

Winmeen Tnpsc Group 1 & 2 Study Materials

Tnpsc Group 2 Complete Syllabus : <https://goo.gl/fNSnMN>

Tnpsc Group 2 Previous Questions : <https://goo.gl/PYqsd7>

Tnpsc Group 2 Model Questions : <https://goo.gl/xQvyTk>

20. Light and Sound

1. What is reflection?

The bouncing of light from the surface of a body is known as reflection.

2. What is ray?

The path taken by the light is known as a ray and is represented by a straight line with an arrow mark. The arrow mark denotes the direction of the light.

3. What is parallel beam?

Two or more rays form a beam. When the rays are parallel it is called as parallel beam.

4. What is Convergent beam?

If the rays meet at a point (converge), they form a convergent beam.

5. What is divergent beam?

If the rays move away from a point it is called as divergent beam.

6. What is reflected ray?

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The light ray that comes out from the reflecting surface after reflection is called a reflected ray.

7. What is normal?

The perpendicular line drawn to the surface at the point of incidence is called a normal.

8. What is angle of incidence?

The angle between the incident ray and the normal at the point of incidence is called the angle of incidence (i).

9. What is angle of reflection?

The angle between the reflected ray and the normal drawn from the point of incidence is called the angle of reflection (r).

10. What is incident ray?

A light ray which strikes the surface is called an incident ray.

11. What is law of reflection?

1. The incident ray, the reflected ray and the normal to the surface at the point of incidence lie in the same plane.

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2. The angle of incidence is equal to the angle of reflection

12. What is regular reflection?

Reflection from a polished surface is called Regular reflection.

13. What is irregular reflection?

Reflection from a rough (unpolished) surface is called irregular or diffused reflection.

14. What is multiple images?

We are aware that a plane mirror forms only a single image of an object. But two or more mirrors are arranged to form number of images of an object. These are called Multiple Images.

15. How does periscope work?

The working of a periscope is based on the principle of successive reflections from two plane mirrors. It consists of two plane mirrors facing each other fixed at 45° to the frame work of a tube.

16. What is refraction?

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The bending of ray of light when it passes from one medium to another is called refraction.

17. What is denser medium?

The direction of deviation depends on the densities of the two media. The medium of greater density is known as denser medium. Ex : Glass

18. What is lower medium?

The medium of lower density is known as rarer medium. Ex: Air

19. Describe about human eye?

- The human eye has a convex lens.
- The convex lens of an eye forms an image of the object on a screen called the retina.
- The retina is covered by a large number of nerve fibres(optic fibres) which sensitive to light.
- They carry the image by means of optic nerves to the brain.

20. What is power of accommodation of eye?

The human eye focusses the image for different objects at different distances by changing the focal length of the lens. This is done by the ciliary muscles, which

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stretch and relax to change the focal length of the lens. This action of the eye is called the power of accommodation of the eye.

21. Why is sound important?

Sound plays an important role in our lives. It helps us to communicate with one another. It is difficult to communicate without talking. Every one and everything around us produce sounds.

22. What is sound?

Sound needs a medium for propagation. Sound can travel through solid, liquid and gases. It can not travel through vacuum.

23. How do we hear sounds?

A vibrating body causes air molecules to vibrate. These vibrations reach our ear and are collected by the pinna and then funnelled into the ear tube. The vibrations strike the eardrum and start vibrating. The ear drum sends the vibrations to the inner ear. From there the signal goes to the brain. That is how we hear sounds.

24. What is prongs and stem?

A tuning fork is made of steel. The two upper ends of the tuning fork are called the 'prongs', while the lower end is called the 'stem'.

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25. What is frequency?

The number of oscillations per second is called the frequency. Frequency is expressed by hertz – Hz.

26. What is time period?

The time taken by the vibrating body to complete one vibration or oscillation is called the time period. The unit of period is second(s).

27. What is amplitude?

The maximum displacement of a vibrating body from its mean position is called amplitude. The unit of amplitude is metre (m)

28. What is audible sound?

The human ear can hear the range of audible frequencies between 20 Hz and 20000 Hz. They are called audible sounds.

29. What is inaudible sound?

Sounds of frequencies lesser than 20 Hz and greater than 20000 Hz can not be heard by the human ear. They are called inaudible sounds.

30. What is noise?

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Any unpleasant sound is called noise.

31. What is noise pollution?

Unwanted sound from any source that causes discomfort of any kind is called noise pollution.

32. What are the harmful effects of noise pollution?

- Exposure to sudden high noise level can damage to the eardrum.
- High levels of noise can also lead to nervous tension and increase in blood pressure.
- Noise also disturbs sleep, increases stress and causes headache

33. What are the steps to control noise pollution?

- 1.The use of loudspeaker in functions should be stopped.
- 2.Cars and other vehicles should not produce loud sounds.
- 3.T.V and Musical systems should be listened at low volumes.

34. What is optical fiber?

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An optical fibre is a device based on the principle of total internal reflection. Optical fibres are thin, flexible and transparent strands of glass which can carry light along them very easily. A bundle of such thin fibres forms a light pipe.

35. What are the uses of optical fiber?

1. Optical fibres are used to transmit communication signals.
2. In medicine, optical fibres are used in endoscope and laparoscopes.

