CBSE Living Science Physics 10

Multiple-Choice Questions

(QUESTION BANK)

CHAPTER 1: ELECTRICITY

1. One coulomb charge is equivalent to the charge contained in
   a. 6.2×10^{19} electrons.
   b. 6.25×10^{18} electrons.
   c. 6.02×10^{10} electrons.
   d. 5.62×10^{18} electrons.

2. If W is the amount of work in bringing a unit positive charge q from infinity to a point, then the electric potential (V) at that point is given by
   a. W/q
   b. q/W
   c. $W\text{-}q$
   d. $W–1/q$

3. Which statement/ statements is/are correct?
   a. Voltmeter is always connected in series.
   b. Voltmeters have a very high resistance.
   c. Voltmeter is always connected in parallel.
   d. Voltmeters have a low resistance.

4. One microampere can be denoted by
   a. 1 mA
   b. 10^6 A
   c. 1 μA
   d. 10^{-3} A

5. If the potential difference across the ends of a conductor is doubled, the current flowing through it gets
   a. halved.
   b. triple.
   c. one-fourth.
   d. double.

6. A bulb working on a 12 V battery draws a current of 0.5 A. The resistance of the bulb is
   a. 6 Ω
   b. 12 Ω
   c. 24 Ω
   d. 10 Ω

7. Keeping the potential difference constant, the resistance of a circuit is halved. The current will become
   a. one-fourth.
   b. four times.
   c. half.
   d. double.

8. If the area of cross section of the conductor is doubled, its resistance gets
   a. one-fourth.
   b. double.
   c. halved.
   d. four times.

9. Which material has high resistance?
   a. Copper
   b. Silver
   c. Aluminium
   d. Nichrome

10. Resistance of a conductor is directly proportional to its
    a. cross sectional area.
    b. length.
    c. area.
    d. width.

11. Resistivity of silver metal is
    a. 1.60×10^{-8} Ω m
    b. 2.60×10^{-9} Ω m
    c. 3.61×10^{-8} Ω m
    d. 5.60×10^{-8} Ω m

12. Which of the following is a semiconductor?
    a. Mercury
    b. Nickel
    c. Germanium
    d. Diamond

13. When the diameter of a wire is doubled, its resistance becomes
    a. double.
    b. four times.
    c. one-half.
    d. one-fourth.

14. Which alloy is used to prepare the heating element of an electric iron?
    a. Constantan b. Nichrome c. Manganin d. Tin–led alloy

15. Which of the following non-metals is a good conductor of electricity?
    a. Graphite b. Ebonite c. Glass d. Diamond

16. Who was the first scientist who studied the heating effect of current through a resistor?
    a. Ampere b. Joule
    c. Alessandro Volta d. Andre-Marie Ampere

17. Tungsten used in a bulb as a filament has a high melting point of
    a. 2380 °C b. 3080 °C c. 3380 °C d. 3580 °C

18. If two resistors of 10 Ω and 30 Ω are joined together in series and then placed in parallel with a 40 Ω resistor, the effective resistance of the combination is
    a. 10 Ω b. 30 Ω c. 40 Ω d. 20 Ω

19. An electric heater is rated at 2 kW. Electrical energy costs ₹ 4 per kWh. What is the cost of using the heater for 3 hours?
    a. ₹20 b. ₹24 c. ₹30 d. ₹40

20. The commercial unit of energy is
    a. watt. b. watt-hour. c. kilowatt-hour. d. kilo-joule.

21. If the potential difference between the ends of a fixed resistor is halved, the electrical power will become
    a. double. b. half. c. four times. d. one-fourth.

22. When an electrical lamp is connected to 20 V battery, it draws a current of 2 A. The power of the lamp is
    a. 20 W b. 10 W c. 40 W d. 60 W

23. How much energy does a 100W electrical bulb transfer in 1 minute?
    a. 100 J b. 600 J c. 3600 J d. 6000 J

24. An electric fuse works on the
    a. chemical effect of current. b. magnetic effect of current.
    c. heating effect of current. d. lighting effect of current.

25. If the current flowing through a fixed resistor is halved, the heat produced in it will become
    a. double. b. one-half. c. one-fourth. d. four times.

