

9. Speed of sound is higher in diamond than in air. This statement
 (a) Is false (b) may be true, depending upon the temperature.
 (c) May be true, depending upon the quality of the diamond (d) is true
- 10 Sound waves of frequency below 20 Hz are called
 (a) Ultrasonic waves (b) audible waves (c) infrasonic waves (d) none of these
11. Sound can travel through:
 a) solids only b) liquids only c) gases only d) all of these
12. The speed of sound depends upon the:
 a) frequency of sound source b) amplitude
 c) wavelength d) property of the medium
13. Sound of frequency 320 Hz is of lower pitch than sound of frequency:
 a) 10 Hz b) 180 Hz c) 256Hz d) 512 Hz
14. What should a drummer do to reduce the pitch of his drum?
 a) Hit the drum skin with a large force
 b) Hit the drum skin with a smaller force
 c) Loosen the drum skin
 d) Tighten the drum skin
15. Which of these is expected to be the best absorber of sound?
 a) iron b) wood c) wool d) cemented wall

Q2. Fill in the blanks

- 1 Sound cannot travel through _____.
- 2 The other name of eardrum is _____.
- 3 The SI unit of frequency is_____.
- 4 Human ear cannot hear sound of frequency_____.
- 5 The shrillness of a sound depends on its _____.
6. A is a back and forth movement of a body about a central position.
7. The number of oscillations per second is called the of oscillation.
8. The part of the outer ear visible to us is called
9. Sound needs a to travel.
10. The speed of sound is in different substances.

Q3. Answer the following questions

1. Differentiate between infrasonic and ultrasonic waves
2. Why a sound cannot be heard on the moon?
3. Define 'Time period' of an oscillation.
4. A body vibrates 12 times in 4 seconds. Calculate the frequency of vibrations?
5. How is sound propagated?
6. What differences will you hear in a sound if there is an increase in
 i. amplitude ii. Frequency

7. Write any four measures to reduce noise pollutions.
8. Explain the internal structure of human ear.

CHAPTER-15
SOME NATURAL PHENOMENA

Q1. FILL IN THE BLANKS

- 1 The point vertically above the focus on the surface of the Earth is called the _____.
- 2 The charges from a body in contact with the Earth, when discharges its charges to the earth is called _____.
- 3 The negatively charged particles and the positively charged particles in an atom is called _____ and _____ respectively.
- 4 On rubbing ebonite rod with wool, both the objects gets charged by _____.
5. The layer immediately beneath the Earth's crust is
6. is used to protect buildings from the damaging effects of lightening.
7. A fault zone in the Earth's crust is also called a
- 8.The most common scale used to measure the magnitude of an earthquake is the
9. is an instrument to detect and compare charges.

Q2. ANSWER THE FOLLOWING QUESTIONS

1. What precautions would you take to protect yourself during an earthquake
 - i. if you are inside the house
 - ii. if you are outdoors
2. What is meant by earthing? Why most electrical appliances and mains of the house are earthed?
3. Explain any one technique of charging an object.
4. Write some safety measures to be taken during lightning?
5. How does an electroscope works?
6. What is the cause of thunder that we hear? Why is lightning dangerous?
7. Define the following.
 - (a) Earthquake
 - (b) Seismology
8. What are the causes for earthquakes?
9. Explain the construction and working of an electroscope
9. How lightning occurs?
10. What is seismograph? How does a seismograph record an earthquake?
11. How can you charge an object such as a glass rod by friction? Give one practical example from your daily life when you observe charging by friction.

CHAPTER 16
Light

Q1. Match the column

Column A

- a) Pitch
- (b) Loudness
- (c) Infrasonic sound
- (d) Ultrasonic sound
- (e) Time period

Column B

- (i) Below 20 Hz
- (ii) Above 20,000 Hz
- (iii) $1/\text{frequency}$
- (iv) Amplitude
- (v) $1/\text{amplitude}$
- (vi) Frequency

Q2 State True or False.

1. Eating a diet deficient in vitamin A over a period of time result in a condition called persistence of vision.
2. The second law of reflection states that ‘The angle of incidence is more than the angle of reflection’.
3. Sun and stars are the examples of non-luminous objects
4. Cataract, myopia and hypermetropia are common eye problems
5. The greater the angle between two mirrors, the greater is the number of images formed.
6. The image seen in plane mirror is a real image.
7. An incident ray, the reflected ray and the normal do not necessarily lie in the same plane.

