Oscillate at first
45. Neighboring two planets to our earth are
   (A) Venus and Mars  (B) Mars and Jupiter
   (C) Mercury and Saturn  (D) Uranus and Neptune

46. Our earth while it revolved round the sun, moves in one hour, a distance of
   (A) 1 lakh km  (B) 10,000 km  (C) 1,000 km  (D) 1000 miles

47. The full shape of a rainbow is
   (A) Arc of a circle  (B) Circle  (C) Ellipse  (D) Parabola

48. When light enters a lens (glass) there is a change in
   (A) Wave length  (B) Frequency  (C) Velocity  (D) Both A and C

49. Atom bomb works on the principle of
   (A) Nuclear fission  (B) Nuclear fusion  (C) Newton’s law  (D) Faraday’s law

50. Hydrogen bomb involves the principle of
   (A) Nuclear fission  (B) Nuclear fusion  (C) Newton’s law  (D) Coulomb law

51. The oil in the wick of an oil lamp rises up due to
   (A) Pressure difference  (B) Capillary action  (C) Low viscosity  (D) Gravitational force

52. Name the lightest particle
   (A) Newton  (B) Electron  (C) Proton  (D) Radon

53. Which of the following substances has the highest specific heat?
   (A) Iron  (B) Copper  (C) Mercury  (D) Water

54. The surface tension of a liquid with increase of temperature
   (A) Increases  (B) Decreases  (C) Remains constant  (D) None of these

55. A 100 watt bulb will consume one unit of electrical energy in
   (A) 1 hour  (B) 10 hours  (C) One day  (D) 60 hours

56. When a common salt is mixed with ice, the freezing point
   (A) Is lowered  (B) Is raised
57. Current always flows from

(A) **High potential to low potential**  (B) Low potential to high potential

(C) Both of these  (D) None of these

58. For a simple pendulum, the graph between I and T will be a

(A) Circle  (B) Parabola  (C) **Straight line**  (D) None of these

59. A solar eclipse occurs when the

(A) Earth comes between the sun and the moon

(B) Moon is at right angle to earth

(C) **Moon comes between the sun and the earth**

(D) None of these

60. Recording of sound waves on tapes was first invented by

(A) Ampere  (B) Bacquerel  (C) Fleming  (D) Poulson

61. A transformer is used to

(A) Increase DC voltage  (B) **Increase or decrease AC voltage**

(C) Decrease DC voltage  (D) Convert DC into AC

62. The surface temperature of sun is

(A) 2,000 K  (B) **6,000 K**  (C) 4,000 K  (D) 10,000 K

63. The unit of moment of force is

(A) Joule  (B) Watt  (C) Metre  (D) **Newton-metre**

64. Which one of the following is a unit of energy?

(A) Watt  (B) **Joule**  (C) Newton  (D) Newton/metre

65. The substance used as a semi-conductor is

(A) Carbon  (B) Boron  (C) **Germanium**  (D) Oxygen

66. Orbital velocity of a satellite close to the earth is

(A) **8 km/sec**  (B) 10 km/sec  (C) 11 km/sec  (D) 12 km/sec
67. The period of revolution of a satellite close to the earth is
   (A) 200 sec  (B) 400 sec  (C) 500 sec  (D) 5000 sec

68. The unit of co-efficient of viscosity is
   (A) N s m²  (B) N m²  (C) J  (D) W

69. Osmotic pressure of dilute solutions can be compared to
   (A) Gas law  (B) Newton laws  (C) Laws of reflection  (D) Laws of Diffusion

70. Radiometer is used
   (A) In radios  (B) To detect Infra-red radiations  (C) In radiology department  (D) To detect radium

71. TV-waves are otherwise known as
   (A) Micro waves  (B) Radio waves  (C) UV-waves  (D) Cosmic waves

72. Voltameter is
   (A) Voltage measuring Instrument  (B) Used to measure current  (C) Used to measure resistance  (D) An electrolytic device