26. The insulators have resistivity in the range of
    a. 10^{12} Ω to 10^{17} Ω b. 10^{6} Ω to 10^{12} Ω
    c. 10^{10} Ω to 10^{12} Ω d. 10^{10} Ω to 10^{20} Ω

27. Resistances 5 Ω, 7 Ω, 8 Ω, and 10 Ω, are connected in series. What is the equivalent resistance of the circuit?
    a. 20 Ω b. 25 Ω c. 30 Ω, d. 35 Ω

28. The maximum current which can flow through a fuse without melting it is called its
    a. fuse current. b. max. current. c. shedding. d. rating.

29. In our country we get domestic electric supply at
    a. 440 V b. 220 V c. 240 V d. 360 V

30. A wire of resistance R_1 is cut into five equal pieces. These five pieces of wire are then connected in parallel. If the resultant resistance of this combination is R_2, then the ratio of R_1/R_2 is
    a. 1/25 b. 1/5 c. 5 d. 25

CHAPTER 2: MAGNETIC EFFECTS OF ELECTRIC CURRENT

1. The area around a magnet in which its influence can be felt is called its
   a. magnetic field. b. magnetic strength. c. magnetic power. d. magnetic intensity.

2. Who discovered that a compass needle gets deflected when a current-carrying conductor is placed near it?
   a. Alexander Fleming b. Hans Christian Oersted c. Joule d. Rutherford

3 Parallel and equidistant magnetic field lines represent
   a. strength of magnetic field.
   b. the direction of magnetic field.
   c. a uniform magnetic field.
   d. magnetic intensity.

4. Magnetic levitation trains do not run on rails but ..... above them.
   a. fly b. swim c. slide d. float

5. What is wrong about an electromagnet?
   a. An electromagnet produces a strong magnetic field.
   b. Electromagnets are made of steel.
   c. Electromagnets can be easily demagnetised.
   d. Electromagnets show temporary magnetism.

6. If the direction of electric current in a solenoid when viewed from a particular end is anticlockwise, then this end of solenoid will be
   a. west pole. b. south pole. c. east pole. d. north pole.

7. The north-south polarities of an electromagnet can be found easily by using
   a. Fleming's right-hand rule.
   b. Fleming's left-hand rule.
   c. Clock face rule.
   d. Left-hand thumb rule.

8. The most suitable material for making the core of an electromagnet is
   a. soft iron. b. brass. c. aluminium. d. steel.

9. The strength of the magnetic field produced by the current-carrying solenoid is
   a. inversely proportional to the current flowing through the solenoid.
   b. directly proportional to the current flowing through the solenoid.
   c. perpendicular to the current flowing through the solenoid.
   d. parallel to the current flowing through the solenoid.

10. The magnetic field lines inside the current-carrying solenoid are
   a. circles.
   b. spirals.
   c. parallel to the axis of solenoid.
   d. perpendicular to the axis of solenoid.

11. In which of the following devices DC motor is used?
   a. Fans b. Washing machine c. Refrigerator d. Battery-operated toy

12. Which is the basic unit of our nervous system?
   a. Electron b. Neuron c. Brain d. Neutron

13. Which magnet is used in the construction of an electric motor?
   a. Bar magnet b. Natural magnet c. Horseshoe magnet d. Electromagnet

14. Who had invented the phenomenon of electromagnetic induction?
   a. Hans Christian Oersted
   b. Charles Coulomb
   c. Peter Mansfield
   d. Michael Faraday

15. Working of a DC motor is based on the
    a. Fleming's left-hand rule.
    b. Fleming's right-hand rule.
    c. Faraday's law of electromagnetic induction.
    d. Maxwell's cork screw rule.

16. In Fleming's left-hand rule, the thumb indicates the direction of
    a. magnetic field applied.
    b. current flown in the conductor.
    c. induced current.
    d. mechanical force on the conductor.

17. The instrument used to detect the presence of electric current in a circuit is called
    a. ammeter.
    b. galvanometer.
    c. voltmeter.
    d. speedometer.