Q3. Answer the following questions

1. What is lateral inversion?
2. What is the blind spot in an eye?
3. A ray of light is incident on a plane mirror along the normal to the mirror at the point of incidence. In which direction will the ray be reflected?
4. What is the role of iris in the functioning of the eye?
5. A ray incident on a plane mirror is reflected in a direction such that the angle between the incident and the reflected ray is 90° . What are the angles of incidence and reflection?
Mohan can see his face clearly in a new stainless steel plate but not in an old one. What could be the reason for this?
6. If an object is placed at a distance of 7.5cm from a plane mirror, how far would it be from its image?
7. We can see the sun because its glowing. How are we able to see the moon?

8. Differentiate between luminous and non-luminous objects.
9. What is meant by dispersion of light? Explain a natural phenomenon which is caused by the dispersion of sunlight in the sky.
10. Explain the structure and working of eyes.

CHAPTER2: MICROORGANISMS

Q1. State whether the following statements are true or false. Correct the false statements.

1. A vaccine is a preparation of a live disease-causing microbe.
2. Microorganisms that cause diseases in human beings, animals and plants are called carriers of diseases.
3. Main conditions required for the growth of microorganisms are a moderately warm temperature, air and moisture.
4. Causative pathogen of common cold is a virus.
5. Bacteria are the smallest and oldest organisms on our planet.
6. Malaria is a communicable disease.
7. Bacteria are considered to be on the borderline of the living and non-living organisms.
8. All fungi are unicellular.
9. Microbes are disease causing micro-organisms.

Q2.Fill in the blanks

1. Groups of microorganisms are called
2. is an example of protozoa.
3. Microorganisms are only visible through a
- 4..... lack chlorophyll and feed on decaying matter.
5. A protein called_____ present in milk coagulates to form curd.
6. Fermentation by yeast produces _____ and _____ .
7. Rinderpest and anthrax are examples of _____ diseases.
- 8._____involves heating a foodstuff to a high temperature and then cooling it rapidly.
9. Cholera and typhoid are examples of diseases caused by _____.

Q3.Answer the following questions

1. Why is there a controversy about viruses being alive or not?
2. What is vaccine?
3. Name the main conditions required for the growth of microorganisms.
4. Differentiate between antibiotics and antibodies.
5. Under what circumstances can viruses reproduce?
6. Why does curd turn sour more easily in summer than in winter?
7. Distinguish between algae and fungi.
8. What are communicable diseases?
9. Pickles have a long shelf life. Explain why?
10. What is food preservation? Describe briefly any four methods of food preservation.
11. What are the various modes of transmission of diseases? Explain with the help of examples.

Stars and the Solar System

Q1. Name the following planets

- (a) Smallest planet
- (b) A planet with no satellites
- (c) Brightest object in the night sky after the moon
- (d) Only planet where life exists
- (e) Largest planet in the solar system
- (f) 'Ringed planet'

Q2. Answer the following questions

1. Which star in the night sky can be located with the help of-
 - i. Orion constellation
 - ii. Ursa Major constellation?
2. Moon does not have light of its own. How are we able to see the moon?
3. Name the four large moons of Jupiter.
4. Why is Mars called the 'red planet'?
5. What is the difference between a star and a shooting star?
6. Define light year.
7. What are celestial bodies?
8. If you shouted on the moon, would someone standing next to you be able to hear you? Give reason.
9. The sun is not the biggest or brightest of stars. Why does it appear to be so?
10. Why is Mercury known as morning or evening star?
11. Which star (other than the sun)
 - (a) is closest to Earth?
 - (b) appears almost stationary to us?
12. Which is the brightest star in the night sky? In which constellation can we locate it?
13. What do you mean by 'phases of the Moon'? Draw a diagram to show phases of the Moon.
Write a short note on comets
14. Why do we see phases of the moon and not the sun?
15. What are the uses of artificial satellites?
16. Differentiate between inner planets and outer planets.
17. Differentiate between meteor, meteorite and meteoroids.
18. Differentiate between stars and sun.
19. Write a short note on comets.
20. Draw diagrammatic representations of Big Dipper and Orion