CHAPTER 11

SOUND

CONCEPT MAP

TOPICAL MULTIPLE CHOICE QUESTIONS

11.1 Sound Waves:

1. **The study of sound is called**
   (a) Acoustic (b) Optics (c) Electrostatics (d) All of these
2. **Sound is produced by _____.**
   (a) Propagation (b) Vibration (c) Both of these (d) None of these
3. **Sound can travel only in presence of**
   (a) Medium (b) vaccum (c) Air (d) Both a and c
4. **Sound is _____ Wave**
   (a) Electromagnetic (b) Transverse (c) Longitudinal (d) None of these

11.2 Characteristics of Sound:

5. **Characteristic by which We can distinguish between two sounds of same loudness and pitch is called _____.**
   (a) Loudness (b) Pitch (c) Quality (d) intensity of sound
6. **Pitch of sound depends on**
   (a) Amplitude (b) Frequency (c) Time period (d) Displacement
7. **Distance between two consecutive compressions and rarefactions is the _____ of sound wave.**
   (a) Amplitude (b) Frequency (c) Wave Length (d) none of these
8. **Loudness of sound depends on**
   (a) Amplitude of vibrating body (b) Area of vibrating body
   (c) Distance of vibrating body (d) All of these
9. **_____ is the characteristic of sound by which we can distinguish between a shrill and a grave sound.**
   (a) Pitch (b) loudness (c) Intensity (d) Quality
10. **Frequency of silent whistle Lies between _____.**
    (a) 20,000Hz - 25,000Hz (b) 20,000Hz - 35,000Hz
    (c) 20Hz - 20,000Hz (d) 15,000Hz - 40,000Hz
11. **The intensity of sound depends on the _____ of sound.**
    (a) Time period (b) frequency (c) Amplitude (d) None of these
12. **Intensity is a _____ quantity.**
    (a) Vector (b) Scalar (c) Physical quantity (d) None of these
13. **Intensity of faintest sound is**
    (a) 10^{12} Wm^{-2} (b) $10^{-12}Wm^{-2}$ (c) $10^{-8}Wm^{-2}$ (d) $10^{-9}Wm^{-2}$

14. **Intensity of loudest audible sound is _____.**
(a) $10^{-12}Wm^{-2}$ (b) $1Wm^{-2}$ (c) $20Wm^{-2}$ (d) All of these

15. **Intensity of whispering**
(a) $10^{-5}Wm^{-2}$ (b) $10^{-8}Wm^{-2}$ (c) $10^{-9}Wm^{-2}$ (d) $10^{-12}Wm^{-2}$

16. **The loudness of sound is directly proportional to logarithm of intensity, this Law is called _____.**
(a) Weber Fechner Law (b) Law of Gravitation
(c) Intensity Level (d) Echo

17. **Voice of Child is _____**
(a) Grave (b) Shrill (c) Faint (d) Loud

18. **I bell is equal to**
(a) 20dB (b) 10dB (c) 100dB (d) 50dB

19. **The amplitude of 100 dB sound is _____**
(a) 1000 (b) 10,000 (c) 100,000 (d) 1001000

20. **By using an _____ we can see sound wave.**
(a) Electroscope (b) Stroboscope (c) Gastroscope (d) Oscilloscope

11.3 Reflection (ECHO) of Sound:

21. **Echo of sound is**
(a) Refraction (b) Reflection (c) Diffraction (d) Interference

22. **The sensation of sound persists in our brain about _____**
(a) 1s (b) 0.1s (c) 0.01s (d) 2s

23. **For hearing distinct echoes, the minimum distance of obstacle from source of source of sound must be**
(a) 34m (b) 17m (c) 38m (d) 16m

11.4 Speed of Sound:

24. **The speed of sound in solid is about _____ times that in gases.**
(a) 5 (b) 15 (c) 20 (d) 10

25. **The speed of sound in air at a2 atm pressure and at room temperature (21°C) is**
(a) $320ms^{-1}$ (b) 360m/s (c) $343ms^{-1}$ (d) None of these

26. **The speed of sound varies with _____**
(a) Temperature (b) Humidity (c) both a and b (d) None of these

27. **The speed of sound in solid is _____ than liquid and air**
(a) Greater (b) Smaller (c) Equal (d) None of these

28. **Bats can hear Frequencies up to 120,000Hz**
(a) 10,000Hz (b) 120,000Hz (c) 12,00,000Hz (d) 120,00,000Hz

29. **Mice can hear frequencies up to**
(a) 35,00Hz (b) 35,000Hz (c) 45,00Hz (d) 100,000 Hz

30. **Compressions are places Where air is slightly _____ than the surrounding air**
(a) Less (b) Higher (c) Equal (d) None of these

31. **Rarefactions are places where air is slightly _____ than the surrounding air**
(a) Less (b) Higher (c) Equal (d) None of these

32. **The speed of sound in air was first accurately measured in _____**
(a) 1838 (b) 1738 (c) 1638 (d) 1938