18. In our country the frequency of the alternating current supplied the power generation unit is
    a. 25 Hz
    b. 45 Hz
    c. 50 Hz
    d. 75 Hz

19. In an electric motor the direction of current in the coil changes once in each
    a. two rotations.
    b. one rotation.
    c. half-rotation.
    d. one-fourth rotation.

20. An electric motor is a device that converts
    a. mechanical energy into electrical energy.
    b. electrical energy into sound energy.
    c. electrical energy into mechanical energy.
    d. electrical energy into heat energy.

21. The alternating current in India changes direction after every
    a. 1/10 second.
    b. 1/100 second.
    c. 1/1000 second.
    d. 1/360 second.

22. A DC generator is based on the principle of
    a. electromagnetic induction.
    b. electrochemical induction.
    c. magnetic effect of electric current.
    d. heating effect of electric current.

23. The device used for producing electric current is called a/an
    a. ammeter.
    b. generator.
    c. galvanometer.
    d. motor.

24. While applying Fleming's right-hand rule the middle finger of right hand indicates
    a. the direction of magnetic field.
    b. the direction of rotation of conductor.
    c. the direction of current being flown.
    d. the direction of induced current.

25. For running electric appliances such as iron and geyser, the wires of ..... are required in our houses.
    a. 5 A
    b. 10 A
    c. 15 A
    d. 20 A

26. In domestic electric circuits the colour of insulation covers of wires in the supply line is generally
    a. red for live wire and green for neutral wire.
    b. red for live wire and black for neutral wire.
    c. green for live wire and red for neutral wire.
    d. green for live wire and black for neutral wire.

27. At the time of short circuiting of an electric circuit the current in the circuit
    a. is substantially reduced.
    b. abruptly increases.
    c. changes continuously.
    d. does not change at all.

28. Which of the following statements is not true about earthing?
    a. The earth can be regarded as an electric sink.
    b. In a house the local earthing is made near the electric meter.
    c. Earthing saves appliances from being damaged due to short circuit and overloading.
    d. The wire with black insulation cover is called the earth wire.

29. The electricity flowing out of the main switch can be distributed in the house by a system of wiring called
    a. tree system of household wiring.
    b. branch system of household wiring.
    c. multidirectional wiring.
    d. domestic wiring.

30. When does an electric short circuit not occur?
    a. When live wire and neutral wire come in contact with each other.
    b. When live wire and earth wire come in contact with each other.
    c. when the insulation of wires is damaged.
    d. when there is a fault in the electric appliance.

CHAPTER 3: SOURCES OF ENERGY

1. Which of the following is a non-conventional source of energy?
   a. Energy from biomass b. hydro energy c. fossil fuels d. solar energy

2. Which of the following is not a fossil fuel?
   a. Coal b. Kerosene c. Biogas d. CNG

3. A non-renewable source of energy is
   a. natural gas. b. solar energy. c. geothermal energy. d. energy from biogas.

4. The fuel having the lowest calorific value is
   a. coal. b. wood. c. charcoal. d. kerosene.

5. Fuels used in a thermal plant are
   a. nuclear energy. b. hydro energy. c. fossil fuels. d. biomass.

6. Which gas does not contribute in the formation of acid rain?
   a. Nitrogen monoxide b. Sulphur dioxide c. Carbon monoxide d. Carbon dioxide

7. The value of solar constant is
   a. 1.4 kWh b. 1.4 kW/J c. 1.4 kW/m d. 1.4 kW/m^2

8. Which material is used to design solar cells?
   a. Silicon b. Silver c. Aluminium d. Copper

9. Which part of a solar cooker is responsible for greenhouse effect?
   a. Mirror b. Glass sheet
   c. Out cover of the solar cooker d. Black colour coating

10. Slurry left in a gobar gas plant after producing gobar gas is
    a. used as a fuel. b. used as food for animals.
    c. used as manure. d. thrown away.

11. Electricity produced in the solar cell panel is stored in
    a. solar panel. b. AC batteries. c. power house. d. DC batteries.

12. The major component of biogas that makes it an excellent fuel is
    a. hydrogen. b. butane. c. methane. d. hydrogen sulphide.

13. The rise sea water during high tide is caused by the gravitational pull of the
    a. Sun. b. Earth. c. Moon. d. Mars.

