

EVERYDAY SCIENCE : PHYSICS - NO.3

Time: 30 minutes

Marks: 100

1. The memory of a computer is usually measured in —
A. Bits B. Bytes C. RAM D. PROM
2. Which of the following requirements must be strictly satisfied by a system in thermo dynamical equilibrium?
A. Mechanical equilibrium B. Thermal equilibrium
C. Chemical equilibrium D. All of the above
3. The force of attraction between earth and an apple is——
A. Gravity B. Electrostatic Force C. Elastic force D. None
4. A body falling freely under the action of gravity has
A. No weight B. Minimum weight C. Maximum weight
D. No effect on its weight
5. Who among the following discovered law of photo electric effect, general theory of relativity etc.
A. Hertz B. Einstein C. Fredrich D. Knipping
6. Which of the following metals show photo-electric effect with ultra-violet light ?
A. Lithium, Sodium, potassium B. potassium, cesium, zinc
C. Zinc, cadmium, magnesium D. magnesium, sodium, cesium
7. Semiconductor materials are ——
A. those which do not conduct electricity B. those which conduct electricity partially
C. those which conduct electricity wholly D. All of the above
8. A person can swim comfortably in water. This is due to ——
A. Pascal's law B. Archimede's principle
C. Newton's third law D. None of the above
9. Which of the following element when added to a pure germanium crystal forms n-type extrinsic semi-conductor
A. Gallium B. Aluminium C. Antimony D. Indium
10. The method of Radio-carbon dating is used to find the age of ——
A. fossils B. stars C. Skeletons D. Trees
11. One gm. Wt is equal to
A. 9.8 ergs B. 9.8 dynes C. 980 ergs D. 980 dynes
12. The unit of energy is
A. Watt B. Pound C. Joule D. Newtons
13. Longitudinal waves do not exhibit
A. polarisation B. diffraction C. interference D. dispersion
14. What is the source of electrical energy in an artificial satellite ?
A. Thermopile B. Solarcell C. Mini nuclear reactor D. Dynamo
15. Sound waves cannot travel in
A. solid B. hydrogen C. Oil D. Vacuum

16. Inertia is the property of
A. mass B. volume C. strength D. all the above
17. Movement of a body in a circular path is due to
A. centrifugal force B. centripetal force C. Artificial force D. Linear force
18. The theory behind the lever and pulleys was first demonstrated by
A. Archimedes B. Newton C. Albert Einstein D. Foucault
19. Example for non-renewable sources of energy is—
A. Hydrogen B. Petrol C. Geo thermal energy D. Biomass
20. When a cycle is driven on an oily road, it slips because on such roads
A. Friction between tyres and road decreases
B. Friction between tyres and road increases
C. Inertia of tyres increases D. None of the above.
21. Rainbow is caused due to
A. Reflection of sun's rays from water drops
B. Dispersion of sun's rays from water drops
C. Total internal reflection from sun's rays D. None of these
22. Finger prints on a piece of paper may be detected by sprinkling fluorescent powder on the paper and then looking at it in
A. sunlight B. infrared light C. Ultraviolet light D. None of these
23. If train is traveling with the velocity of light, its length would be
A. Infinite B. Zero C. very small or very large
D. None of the above
24. A needle or a pin floats on the surface of water because of
A. surface tension B. viscosity C. higher weight D. capillarity
25. Light emitted from the sun takes approximately ——— to reach the earth
A. 50 seconds B. 10 seconds C. 500 seconds D. 1000 seconds
26. When a man circles round the earth in a satellite, his
A. mass becomes zero but weight remains the same
B. mass remains constant by weight becomes zero
C. mass and weight remains constant D. both mass and weight becomes zero
27. The Milky way ———
A. is stationary B. is not stationary C. revolves sometimes D. never revolves
28. 'Lyra', 'Vega' and 'Orion' are the names of
A. Galaxies B. Cosmic rays C. Constellations D. None of these
29. Persistence of vision is the principles behind
A. periscope B. spectroscope C. cinema D. camera
30. In what type of trays will ice cubes be formed more quickly in a freezer ?
A. Wooden trays B. Plastic trays C. Rubber trays D. Aluminium trays
31. In the walking of man ——— is involved
A. Newton's Ist law B. Newton's IInd law
C. Newton's IIIrd law D. None of the above
32. Gravitational forces are
A. The weakest force in nature B. The strongest force in nature
C. Ineffective in nature D. None of the above