73. In nuclear reactors graphite rods are used
   (A) To absorb neutrons  (B) To reduce the speed of neutrons  (C) As fuel  (D) To arrest the radiation

74. Which of the following does not fit in to the group?
   (A) Fatman  (B) Kamini  (C) Purnima  (D) Apsara

75. Find the odd man out
   (A) Newton  (B) Einstein  (C) Young  (D) Little Boy

76. The engine power of the glides plane is
   (A) 0 H.P  (B) 100 H.P  (C) 1000 H.P  (D) 10,000 B.H.P

77. Laws of planetary motion was given by
   (A) Newton  (B) Galileo  (C) Aristotle  (D) Kepler
78. Which of the following devices is used for digital display in electronic calculator?
   (A) Photo diodes  (B) Zenes diodes  (C) LEDs  (D) None of these

79. $27^\circ$ C can be expressed as
   (A) 250 k  (B) 200 k  (C) 400 k  (D) 300 k

80. Which one of the following is used as the moderation in Nuclear reactor?
   (A) Platinum  (B) Thorium  (D) Uranium  (D) Graphite

81. Ultrasonic waves have frequency
   (A) Above audible range  (B) Below audible range  
   (C) Equal to audible range  (D) None of these

82. A simple microscope has
   (A) Concave lens  (B) Plano concave lens  (C) Convex lens  (D) None of these

83. There is no atomic power station at
   (A) Kalpakkam  (B) Narora  (C) Tarapur  (D) Trombay

84. Kilowatt is the unit of
   (A) Energy  (B) Power  (C) Charge  (D) Voltage

85. The radiation with highest energy is
   (A) UV-ray  (B) IR-ray  (C) X-ray  (D) Visible ray

86. An electric motor is a device which
   (A) Converts electrical energy into mechanical energy  
   (B) Converts mechanical energy into electrical energy  
   (C) Converts mechanical energy into potential energy  
   (D) None of these

87. Tesla is the unit of
   (A) Magnetic intensity  (B) Magnetic moment  
   (C) Magnetic induction  (D) None of these
88. The electromagnetic radiation travels with a velocity of
   (A) $3 \times 10^8$ m/s  
   (B) $3 \times 10^{10}$ m/s  
   (C) 330 m/s  
   (D) None of these

89. Filament of an electric bulb is made of
   (A) Iron  
   (B) Tungsten  
   (C) Copper  
   (D) None of these

90. The device that is used to determine the depth of the sea is
   (A) Radar  
   (B) Sonar  
   (C) Fathometer  
   (D) Hydrometer

91. Absolute zero is the temperature of
   (A) 0°C  
   (B) 0°F  
   (C) 372°C  
   (D) -273°C

92. The discovery of electricity is attributed to
   (A) Michael Faraday  
   (B) W. Gilbert  
   (C) A.M. Ampere  
   (D) G.S. Ohm

93. If the surface water lake is just going to freeze, what will be the temperature of water at the bottom?
   (a) 0°C  
   (B) More than 4°C  
   (C) 4°C  
   (D) More than 4°C

94. The flying of birds is a consequence of Newton’s
   (A) First law  
   (B) Second law  
   (C) Third law  
   (D) Both Second and Third law

95. Who discovered that the earth moves round the sun?
   (A) Newton  
   (B) Galileo  
   (C) Aristotle  
   (D) Copernicus

96. The value of gravitational constant is
   (A) $3.766 \times 10^{-11}$ Nm²  
   (B) $6.673 \times 10^{-11}$ Nm²kg⁻²  
   (C) 9.8 m s⁻²  
   (D) 980 Nm²

97. The element that has the same atomic number and atomic weight is
   (A) Hydrogen  
   (B) Oxygen  
   (C) Nitrogen  
   (D) Helium

98. Which one of the following is non-divisible?
   (A) Nucleus  
   (B) Photon  
   (C) Proton  
   (D) Atom

99. Gas Law was given by
100. Alternating current is converted into direct current by

(A) Rectifier (B) Dynamo (C) Transformer (D) Motor