1. What type of wave is sound?

A) Transverse

B) Longitudinal

C) Electromagnetic

D) Mechanical

Answer: B) Longitudinal

2. Sound requires a _____ for propagation.

A) Vacuum

B) Medium

C) Light source

D) Magnetic field

Answer: B) Medium

3. The speed of sound is fastest in _____.

A) Gases

B) Liquids

C) Solids

D) Vacuum

Answer: C) Solids

4. Loudness of sound depends on _____.

A) Frequency

B) Amplitude

C) Wavelength

D) Speed

Answer: B) Amplitude

5. Pitch of sound is determined by _____.

A) Amplitude

B) Frequency

C) Speed

D) Loudness

Answer: B) Frequency

6. The unit of frequency is _____.

A) Hertz (Hz)

B) Decibel (dB)

C) Meter (m)

D) Second (s)

Answer: A) Hertz (Hz)

7. In air at 20°C, the speed of sound is approximately _____ m/s.

A) 330

B) 343

C) 350

D) 360

Answer: B) 343

8. Speed of sound increases with _____ in air.

A) Decrease in temperature

B) Increase in temperature

C) Increase in humidity

D) Both B and C

Answer: D) Both B and C

9. Sound travels faster on a _____ day.

A) Hot

B) Cold

C) Humid

D) Windy

Answer: A) Hot

10. The reflection of sound is called _____.

A) Echo

B) Refraction

C) Diffraction

D) Interference

Answer: A) Echo

11. Echoes are used in _____ technology.

A) Radar

B) Sonar

C) Ultrasound

D) All of the above

Answer: D) All of the above

12. For an echo to be heard distinctly, the reflecting surface should be at least _____ meters away.

A) 10

B) 17

C) 20

D) 25

Answer: B) 17

13. Humans can hear sounds between _____ Hz.

A) 20-2000

B) 20-20000

C) 200-20000

D) 2-2000

Answer: B) 20-20000

14. Sounds below 20 Hz are called _____.

A) Ultrasonic

B) Infrasonic

C) Supersonic

D) Hypersonic

Answer: B) Infrasonic

15. Sounds above 20000 Hz are _____.

A) Infrasonic

B) Ultrasonic

C) Audible

D) Sonic

Answer: B) Ultrasonic

16. Noise pollution can cause _____.

A) Hearing loss

B) Stress

C) Sleep disturbance

D) All of the above

Answer: D) All of the above

17. Units of noise measurement are _____.

A) Hertz (Hz)

B) Decibels (dB)

C) Watts (W)

D) Meters (m)

Answer: B) Decibels (dB)

18. Control measures for noise pollution include _____.

A) Soundproofing

B) Regulations

C) Ear protection

D) All of the above

Answer: D) All of the above

19. Ultrasound is used in _____.

A) Medical imaging

B) Cleaning

C) Sonar

D) All of the above

Answer: D) All of the above

20. SONAR stands for _____.

A) Sound Navigation and Ranging

B) Sound Operation and Ranging

C) Sonic Navigation and Reflection

D) Sound Optical Navigation

Answer: A) Sound Navigation and Ranging

21. _____ refers to the quality of sound.

A) Pitch

B) Loudness

C) Timbre

D) Frequency

Answer: C) Timbre

22. Timbre helps distinguish _____.

A) Same pitch sounds from different instruments

B) Loudness levels

C) Frequency ranges

D) Speed variations

Answer: A) Same pitch sounds from different instruments

23. Music differs from noise in having _____ patterns.

A) Random

B) Organized

C) Disordered

D) Chaotic

Answer: B) Organized

24. The depth of the ocean can be calculated using _____.

A) Echoes

B) Refraction

C) Diffraction

D) Interference

Answer: A) Echoes

25. Given speed of sound in water = 1500 m/s, time for echo = 14.7 s, ocean depth is _____ meters.

A) 11000

B) 11025

C) 12000

D) 15000

Answer: B) 11025

26. Loudness is measured in _____.

A) Hertz

B) Decibels

C) Meters

D) Seconds

Answer: B) Decibels

27. Increasing amplitude increases _____.

A) Pitch

B) Loudness

C) Frequency

D) Speed

Answer: B) Loudness

28. _____ sounds are inaudible to humans.

