

KNOWLEDGE HORIZON CLASSES

Test Series

- Q1.** The angle of reflection is the angle between
- The incident ray and the surface of the mirror
 - The reflected ray and the surface of the mirror
 - The normal to the surface and the incident ray
 - The normal to the surface and the reflected ray
- Q2.** An object is placed at the centre of curvature of a concave mirror. The distance between its image and the pole is
- Equal to f
 - Between f and $2f$
 - Equal to $2f$
 - Greater than $2f$
- Q3.** An object of size 2.0 cm is placed perpendicular to the principal axis of a concave mirror. The distance of the object from the mirror equals the radius of curvature. The size of the image will be
- | | |
|--------------|-------------|
| (i) 0.5 cm | (ii) 1.0 cm |
| (iii) 1.5 cm | (iv) 2.0 cm |
- Q4.** The magnification m of an image formed by a spherical mirror is negative. It means, the image is
- Smaller than the object
 - Larger than the object
 - Erect
 - Inverted
- Q5.** The colour of an object is determined by
- The colour of light reflected by it.
 - The colour of light absorbed by it.
 - The colour of light incident on it only.
 - None of the above.
- Q6.** Refraction of light can take place at the boundary of
- Transparent media
 - Opaque media

- (iii) Any medium
(iv) None of these
- Q7.** The sky appears blue because
(i) Molecules of air and other particles in the atmosphere are smaller than wavelength of visible light
(ii) Light of shorter wavelengths at the blue end are scattered more than the red light whose wavelength is 1.8 times
(iii) The scattered blue light enters our eyes
(iv) All of these
- Q8.** 'Danger' signal lights are usually red in colour because
(i) It is a bright colour
(ii) It least scattered by fog or smoke
(iii) It has smaller wavelength and can be seen from a distance
(iv) All of these
- Q9.** An electric bulb of 40W is connected to a source of 220V, the current drawn by the bulb will be
(i) 0.18A
(ii) 18A
(iii) 1.8A
(iv) 180A
- Q10.** A man has five resistors each of value 0.2 ohms. The maximum resistance he can obtain by connecting them will be
(i) 0.1 ohm
(ii) 1.0 ohm
(iii) 0.04 ohm
(iv) 0.4 ohm
- Q11.** Heat produced due to flow of current through a conductor is given by the formula
a. $H = I^2 R t$
b. $H = V I t$
c. $H = V^2 t / R$
d. All of the above
- Q12.** An 'electric fuse' is essential in domestic circuits, because
a. It is safety device
b. It breaks the circuit in case of overload
c. The circuit is broken because it melts in case of short circuit
d. All of above
- Q13.** A uniform magnetic field acting from east to west on a straight current carrying wire in the vertical direction, the direction towards which the conductor moves:

- (i) East
 - (ii) West
 - (iii) North
 - (iv) South
- Q14.** What is the use of the commutator in a D.C. motor?
- (i) To stop the flow of current
 - (ii) To reverse the direction of current
 - (iii) To increase the amount of current
 - (iv) No change in current
- Q15.** Which of the factor does not influence the current flowing in a current carrying conductor?
- (i) The current in the conductor
 - (ii) Magnetic field
 - (iii) Distance from the conductor
 - (iv) Electric field
- Q16.** What are *Van Allen radiation belts*?
- (i) Charged particles from sun getting trapped to form radiation belts.
 - (ii) Cosmic rays from sun forming radiation belts.
 - (iii) X-rays from atoms forming radiation belts.
 - (iv) Gamma rays forming the radiation belts.
- Q17.** The atomic masses of four different elements are given.
Which of the following is the most suitable fuel for nuclear fission?
- i. 2
 - ii. 35
 - iii. 135
 - iv. 239
- Q18.** The source of energy which is not derived from sun is
- i. Biomass
 - ii. Coal
 - iii. Petroleum
 - iv. Nuclear fuel
- Q19.** The type of mirror which is best suited for the use in solar cooker is
- i. Convex mirror
 - ii. Concave mirror
 - iii. Plane mirror
 - iv. None of these.
- Q20.** Electrical energy consumed in lighting an electrical bulb of 60W for 5 hours =
- (i) 3 kWh

- (ii) $1.08 \times 10^6 \text{ J}$
- (iii) 0.3 kWh
- (iv) Both b. and c.