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Measurement unit

1. In fibre-optics communication phenomenon is used in optical fibres?

- (a) Light wave (b) Radio wave
(c) Microwave (d) Electric wave

2. "Endoscope" used by the doctors for examining the inside of patient's stomach works on the principle of:

- (a) Reflection of light
(b) Dispersion of light
(c) Refraction of light
(d) Total internal reflection of light

3. The reason of mirage is:

- (a) Interference of light
(b) Diffraction of light
(c) Polarization of light
(d) Total internal reflection of light

4. Consider the following natural phenomena:

1. Terrestrial heating
2. Reflection of light
3. Refraction of light
4. Diffraction of light

Due to which of these phenomena is mirage formed?

- (a) 1 and 2 (b) 2, 3 and 4
(c) 1 and 3 (d) 4 only

5. The technique to integrate and mark the image of a three-Dimensional objects is-

- (a) Audiography (b) Lexicography
(c) Photography (d) Holography

6. The generating images on a screen by focusing an electronic beam on phosphorus coated screen is called

- (a) Master Scan (b) Total Scan
(c) Roaster Scan (d) Radar Scan

7. For reproducing sound, a CD (Compact Disc) audio player uses a :

- (a) Quartz crystal (b) Titanium needle
(c) Laser beam (d) Barium titanate ceramic

8. Assertion (A): In a motion pictures, usually 24 frames are projected every second over the whole length of the film.

Reason (R) : An image formed on the retina of eye persists for about 0.1 s after the removal of the stimulus.

Code:

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
(b) Both (A) and (R) are true but (R) is not a correct explanation of (A)
(c) (A) is true but (R) is false
(d) (A) is false but (R) is true

9. Television signal cannot be received beyond a certain distance because:

- (a) Signals are weak
(b) Antenna is weak
(c) Air absorbs signal
(d) The surface of the earth is curved

10. The technique is used to transmit audio signals in television broadcast is:

- (a) Amplitude Modulation
(b) Frequency Modulation
(c) Pulse code Modulation
(d) Time Division Multiplexing

11. The image formed on Retina is:

- (a) Equal to object but inverted
(b) Smaller than object but straight
(c) Smaller than object but inverted
(d) Equal to object but straight

12. Which type of image of an object is formed by eye lens of the retinas?

- (a) Erect and Real (b) Erect and Virtual
(c) Inverted and Real (d) Inverted and virtual
(e) None of the above

13. The Principle reason why it is better to have two eyes than one is that:

- (a) By having two eyes we can distinguish colour easily

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(b)By having two eyes we can easily see in the dark as well as in dim light

(c)It gives a man a type of vision known as mosaic vision

(d)It enhances distance and depth perception in us.

14.Direct viewing of sun during total solar eclipse causes irreversible damage to eyes .The retinal burn is caused by which one of the following components of the sun rays?

(a)Heat (b)Rainbow light

(c)Ultra-violet light (d)Infra-red light

15.The colour of the star is an indication of its:

(a)Distance from the earth

(b)Temperature

(c)Luminosity

(d)Distance from the sun

16.Diffusion of light in the atmosphere takes place due to:

(a)Carbon dioxide (b)Dust particles

(c)Helium (d)None of the above

17.The colour of light is determined by its:

(a)Amplitude (b)Wavelength

(c)Intensity (d)Velocity

18.In the visible spectrum, the colour having the shortest wavelength is

(a)Red (b)Yellow (c)Blue (d)Voilet

19.Which one among the following has the highest energy?

(a)Blue light (b)Green light

(c)Red light (d)Yellow light

20.The sun is visible to us a few minutes before the actual sunrise because of:

(a)Scattering of light

(b)Diffraction of light

(c)Total internal reflection of light

(d)Refraction of light

21.The sun and the moon appear elliptical near the horizon because of:

(a)Refraction

(b)Optical illusion

(c)Interference phenomenon

(d)Their actual shape

22. The Sky appears blue due to:

(a)Blue color is scattered most

(b)The red color is scattered most.

(c)Blue light is minimum absorbed by atmosphere

(d)Red light is ultimately absorbed by atmosphere

23. The Sun appears red during sunset:

(a)Reflection of light

(b)Scattering of light

(c)Refraction of light

(d)Diffraction of light

24. An astronaut sees the colour of the sky as:

(a)Blue (b) White (c) Black (d) Red

25. When we see the sky from a plane in high altitude ,then it seems:

(a)Blue (b) Black (c) White (d)Red

26.The concept of expanding universe is based in:

(a)Doppler effect (b)Stark effect (c)Zeeman effect (d)Raman effect

27.Suppose a rocket ship is proceeding from the earth at a speed of $2/10^{th}$ the velocity of light .A light in the rocket ship appears blue to the passengers on the ship .What colour would it appear to an observer on the earth?

(a)Blue (b)Orange (c)Yellow

(d)Yellow-orange

28.In driving a car which type of mirror would you like to use for observing traffic at your back?

(a)Concave mirror (b)Spherical mirror

(c)Convex mirror (d)Plain mirror

29. Which one of the following types of the mirror is used to see the traffic behind the car?

(a)Convex mirror (b)Concave mirror

(c)Plane mirror (d)Spherical mirror

30. For shaving ,one uses:

(a)Concave mirror (b)Plain mirror

(c)Convex mirror (d)None of these