A) Ultrasonic

B) Infrasonic

C) Both A and B

D) Audible

Answer: C) Both A and B

29. Which factor affects speed of sound in air?

A) Temperature

B) Pressure

C) Humidity

D) All of the above

Answer: D) All of the above

30. _____ is the persistence of sound after source stops.

A) Echo

B) Reverberation

C) Refraction

D) Diffraction

Answer: B) Reverberation

31. High frequency sounds have _____ pitch.

A) Low

B) High

C) Medium

D) Variable

Answer: B) High

32. Decibel is a unit of _____.

A) Frequency

B) Loudness

C) Pitch

D) Wavelength

Answer: B) Loudness

33. Noise pollution affects _____.

A) Hearing

B) Sleep

C) Communication

D) All of the above

Answer: D) All of the above

34. SONAR is used for _____.

A) Measuring ocean depth

B) Detecting objects underwater

C) Medical imaging

D) Both A and B

Answer: D) Both A and B

35. _____ helps identify a musical instrument's sound.

A) Pitch

B) Loudness

C) Timbre

D) Frequency

Answer: C) Timbre

36. Sound reflection leads to _____.

A) Echo

B) Refraction

C) Diffraction

D) Absorption

Answer: A) Echo

37. Speed of sound in air is _____ in water.

A) Higher than

B) Lower than

C) Equal to

D) Comparable

Answer: B) Lower than

38. Factors affecting loudness include _____.

A) Amplitude

B) Distance

C) Medium

D) All of the above

Answer: D) All of the above

39. _____ is used for non-invasive medical imaging.

A) X-ray

B) Ultrasound

C) MRI

D) CT scan

Answer: B) Ultrasound

40. Sound waves can undergo _____.

A) Reflection

B) Refraction

C) Diffraction

D) All of the above

Answer: D) All of the above

41. Human speech typically falls in _____ Hz range.

A) 100-3000

B) 20-20000

C) 1000-5000

D) 500-2000

Answer: A) 100-3000

42. _____ reduces noise pollution impact.

A) Soundproofing

B) Amplifying

C) Reflecting

D) Absorbing only

Answer: A) Soundproofing

43. Pitch is related to _____.

A) Amplitude

B) Frequency

C) Loudness

D) Speed

Answer: B) Frequency

44. Echo sounding is used to measure _____.

A) Air pressure

B) Ocean depth

C) Sound speed

D) Frequency

Answer: B) Ocean depth

45. Which medium allows fastest sound travel?

A) Air

B) Water

C) Steel

D) Vacuum

Answer: C) Steel

46. Decibel level for normal conversation is _____ dB.

A) 20-30

B) 40-60

C) 80-90

D) 100-120

Answer: B) 40-60H

47. Sound intensity is measured in _____.

A) Watts

B) Decibels

C) Hertz

D) Meters

Answer: B) Decibels

48. Increasing distance from a sound source _____ loudness.

A) Increases

B) Decreases

C) Does not affect

D) Doubles

Answer: B) Decreases

49. The phenomenon of sound bending around obstacles is _____.

A) Reflection

B) Refraction

C) Diffraction

D) Interference

Answer: C) Diffraction

50. _____ is the minimum distance for hearing an echo.

A) 5 meters

B) 10 meters

C) 17 meters

D) 25 meters

Answer: C) 17 meters

51. Timbre distinguishes sounds of same _____.

A) Loudness

B) Pitch

C) Frequency

D) Amplitude

Answer: B) Pitch

52. Noise pollution control includes _____.

A) Using earplugs

B) Soundproofing

C) Reducing source noise

D) All of the above

Answer: D) All of the above

53. Speed of sound in solids is _____ in gases.

A) Slower than

B) Faster than

C) Equal to

D) Comparable

Answer: B) Faster than

54. _____ affects sound wave propagation.