33. If a person sitting in a boat in a river throws a large stone with a large velocity, the boat will
A. Move in forward direction B. Move in backward direction
C. Remain stationary D. Oscillate in its position
34. Sound energy is converted into electrical energy by the
A. microphone B. Loud speaker C. telephone D. Ear phone
35. In gases an ultrasonic wave is
A. longitudinal only B. both (A) & (C) C. transverse only D. Neither (A) or (C)
36. "Hydro power" is the term used for electricity produced through
A. Atomic power B. Water C. Mineral oil D. Coal
37. ——— was the first to realize that the moon is a satellite of the earth
A. Kepler B. Newton C. Einstein D. Galileo
38. The force due to a magnet is
A. Variable force B. Same at different points
C. Electric in nature D. None of the above
39. A person pushing against a wall
A. Does work B. Does no work unless wall is moved C. produces displacement
D. is wasting his time
40. Why does the human body perspire in summer ?
A. To maintain a constant normal body temperature B. To relax
C. To get more energy D. To intake more cool air.
41. The wave length of thermal radiations is ——— that of visible light
A. More than B. Lesser than C. Equal to D. None of these
42. Light waves and radio waves are
A. Transverse waves B. Longitudinal waves C. Elastic waves D. None of the above
43. The sound heard after reflection from a rigid obstacle is
A. an echo B. refraction of the sound C. Dispersion D. Diffusion
44. The audible range for human ear is
A. 20 Hz to 2000 Hz B. 20 Hz to 200 Hz
C. 20 Hz to 20,000 Hz D. 20 Hz to 20 kHz
45. The unit of frequency is
A. Meter/second B. Meter C. Second D. Hertz
46. During compression in longitudinal waves
A. Particles of a medium are closer to one another and there is a momentary reduction in volume of the medium
B. Particles of a medium are further apart than is normal and there is a momentary increase in the volume
C. Particles remain at their normal positions D. None of the above
47. The distance of distinct vision for a normal eye is
A. 25 metres B. 250 centimetres C. 25 centimetres D. 0.25 centimetres
48. When a magnet is broken into two pieces, it acts as a
A. North pole B. South pole C. Magnet D. Non-magnetic substance
49. The S.I. unit of magnetic flux is
A. Tesla B. Weber C. Maxwell D. Gauss

50. The S.I unit of intensity of magnetic field is
A. Weber B. Tesla C. Gauss D. Ampere
51. In India the fast breeder reactor is installed at
A. Trombay B. Kalpakkam C. Tarapur D. Narora
52. Which cannot be included in fossil fuels ?
A. Petroleum B. Natural gas C. Wood charcoal D. Coal
53. Two objects losing the same weight when immersed in water must have the same
A. weight in air B. weight in water C. volume D. density
54. The main source of energy in the biosphere is
A. electricity B. fire wood C. sun D. plants
55. The voltage between any two phases in the three phase system is
A. 1100V B. 400 V C. 220 V D. 110V
56. Dynamo was invented by
A. Newton B. Einstein C. Faraday D. Edison
57. Who was the first chairman of the Atomic Energy Commission of India ?
A. Vikram Sarabhai B. Dr. Homi J. Bhaba C. U.R. Rao D. M.G.K. Menon
58. The planet nearest to the Earth is
A. Venus B. Mars C. Pluto D. Neptune
59. Pasteurization is a process of
A. cooling the milk to 0°C B. heating the milk to boiling
C. cooling the milk followed by moderate heating
D. moderate heating followed by cooling.
60. Water freezes at
A. 10°C B. -32°C C. -1°C D. 32°F
61. The X-ray spectra is
A. discrete B. continuous C. series of lines separated by a distance
D. none of these
62. The fact that the compass needle does not point true north was observed first by
A. Newton B. Columbus C. Archimedes D. Edison
63. The base of the binary system is
A. 10 B. 20 C. 4 D. 2
64. The defect in a lens due to its prismatic action is known as
A. chromatic aberration B. spherical aberration
C. Monochromatic aberration D. Myopia
65. In a refrigerator, the refrigerant is
A. Nitrogen B. Oxygen C. Chlorine D. Freon
66. The platinum – Resistance thermometer was first designed by
A. Celsius B. Siemen C. Fahrenheit D. Callender and Griffiths
67. When water in a bucket is whirled fast overhead, the water does not fall out at the top of the motion because
A. the centripetal force on the water is greater than its weight
B. the centripetal force on the water is less than the weight of the water
C. atmospheric pressure counteracts the weight.
D. the reaction of the bucket on the water is zero