14. Molten rocks formed in deeper hot regions of the earth's core are called
    a. hot rocks. b. magma. c. hot spots. d. underground rocks.

15. Geothermal energy was developed to generate electrical power in the year
    a. 1904 b. 2004 c. 1994 d. 1964

16. Ocean thermal energy is due to
    a. energy possessed by ocean waves.
    b. temperature difference at different levels in the ocean.
    c. pressure difference at different levels in the ocean.
    d. sea tides arising out in the ocean.

17. Which form of energy leads to least environmental pollution during the processing of its harnessing and utilisation?
    a. Nuclear energy b. Thermal energy c. Geothermal energy d. Solar energy

18. Which is not true for the applications of solar cooker?
    a. Solar cooker for cooking food saves fuel.
    b. Solar cooker does not produce smoke.
    c. Solar cooker can be used for frying, baking and making *chapattis*.
    d. Solar cooker has a low installation and maintenance cost.

19. Solar cells in a solar cell panel are connected by wires made of
    a. iron. b. silver. c. copper. d. aluminium.

20. Generation of wave energy is based on the principle of converting
    a. kinetic energy into electrical energy. b. potential energy into electrical energy.
    c. Kinetic energy into chemical energy. d. potential energy into kinetic energy.

21. One MeV of nuclear energy is equivalent to
    a. 1.602×10^{-19} J b. 1.602×10^{-15} J c. 1.602×10^{-14} J d. 1.602×10^{-13} J

22. In a controlled chain reaction the number of uranium-235 atoms that undergo fission in one minute is
    a. 10^{20} b. 69 c. 60 d. 10^{19}

23. Which is used as a coolant as well as a moderator in a nuclear power plant?
    a. Water b. Heavy water c. Graphite d. Liquid sodium

24. Narora atomic power station is located in the state of
    a. Bihar. b. Maharashtra. c. Jharkhand. d. Uttar Pradesh.

25. The waste materials produced during nuclear energy production contain harmful radioactive substances like
    a. Ba-139 and Kr-94 b. Ba -135 and Kr-34 c. Ba-139 and Ar-132 d. Kr-96 and U-92

26. Chernobyl located in the former Soviet Union is famous for
    a. nuclear blast. b. leakage of nuclear radiations.
    c. its biggest nuclear plant. d. its monuments.

27. The amount of heat energy released by the Sun in one second is equal to
    a. 3.8×10^{29} J b. 6.8×10^{26} J c. 3.8×10^{26} J d. 5.8×10^{21} J

28. The atom bomb dropped on the city of Nagasaki in Japan was a ..... device.
    a. Pu-239 b. U-235 c. Pu-234 d. U-239

29. The heat energy released by the explosion of nuclear bomb raises the temperature to ..... in a few seconds.
    a. 10^{11} K b. 10^{7} K c. 10^{26} K d. 10^{19} K

30. In the equation $E = mc^2$ what is the value of '*c*'?
    a. 3×10^{12} m/s b. 3×10^{19} m/s c. 3×10^{8} m/s d. 3×10^{21} m/s

CHAPTER 4: REFLECTION OF LIGHT

1. Which is not a luminous object?
   a. Sun b. Firefly c. Plant d. Candle

2. Who had proposed the Particle Theory in 1905?
   a. Albert Einstein b. Maxwell c. Hertz d. Newton

3. A line drawn at right angle to the mirror surface at the point of incidence is called
   a. incident ray. b. reflected ray. c. normal. d. refracted ray.

4. The angle between the incident ray and the plane mirror is 60°. The total angle between the incident ray and reflected ray will be
   a. 30° b. 120° c. 90° d. 60°

5. If the angle between the mirror and the incident ray is 50°, then the angle of reflection is
   a. 40° b. 50° c. 60° d. 110°

6. If the angle between the incident ray and the reflected ray is 110°, the angle of reflection is
   a. 40° b. 55° c. 45° d. 60°

7. The image formed by a plane mirror is
   a. erect and diminished.
   b. erect and enlarged.
   c. inverted and of same size.
   d. erect and of same size.

8. The image formed by a plane mirror is
   a. real.
   b. virtual.
   c. virtual with lateral inversion.
   d. real with lateral inversion.