A) Temperature

B) Humidity

C) Medium density

D) All of the above

Answer: D) All of the above

55. SONAR technology uses _____.

A) Sound waves

B) Light waves

C) Radio waves

D) Electromagnetic waves

Answer: A) Sound waves

56. Sound reflection occurs when sound _____.

A) Passes through a medium

B) Bounces off a surface

C) Changes speed

D) Is absorbed

Answer: B) Bounces off a surface

57. _____ is crucial for sound localization.

A) Pitch

B) Loudness

C) Timbre

D) Binaural hearing

Answer: D) Binaural hearing

58. Decibel scale is _____.

A) Linear

B) Logarithmic

C) Exponential

D) Inverse

Answer: B) Logarithmic

59. Prolonged exposure to _____ dB can cause hearing damage.

A) 50

B) 70

C) 90

D) 110

Answer: C) 90

60. _____ determines sound loudness perception.

A) Amplitude

B) Frequency

C) Wavelength

D) Speed

Answer: A) Amplitude

61. Frequency range of human speech is _____ Hz.

A) 100-3000

B) 20-20000

C) 500-5000

D) 1000-10000

Answer: A) 100-3000

62. Applications of sound include _____.

A) Medical imaging

B) Navigation

C) Communication

D) All of the above

Answer: D) All of the above

63. Sound speed in air at 0°C is about _____ m/s.

A) 330

B) 343

C) 350

D) 360

Answer: A) 330

64. _____ affects pitch perception.

A) Amplitude

B) Frequency

C) Loudness

D) Timbre

Answer: B) Frequency

65. Noise is considered _____ sound.

A) Organized

B) Unwanted

C) Harmonious

D) Musical

Answer: B) Unwanted

66. Echoes depend on _____ of surfaces.

A) Reflection

B) Absorption

C) Transmission

D) Diffraction

Answer: A) Reflection

67. Sound intensity decreases with _____ distance.

A) Increasing

B) Decreasing

C) Constant

D) Variable

Answer: A) Increasing

68. Medical ultrasonography uses _____ frequency sound.

A) Low

B) High

C) Audible

D) Infrasonic

Answer: B) High

69. _____ is a measure of sound level.

A) Hertz

B) Decibel

C) Pascal

D) Joule

Answer: B) Decibel

70. The speed of sound is _____ in water than air.

A) Lower

B) Higher

C) Same

D) Variable

Answer: B) Higher

71. _____ sound waves are used in SONAR.

A) Ultrasonic

B) Infrasonic

C) Audible

D) Supersonic

Answer: A) Ultrasonic

72. Human ears detect sound via _____.

A) Vibration

B) Resonance

C) Both A and B

D) Refraction

Answer: C) Both A and B

73. Factors affecting sound speed include _____.

A) Medium

B) Temperature

C) Pressure

D) All of the above

Answer: D) All of the above

74. _____ describes sound quality.

A) Pitch

B) Loudness

C) Timbre

D) Frequency

Answer: C) Timbre

75. Sound absorption reduces _____.

A) Echo

B) Reflection

C) Refraction

D) Diffraction

Answer: A) Echo

76. _____ waves are used for cleaning delicate objects.

A) Ultrasonic

B) Infrasonic

C) Audible

D) Shock

Answer: A) Ultrasonic

77. Threshold of human hearing is _____ dB.

A) 0

B) 10

C) 20

D) 30

Answer: A) 0

78. Painful sound levels are above _____ dB.

A) 80

B) 100

C) 120

D) 140

Answer: C) 120

79. _____ is key in noise pollution control.

