Ch-11 Sound

1. How can we distinguish one sound from another having the same pitch and loudness?
2. What is the audible range of frequency for human beings?
3. What is the 'note' of sound?
4. Find the frequency of a wave whose time period is 0.002 second.
5. What is crest and trough?
6. Why don't we get echo in small room?
7. What is the function of middle ear?
8. What are ultrasonic and infrasonic sound waves?
9. What is SONAR?
10. Define wave-motion.
11. What is one Hz?
12. What is the time period of sound wave?
13. What is the minimum distance required to hear distinct echo?
14. Why does sound become faint with distance?
15. Give two applications of echo.
16. Distinguish between tone, note, and noise.
17. A sound has 13 crests and 15 troughs in 3 seconds. When the second crest is produced, the first is 2cm away from the source? Calculate –
    a. The wavelength,
    b. The frequency, and
    c. The wave speed.
18. Explain structure of the human ear with the help of diagram.
19. Given that sound travels in air at 340 m/sec, find the wavelength of the waves in air produced by 20 kHz sound source. If the same source is put in a water tank, what would be the wavelength of the sound waves in water? [Speed of sound in water is 1480 m/s]
20. What is wavelength?
21. What is pitch?
22. What should be the time interval between the originated sound and the reflected sound to heard distinctly?
23. A ship sends out ultrasound that returns from the seabed and is detected after 3.42 s. If the speed of ultrasound through seawater is 1531 m/s . What is the distance of the seabed from the ship?
24. Define amplitude, time period and frequency of sound water.
25. Why do we say that sound waves are longitudinal?
26. Give three uses of ultrasound.
27. Sound cannot travel in vacuum. Describe an experiment to demonstrate this.
28. A child watching Dussehra from a distance sees the effigy of Ravana burst into flames and hears the explosion associated with it 2 sec after that. How far was he from the effigy if the speed of sound in air that night was 335 m/sec?