9. If the incident ray and the reflected ray from a mirror are mutually perpendicular to each other, then the angle of incidence is
   a. 45° b. 55° c. 65° d. 75°

10. A spherical mirror whose reflecting surface is curved inwards, then it is a
    a. plane mirror.
    b. convex mirror.
    c. concave mirror.
    d. either convex or concave mirror.

11. A real and enlarged image can be obtained by using a
    a. plane mirror.
    b. concave mirror.
    c. convex mirror.
    d. either convex or concave mirror.

12. If the focal length of a concave mirror is 18 cm, its radius of curvature will be
    a. 30 cm. b. 35 cm. c. 40 cm. d. 36 cm.

13. If the radius of curvature of a spherical mirror is 35 cm, its focal length will be
    a. 17.5 cm. b. 30 cm. c. 18 cm. d. 12.5 cm.

14. The Image formed by a concave mirror when the object is placed between the focus and the centre of curvature of mirror is
    a. virtual, erect and magnified.
    b. real, inverted and diminished.
    c. real, inverted and magnified.
    d. virtual, erect and diminished.

15. The Image formed by a concave mirror when the object is placed at the centre of curvature of mirror is
    a. virtual, erect and magnified.
    b. real, inverted and of same size as the object.
    c. real, inverted and magnified.
    d. virtual, erect and diminished.

16. Image formed by a convex mirror when the object is placed anywhere between pole and infinity
    a. virtual, erect and magnified.
    b. real, inverted and diminished.
    c. real, inverted and magnified.
    d. virtual, erect and diminished.

17. The image formed by a concave mirror is real, inverted and highly magnified. The position of the object is
    a. at focus.
    b. between focus and centre.
    c. at centre of curvature.
    d. at infinity.

18. The mirror used as a rear-view mirror in a car or truck is
    a. plane.
    b. concave.
    c. convex.
    d. parabolic.

19. The mirror used for converging solar radiations in solar cookers to generate adequate heat for cooking purposes is
    a. plane.
    b. concave.
    c. convex.
    d. parabolic.

20. In the concave reflector of a torch, the bulb is placed
    a. between the pole and focus of reflector.
    b. at the focus of reflector.
    c. between focus and centre of curvature of reflector.
    d. at the centre of curvature of reflector.

21. A doctor uses a head mirror to focus light on the internal body parts such as teeth, ear, nose and throat. Which mirror is it?
    a. Plane
    b. Parabolic
    c. Convex
    d. Concave

22. Magnification produced by a convex mirror is always
    a. more than 1.
    b. less than 1.
    c. equal to 1.
    d. more or less than 1.

23. Magnification produced by a plane mirror is
    a. equal to 1.
    b. more than 1.
    c. less than 1.
    d. zero.

24. If the magnification of an image formed by a mirror is equal to 1, then the image is
    a. smaller than the object.
    b. larger than the object.
    c. of the size of object.
    d. none of these.

25. If the image formed is always virtual, the mirror can be
    a. concave or convex.
    b. concave or plane.
    c. only convex.
    d. convex or plane.

26. A concave mirror cannot be used as a
    a. magnifying mirror.
    b. dentist's mirror.
    c. rear-view mirror.
    d. torch reflector.

27. An object is placed in front of a concave mirror at a very far distance. If the radius of curvature of the mirror is 18 cm, then the image of the object in front of the mirror will be formed at a distance of
    a. 9 cm.
    b. 15 cm.
    c. 18 cm.
    d. 10 cm.

28. If the magnification of a body of size 1 m is 2 then the size of the image is
    a. 4 m.
    b. 2 m.
    c. 1 m.
    d. 0.5 m.

29. If the magnification has a plus sign, then the image is
    a. virtual and erect.
    b. real and inverted.
    c. virtual and diminished.
    d. real and diminished.

30. Which statement is not correct for a convex mirror?
    a. The image distance is always positive.
    b. The object distance is with negative sign.
    c. Always forms an image behind the mirror.
    d. The focal length is always negative.