68. When milk is churned, cream separates from it due to the
A. Cohesive force B. Centripetal force C. gravitational force D. adhesive force
69. Bat can fly in the dark because
A. they have a better vision in the dark
B. the pupils of their eyes are very big
C. They are guided by ultrasonic waves produced by them D. any birds can do so
70. Torricelli is the unit of
A. volume B. pressure C. density D. temperature
71. As a boat moves from fresh water into the salt water, its water mark will
A. go upward B. go down ward C. remain the same
D. depend on the material of the boat
72. In a electric bulb, air is completely removed to prevent
A. efficiency of the bulb B. high resistance of the tungsten
C. high melting point of tungsten D. Oxidation of tungsten
73. The small drops of mercury are spherical because the surface area is
A. minimum B. maximum C. zero D. none of the above
74. The surface tension of liquids
A. increases with the rise of temperature B. decreases with the rise of temperature
C. is independent of temperature D. increases randomly with temperature
75. Two pieces of glass plates one over the other with a little water in between them cannot be separated because of the
A. surface tension B. viscosity C. inertia D. pressure
76. The theory that was developed by Max Planck is
A. wave theory B. quantum theory C. kinetic theory D. none of the above
77. Cobalt – 60 is commonly used in radiation therapy because it emits
A. alpha rays B. beta rays C. gamma rays D. x-rays
78. Which one of the following is a longitudinal wave ?
A. Light wave B. sound wave C. micro wave D. Radio wave
79. One Astronomical unit is the average distance between
A. Earth and the sun B. Earth and the moon
C. Jupiter and the sun D. Pluto and the sun
80. A 'black hole' is a body in space which does not allow any radiation to come out. This property is due to its
A. very small size B. very large size C. very high density D. very low density
81. A person is moving towards a plane mirror with a speed of 1m/sec. The image will approach the moving person with a relative speed of
A. $\frac{1}{2}$ m/sec B. 1 m/ sec C. 2 m/sec D. 3 m/sec
82. Domestic electrical wiring is basically a
A. Series connection. B. Parallel connection
C. Combination of series and parallel connections.
D. Neither series nor parallel connections.
83. The working of the quartz crystal in the watch is based on the
A. photo electric effect B. Johnson effect C. Piezo-electric effect D. Edison effect.

84. The term "Mach" is used to measure speed of
A. sound B. wind C. ship D. Aeroplanes
85. Which temperature is equal in Celsius and Fahrenheit thermometer ?
A. -40 B. 212 C. 40 D. 100
86. The normal temperature of human body on the Kelvin scale is
A. 280 K B. 290 K C. 300 K D. 310 K
87. A man starts walking from a point towards North-East direction. After moving 500 metres he turns towards south and covers a distance 400 metres. At the end he reaches a point.
A. 300 metre North from starting point B. 100 metre North – East from starting point
C. 300 metre East from starting point D. 100 metre North from starting point.
88. A hydrogen – inflated polythene balloon is released from the surface of the earth. As the balloon rises to an altitude up in the atmosphere, it will
A. decrease in size B. flatten into a disc-like shape
C. increase in size D. maintain the same size and shape
89. The nature of light is a
A. wave like B. particle like C. both wave and particle like D. none of these
90. X-rays were discovered by
A. Rutherford B. Bohr C. Rontgen D. Fresnel
91. The property of a liquid owing to which it opposes the relative motion of its various parts is called its
A. surface tension B. critical velocity C. viscosity D. velocity gradient
92. The accumulation of snow on wings of an aeroplane may reduce the lift as
A. weight of the wings changes B. shape of the wings changes
C. overall weight of the aeroplane increases D. none of the above
93. In aeroplanes, we use polaroids to
A. control speed B. control amount of light coming inside
C. control direction D. None of the above
94. The wave theory of light was put forward by
A. Christian Huygens B. Newton C. Max Plank D. Einstein
95. On mixing some detergent with pure water, the cleaning property of water improves because of
A. low surface tension B. low density C. low viscosity D. laminar flow
96. The human ear is
A. more sensitive to sound of low intensity B. less sensitive to sound of low intensity
C. equally sensitive to sound of all intensities D. not sensitive to sound of low intensity
97. If one of the prongs of a tuning fork gets broken the vibrations
A. cannot be maintained B. are maintained at the same frequency
C. are maintained at a lower frequency D. are maintained at a higher frequency
98. Which of the following instruments is not used for measuring thermal radiations
A. Bolometer B. Boy's radio micrometer C. Crooke's radiometer
D. Pyrometer
99. Which of the following will radiate more heat ?
A. White polished surface B. White rough surface
C. Black polished surface D. Black rough surface
100. Lift was invented by
A. Edison B. Graham Bell C. James watt D. Ottis

Answers

1 B	2 D	3 A	4 A	5 B	6 C	7 B	8 C
9 C	10 A	11 D	12 C	13 A	14 B	15 D	16 A
17 B	18 A	19 B	20 A	21 B	22 C	23 B	24 A
25 C	26 B	27 B	28 C	29 C	30 D	31 C	32 A
33 B	34 A	35 A	36 B	37 B	38 A	39 B	40 A
41 A	42 A	43 A	44 C	45 D	46 A	47 C	48 C
49 B	50 B	51 B	52 C	53 D	54 C	55 B	56 C
57 B	58 A	59 D	60 D	61 B	62 B	63 D	64 A
65 D	66 B	67 A	68 B	69 B	70 B	71 B	72 D
73 A	74 B	75 A	76 B	77 B	78 B	79 A	80 C
81 C	82 B	83 C	84 D	85 A	86 D	87 C	88 D
89 C	90 C	91 C	92 B	93 B	94 A	95 A	96 A
97 A	98 D	99 D	100 D				