

11. Which of the following is a wrong statement?

a rainbow can be seen only when the sun is at your front

sometimes two rainbows can be seen simultaneously

the same rainbow can be observed by two persons if both have normal vision

rainbow is formed due to refraction of light in rain drops

Answer (c).

12. The separation of white light into its component colours is called :

Dispersion

Refraction

Reflection

Radiation

Answer (a).

13. Why do some automobiles have additional yellow headlights?

Yellow light does not produce dazzling effect in the eyes of the people coming from front

Yellow light consumes less power

Yellow light is able to penetrate the fog and is thus able to illuminate the road better in foggy nights

both (a) and (b)

Answer (c).

14. 'Newton's disc' when rotated at a great speed appears :

Black

White

Shows seven colours

Green

Answer (b).

15. Which one among the following is not produced by sound waves in air?

Polarization

Diffraction

Reflection

Refraction

Answer (a).

16. Ultrasonic waves are those sound waves having frequency

between 20 hertz and 1000 hertz

between 1000 hertz and 20000 hertz

more than 20 kilohertz

less than 20 hertz

Answer (c).

17. When a ray of light is going from one medium to another, its

wavelength remains same

frequency remains same

frequency increases

wavelength increases

Answer (b).

18. A jet plane flies through air with a velocity of 2 Mach. While the velocity of sound is 332 m/s the air speed of the plane is

166 m/s

66.4 km/s

332 m/s

664 m/s

Answer (d).

19. Light travels in optical fibre irrespective of its shape because it is a device by which signals can be transferred from one location to another. It is based on the phenomenon of

diffraction of light

refraction of light

polarization of light

total internal reflection of light

Answer (d).

20. Bats can ascertain distances, directions, nature and size of the obstacles at night. This is possible by reflection of the emitted

ultrasonic waves from the bat

ultrasonic waves from the distant objects

supersonic waves from the bat

supersonic waves from the distant objects

Answer (a).