CHAPTER 5: REFRACTION OF LIGHT

1. The speed of light in glass is
   a. 3×10^8 m/s b. 2.2×10^8 m/s c. 2×10^8 m/s d. 3×10^{10} m/s

2. A medium in which the speed of light is more is known as an optically
   a. denser medium. b. rarer medium. c. lighter medium. d. thick medium.

3. A light ray does not bend at the boundary in passing from one medium to the other medium if the angle of incidence is
   a. 0° b. 90° c. 45° d. 60°

4. The phenomenon due to which a ray of light deviates from its path while travelling from one optical medium to the other is called
   a. dispersion. b. reflection. c. diffraction. d. refraction.

5. A ray of light strikes a glass slab at 90°. The angle of incidence is
   a. 90° b. 0° c. 45° d. less than 90°

6. When a ray of light travels from a denser medium to a rarer medium, it
   a. deviates towards the normal. b. does not deviate.
   c. deviates away from normal. d. gets reflected.

7. The refractive index of water is
   a. 1.33 b. 1.50 c. 2.42 d. 1.36

8. If the refractive index of water with respect to air is 4/3, then refractive index of air with respect to water is
   a. 0.50 b. 3.75 c. 0.75 d. 0.25

9. A lens thinner in the middle and thicker at the edges is a
   a. concave lens. b. convex lens. c. plano-convex lens. d. none of these.

10. The distance between optical centre and principal focus of a lens is called
    a. radius of curvature. b. principal axis. c. aperture. d. focal length.

11. Which is also called a diverging lens?
    a. Bio-convex lens b. Concave lens c. Plano–convex lens d. Concavo-convex lens

12. A lens forms an inverted image of an object equal to its own size, if the object is placed
    a. beyond infinity and $2F_1$ b. at $2F_1$
    c. between $2F_1$ and F_1 d. in between F_1 and optical centre

13. A concave lens always forms
    a. virtual, erect and diminished image. b. real, inverted and enlarged image.
    c. virtual, erect and enlarged image. d. real, inverted and diminished.

14. When the object is placed between the optical centre and the principal axis of a convex lens, then the image formed is
    a. virtual, erect and diminished image. b. real, inverted and enlarged image.
    c. virtual, erect and enlarged image. d. real, inverted and diminished.

15. A ray of light directed towards the optical centre of a lens, after refraction it
    a. passes through the focus. b. becomes parallel to the principal axis.
    c. passes undeviated. d. is reflected back.

16. A ray of light after refraction through a lens emerges parallel to the principal axis of the lens. The incident ray either passes through or appear to meet at

a. optical centre.
b. first focus.
c. second focus.
d. centre of curvature of the first surface.

17. A convex lens of focal length 6 cm forms a real image of the same size as the object. The distance between the object and image will be

a. 12 cm
b. 18 cm
c. 9 cm
d. 24 cm

18. For an object placed at a distance of 30 cm in front of a convex lens, the image is at distance 30 cm behind the lens. The focal length of the lens is

a. 15 cm.
b. 30 cm.
c. 60 cm.
d. 45 cm.

19. Image distance is always negative for a

a. convex lens
b. plano-convex lens
c. concave lens
d. concavo-convex lens

20. One dioptre is the power of a lens whose focal length is

a. 2 m
b. 1 m
c. 0.5 m
d. 3 m

21. A combination of a convex lens of power +3 D and a concave lens of power –7 D has a resultant power of

a. 10 D
b. –10 D
c. 4 D
d. –4 D

22. A thin lens has power of –10 dioptres. Which lens is it?

a. Concave lens
b. Plano-convex lens
c. Convex lens
d. Concavo-convex lens

23. The power of a lens is +2.0 D. What should be its focal length?

a. 100 cm
b. 80 cm
c. 50 cm
d. 200 cm

24. A convex lens of focal length 10 cm is placed in contact with a concave lens of focal length 20 cm. The focal length of the combination of lens will be

a. 30 cm
b. 20 cm
c. 10 cm
d. 60 cm

25. The power of a convex lens of focal length 10 cm is

a. 5 D
b. 0.1 D
c. 30 D
d. 10 D

26. For a concave lens that forms a virtual image, the lens formula will be

a. $\frac{1}{f} = \frac{1}{v} + \frac{1}{u}$
b. $\frac{1}{f} = \frac{1}{-v} - \frac{1}{u}$
c. $\frac{1}{f} = \frac{1}{v} - \frac{1}{u}$
d. both **a** and **b**.