A) Amplification

B) Reduction

C) Reflection

D) Absorption only

Answer: B) Reduction

80. Sound diffraction allows sound to _____ obstacles.

A) Reflect off

B) Pass through

C) Bend around

D) Absorb

Answer: C) Bend around

81. Frequency determines _____ of sound.

A) Loudness

B) Pitch

C) Timbre

D) Speed

Answer: B) Pitch

82. Reverberation is _____.

A) Sound reflection

B) Sound absorption

C) Multiple reflections

D) Sound diffraction

Answer: C) Multiple reflections

83. Sound waves transfer _____.

A) Energy

B) Matter

C) Both

D) Neither

Answer: A) Energy

84. _____ hearing loss is due to noise exposure.

A) Conductive

B) Sensorineural

C) Temporary

D) Both B and C

Answer: D) Both B and C

85. Speed of sound depends on _____.

A) Medium

B) Temperature

C) Frequency

D) A and B

Answer: D) A and B

86. Sound localization involves _____.

A) Intensity differences

B) Time differences

C) Both A and B

D) Frequency changes

Answer: C) Both A and B

87. _____ is a unit of sound pressure.

A) Decibel

B) Pascal

C) Hertz

D) Meter

Answer: B) Pascal

88. Music has _____ patterns.

A) Random

B) Structured

C) Chaotic

D) Noisy

Answer: B) Structured

89. _____ affects sound wave diffraction.

A) Frequency

B) Amplitude

C) Wavelength

D) All of the above

Answer: D) All of the above

90. Hearing protection is crucial for _____ dB sounds.

A) Low

B) High

C) Medium

D) Variable

Answer: B) High

91. Sound in solids is _____ than in air.

A) Slower

B) Faster

C) Equal

D) Comparable

Answere : A) faster

92. Sound absorption is used for _____ control.

A) Noise

B) Echo

C) Reverberation

D) All of the above

Answer: D) All of the above

93. SONAR stands for Sound _____ and Ranging.

A) Operation

B) Navigation

C) Observation

D) Orientation

Answer: B) Navigation

94. Sound reflection leads to _____ formation.

A) Echo

B) Shadow

C) Diffraction

D) Refraction

Answer: A) Echo

95. _____ is a factor affecting sound speed in air.

A) Temperature

B) Pressure

C) Humidity

D) All of the above

Answer: D) All of the above

96. Loudness is perceived based on sound _____.

A) Frequency

B) Amplitude

C) Pitch

D) Timbre

Answer: B) Amplitude

97. _____ frequency sounds are used in medical imaging.

A) Low

B) High

C) Audible

D) Infrasonic

Answer: B) High

98. Decibel scale measures sound _____.

A) Frequency

B) Pitch

C) Intensity

D) Speed

Answer: C) Intensity

99. _____ hearing damage can be caused by loud noise.

A) Temporary

B) Permanent

C) Both A and B

D) Reversible

Answer: C) Both A and B

100. Sound travels through _____ fastest.

A) Air

B) Water

C) Steel

D) Vacuum

Answer: C) Steel

Answer: D) All of the above

101. Pitch perception relates to sound _____.

A) Amplitude

B) Frequency

C) Loudness

D) Timbre

Answer: B) Frequency

102. _____ describes unique sound character.

A) Pitch

B) Loudness

C) Timbre

D) Intensity

Answer: C) Timbre

103. Noise control measures include _____.

A) Soundproofing

B) Ear protection

C) Source reduction

D) All of the above

104. Human speech frequency range is typically _____ Hz.

A) 100-3000

B) 20-20000

C) 500-8000

D) 1000-5000

Answer: A) 100-3000

105. _____ affects sound localization ability.

A) Intensity

B) Frequency

C) Binaural hearing

D) All of the above

Answer: D) All of the above

106. _____ is used to measure ocean depths.

A) SONAR

B) Radar

C) Ultrasound

D) Infrared

Answer: A) SONAR

107. Sound wave characteristics include _____.

A) Frequency

B) Amplitude

C) Wavelength

D) All of the above

Answer: D) All of the above

Answer: B) Faster