11.5 Noise Pollution:

33. **Such sound Which are pleasant to our ears are called _____**
(a) Musical Sound (b) Noise (c) Both a and b (d) None of these

34. **Such sounds which are unpleasant to our ears are called _____.**
(a) Musical Sound (b) Noise (c) Both a and b (d) None of these

35. **Corresponds to irregular and sudden vibrations produced by some sound**
(a) Noise (b) Musical Sound (c) Notes of tuning fork (d) None of these

36. **The Level of noise recommended in most of countries is**
(a) 75-80dB (b) 85-90dB (c) 95-100dB (d) 115-120dB

37. **The method used to absorb undesirable sound by soft and porous surface is called**
(a) Acoustics (b) Echos (c) Intensity (d) Pitch

38. **Multiple reflections called**
(a) Acoustics (b) reverberations (c) Vibration (d) All of these

39. **We hear sound produce by musical instrument such as**
(a) Flute (b) Violin (c) Harmonic (d) All of these

40. **For a normal person audible frequency rnage for sound wave lie between**
(a) 10^{th} and 10 Khz (b) 20 Hz and 20KHz (c) 25Hz and 25 KHz (d) 30Hz and 30 KHz

41. **Noise correspond _____ vibration**
(a) Irregular (b) Sudden (c) Both 'a' and 'b' (d) Slowly slowly

42. **Noise has negative effects on human health it cause except**
(a) Aggression (b) Hypertension (c) High stress level (d) Fever/flue

43. **Which are the acoustic protection except**
(a) Lecture Halls (b) Auditorium (c) Theater halls (d) Kitchen

11.6 Audible Frequency Range:

44. **Audible frequency range is**
(a) 200Hz-2000Hz (b) 15Hz-15000Hz (c) 20Hz-20KHz (d) 20Hz-15000Hz

45. **Old people cannot hear sound even above**
(a) 20, 00Hz (b) 15 KIHz (c) 15,000 Hz (d) Both (b) and (c)

46. **Which bird fly easily between wires in the black room**
(a) Sparrow (b) Bat (c) Cow (d) Parrot

47. **The range of the frequency which human, ear can hear is called**
(a) Audible frequency range (b) Ultrasonic waves
(c) Transonic waves (d) None of these

11.7 Ultrasound:

48. **Ultrasonics are used to measure the depth of Water by**
(a) Acoustics (b) Echo Method (c) Sound Level (d) Diffraction

49. **_____ Waves carry more energy and higher frequency than sound waves**
(a) Ultrasonics (b) Infrasonic (c) Audible sound (d) All of these

50. **Ultrasonics are used to locate under-water depth the technique is called**
(a) Acoustics (b) Reverb ration (c) Sonar (d) Infrasonics

51. **Sound waves with frequency less than 20Hz are called _____.**
(a) Ultrasonic (b) Infrasonics (c) Notes (d) Acoustic

52. **Ultrasound is the frequency of sound higher than**
(a) 20Hz (b) 20KHz (c) 15,000 Hz (d) 25,000 Hz

53. **Infrasonic is the frequency of sound less than**
(a) 20Hz (b) 20 KHz (c) 15,000 Hz (d) 25,000 Hz

54. **According to wave equation $v = f\lambda$ the wavelength of ultra sonic waves are**
(a) Very small (b) Very big (c) Both "a" and "b" (d) None of these

55. **Powerful ultrasound is now being used to remove blood clot from**
(a) Capillaries (b) Arteries (c) Convoluted tubule (d) None of these

56. **By which waves small cracks can appear**
(a) Ultrasonics (b) Infrasonic (c) NOTSE (d) Sound frequency

57. **By ultrasonic waves are destroyed**
(a) Germs (b) Bacteria (c) Fungus (d) Both "a" and "b"

58. **When the frequency of a sound wave is increased which of following decrease**
(a) Wave length (b) Period (c) Amplitude (d) Both a and b

59. **Bats can hear frequency up to**
(a) 120, 000Hz (b) 2,000 Hz (c) 20, 000 Hz (d) 15,000 Hz

60. **Researcher in _____ observed giraffes to stop and wait for the others that were out of sight**
(a) 1898 (b) 1993 (c) 2013 (d) None of these

ANSWER KEY

Q.	Ans	Q.	Ans	Q.	Ans	Q.	Ans	Q.	Ans	Q.	Ans
1	a	11	d	21	b	31	a	41	c	51	b
2	b	12	c	22	b	32	b	42	d	52	b
3	d	13	b	23	b	33	a	43	d	53	a
4	c	14	b	24	b	34	b	44	c	54	a
5	c	15	c	25	c	35	a	45	c	55	b
6	b	16	a	26	c	36	b	46	b	56	a
7	c	17	b	27	a	37	a	47	a	57	d
8	d	18	b	28	b	38	b	48	b	58	d
9	a	19	c	29	d	39	d	49	a	59	a
10	a	20	d	30	b	40	b	50	c	60	b