27. Under new Cartesian sign convention all distances are measured from

a. the optical centre.
b. the focal point.
c. the object.
d. the image.

28. Magnification produced by the lens is defined as the ratio of

a. $\frac{h'}{h}$
b. $\frac{v}{u}$
c. $\frac{h}{h'}$
d. both **a** and **b**.

29. The power of a lens depend on

a. the aperture of a lens.
b. the radius of curvature.
c. the focal length.
d. the image distance.

30. If two lenses of powers P_1 and P_2 are placed in contact with each other, then their resultant power P is given by

a. $P_1 + P_2$
b. $P_1 - P_2$
c. $P_1 P_2$
d. P_1 / P_2

CHAPTER 6: THE HUMAN EYE AND THE COLOURFUL WORLD

1. Which is the outermost covering of the eye?
   a. Sclerotic b. Cornea c. Iris d. Pupil

2. Through which part of the eye the light coming from the object enters into the eyes?
   a. Retina b. Choroid c. Cornea d. Iris

3. The lens in our eyes is a
   a. concave lens. b. convex lens. c. plano-convex lens. d. concavo-convex lens.

4. A spot behind the pupil and situated on the retina is called
   a. red spot. b. black spot. c. blind spot. d. yellow spot.

5. The image formed on the retina is retained by it for about ..... of a second.
   a. 1/15th b. 1/16th c. 1/18th d. 1/20th

6. The range of vision of a normal human eye is from infinity to about
   a. 30 cm. b. 45 cm. c. 25 cm. d. 15 cm.

7. Which of the following controls the amount of light entering the eye?
   a. Iris b. Cornea c. Pupil d. Lens

8. The defect of vision which cannot be corrected by using spectacles is
   a. myopia. b. hypermetropia. c. presbyopia. d. cataract.

9. A person who cannot see nearby objects distinctly is a case of
   a. myopia. b. hypermetropia. c. presbyopia. d. cataract.

10. Which lens is prescribed to be used in the spectacles for correcting a myopic defect?
    a. Concave lens b. Convex lens c. Cylindrical lens d. Bifocal lens

11. For a dual eye effect, lens prescribed is
    a. convex lens. b. concave lens. c. bifocal lens. d. plano-convex lens.

12. A person who cannot see distant objects clearly. His vision can be corrected by using spectacles containing
    a. concave lenses. b. plane lenses. c. contact lenses. d. convex lenses.

13. In which defect of vision the power of accommodation of the eye decreases with aging?
    a. Myopia b. Hypermetropia c. Presbyopia d. Cataract

14. To correct presbyopia defect, the elderly people need to use spectacles with a
    a. concave lens. b. bifocal lens. c. contact lens. d. convex lens.

15. The defect of vision due to progressive clouding of the lens of the eye is
    a. presbyopia. b. cataract. c. myopia. d. hypermetropia.

16. The colour of light that bends least on passing through a prims is
    a. violet. b. green. c. indigo. d. red.

17. The colour of white light that undergoes maximum bending on passing through a prism is
    a. violet. b. red. c. blue. d. yellow.

18. Which colour of light has the highest wavelength?
    a. Violet b. Green c. Red d. Blue

19. The splitting up of white light into seven colours on passing through a glass prism is called
    a. reflection. b. refraction. c. deflection. d. dispersion.

20. Which of the following colour of white light has the least wavelength?
    a. Red b. Orange c. Violet d. Blue

21. Formation of a rainbow in the sky is the result of
    a. reflection. b. refraction.
    c. dispersion. d. a combination of dispersion, refraction and reflection of light.

22 Twinkling of stars is due to the phenomenon of atmospheric
    a. reflection. b. refraction. c. deflection. d. scattering.

23. The colour of the sky appears blue due to ..... of light.
    a. reflection b. refraction c. scattering d. dispersion

24. The red colour of the sun at the time of sunrise and sunset is because
    a. red colour is least scattered. b. blue colour is least scattered.
    c. red colour is most scattered. d. blue colour is most scattered.

25. Tyndall effect is related to
    a. reflection of light. b. scattering of light. c. refraction of light. d. dispersion of light.

26. A glass prism splits the white light into ..... colours.
    a. six b. eight c. seven d. nine

27. The water droplets over the cloud act like small ..... .
    a. lenses b. spheres c. triangles d. prisms

28. Intensity of scattered light varies inversely as the ..... power of the wavelength of incident light.
    a. 5th b. 6th c. 7th d. 8th

29. Which colour of light can easily pass through fog without getting scattered?
    a. Red b. Green c. Orange d. Yellow

30. How many times is the wavelength of red light greater than that of blue light?
    a. 1.5 times b. 1.6 times c. 1.7 times d. 1.8 times

ANSWERS

CHAPTER 1: ELECTRICITY

1. b.	**2.** a.	**3.** b-c.	**4.** c.	**5.** d.	**6.** c.	**7.** d.
8. c.	**9.** d.	**10.** b.	**11.** a.	**12.** c.	**13.** d.	**14.** b.
15. a.	**16.** b.	**17.** c.	**18.** d.	**19.** b.	**20.** c.	**21.** d.
22. c.	**23.** d.	**24.** c.	**25.** c.	**26.** a.	**27.** c.	**28.** d.
29. b.	**30.** d.					

CHAPTER 2: MAGNETIC EFFECTS OF ELECTRIC CURRENT

1. a.	**2.** b.	**3.** c.	**4.** d.	**5.** b.	**6.** d.	**7.** c.
8. a.	**9.** b.	**10.** c.	**11.** d.	**12.** b.	**13.** c.	**14.** d.
15. a.	**16.** d.	**17.** b.	**18.** c.	**19.** c.	**20.** c.	**21.** b.
22. a.	**23.** b.	**24.** d.	**25.** b.	**26.** b.	**27.** b.	**28.** d.
29. a.	**30.** b.					

CHAPTER 3: SOURCES OF ENERGY

1. d.	**2.** c.	**3.** a.	**4.** b.	**5.** c.	**6.** c.	**7.** d.
8. a.	**9.** b.	**10.** c.	**11.** d.	**12.** c.	**13.** c.	**14.** b.
15. a.	**16.** b.	**17.** d.	**18.** c.	**19.** b.	**20.** a.	**21.** d.
22. c.	**23.** b.	**24.** d.	**25.** a.	**26.** b.	**27.** c.	**28.** a.
29. b.	**30.** c.					

CHAPTER 4: REFLECTION OF LIGHT

1. c.	**2.** a.	**3.** c.	**4.** d.	**5.** a.	**6.** b.	**7.** d.
8. c.	**9.** a.	**10.** c.	**11.** b.	**12.** d.	**13.** a.	**14.** c.
15. b.	**16.** d.	**17.** a.	**18.** c.	**19.** b.	**20.** b.	**21.** d.
22. b.	**23.** a.	**24.** c.	**25.** d.	**26.** c.	**27.** a.	**28.** b.
29. a.	**30.** b.					

CHAPTER 5: REFRACTION OF LIGHT

1. c.	**2.** b.	**3.** a.	**4.** d.	**5.** b.	**6.** c.	**7.** a.
8. c.	**9.** a.	**10.** d.	**11.** b.	**12.** c.	**13.** a.	**14.** c.
15. c.	**16.** b.	**17.** d.	**18.** a.	**19.** c.	**20.** b.	**21.** d.
22. a.	**23.** c.	**24.** b.	**25.** d.	**26.** c.	**27.** a.	**28.** d.
29. c.	**30.** a.					

CHAPTER 6: THE HUMAN EYE AND THE COLOURFUL WORLD

1. a.	**2.** c.	**3.** b.	**4.** d.	**5.** b.	**6.** c.	**7.** a.
8. d.	**9.** b.	**10.** a.	**11.** c.	**12.** a.	**13.** c.	**14.** d.
15. b.	**16.** d.	**17.** a.	**18.** c.	**19.** d.	**20.** c.	**21.** d.
22. b.	**23.** c.	**24.** d.	**25.** b.	**26.** c.	**27.** d.	**28.** a.
29. c.	**30.** d.					