114. If mass of a body suspended from a spring is doubled, the period of vibration of the body becomes: (6a ii 07)

a) Double.
b) Half.
c) $\sqrt{2}$ Times.
d) FIyr times.

115. The frequency of a simple pendulum in given by: (5a-I 08)

a) V = 2Л $\sqrt{g}$ / L.
b) V = 2Л$\sqrt{L/g}$.
c) V = 1/2Л.$\sqrt{L/g}$.
d) V = 1/2Л$\sqrt{g/L}$.

116. Beats are produced due to: (5a – ii 08)

a) Diffraction.
b) Interference.
c) Polarization.
d) Refraction.

117. When temperature of air rises, the speed of sound increases because: (5a – iii 08)

a) The frequency of wave increases.
b) The wavelength of wave increases.
c) Both the frequency and wavelength of wave increase.
d) Neither frequency nor wavelength increases.

118. If you go on increasing the stretching force on a wire in a guitar, it's frequency of vibration: (6-a I 08)

a) Increases.
b) Decreases.
c) Neither increases nor decreases.
d) Becomes zero

119. If mass of a body suspended from a spring is increased to 4 times, the period of vibration of the body be: (6 a ii 08)

a) 4 times.
b) 2 times.
c) $\sqrt{2}$ Times.
d) Same as before.

120. If the fundamental frequency of vibration of a string fixed at both ends is 50 Hz. The fourth harmonic will be: (6 a iii 08)

a) 100 Hz.
b) 150 Hz.
c) 200 Hz.
d) 250 Hz.

123. If two tuning forks with frequencies 256 Hz and 262 Hz. Are sounded together the beat frequency will be: (8 – iv, 2009)

a) 3
b) 4
c) 5
d) 6

122. If the tension of a stretched string is increased 4 times. The speed of the transverse wave in it will increase: (8 – vii, 2009)

a) 4 times.
b) 8 times.
c) 2 times.
d) 16 times.

123. The velocity of sound has maximum value in: (8 – ix, 2009)

a) Solids.
b) Liquids.
c) Gasses.
d) Free space.

124. A body executes simple harmonic motion if: (8 – xiv, 2009)

a) A = kx.
b) V = - kx.
c) A = -✓ kx.
d) A = $kx^{2.}$

125. The S.I unit of intensity of sound is: (8 – xvii, 2009)

a) Watt/m^2.
b) Decibel
c) Weber.
d) Diopter.

126. Which of the following exhibited simple harmonic motion: (1 – xiii, 2010?)

a) A hanging spring supporting a weight.
b) The balance of a wheel.
c) The wheel of an automobile.
d) The spring of a violin.

127. Pitch of sound depends upon: (1 – xiv, 2010)

a) Frequency.
b) Loudness.
c) Time period.
d) Distance.

128. Velocity of sound in space is: (1 – xiv, 2010)

a) 332 m/s.
b) 344 m/s.
c) 330 m/s.
d) Zero.

129. Electromagnetic waves consist of oscillating electric and magnetic fields, both are: (1 – iv, 2011)

a) Parallel to each other.
b) Perpendicular to each other.
c) Non-parallel to each other.
d) Neither of these.

130. This is compression wave: (1 – v, 2011)

a) Light wave.
b) Sound wave.
c) Radio wave.
d) X-sty.

131. If two tuning forks of frequencies 256 Hz and 260 Hz are sounded together, the number beats per second will be: (1 –vi, 2011)

a) 3
b) 4
c) 5
d) 6

132. Earthquake waves are the example of: (1 – xiv, 2011)

a) Audio waves.
b) Infrasonic waves.
c) Ultraviolet waves.
d) Shock waves.

ANSWERS

1. Periodic motion.
2. All of these.
3. Simple harmonic only when its acceleration is directly proportional to its displacement and directed towards the mean position.
4. Its amplitude of vibration is small.
5. Maximum distance from the mean position on either side.
6. Number of vibrations/sec.
7. Mean position.
8. Simple harmonic.
9. V = ∞ $\sqrt{r^2}$ $x^{2.}$
10. T = 2Л/∞.
11. F = 1/T.
12. T = 2Л ✓m/k.
13. T = 2Л ✓L/g.
14. Increases.
15. Remains constant.
16. Increases.
17. Increases by $\sqrt{2}$ times..
18. Answer and d.
19. Answer a and d.
20. Intensity.
21. Pitch.
22. Frequency of sound.
23. Low.
24. High.
25. Iron and glass.
26. Isothermal conditions.
27. Less than.
28. Doppler Effect.
29. Standing or stationary.
30. Fundamental frequency.
31. 2 second.
32. 0.5 Hertz.
33. Less than 2 seconds.
34. More than 2 seconds.
35. Answers c and d.
36. More than the speed of sound.
37. More than 20000 Hz.
38. Intensity level.
39. 7 beats/second.
40. Wave length of sound.
41. Speed of sound waves.
42. Speed and wave length of sound waves.
43. Pitch increases due to an increase in frequency.
44. Sound waves.
45. λ/4.
46. Quality.
47. 332 m/s.
48. $\sqrt{2}$ F.
49. $increases\ with$ Temperature.
410. $longitudinal$.

51. $beats$.
52. QUality.
53. Iron.
54. Increases with temperature.
55. Longitudinal waves.
56. Vλ.
57. Mach number.
58. Shock wave.
59. Too small.
60.7.
61Frequency
62. Sound waves.
63. λ/2.
64. $\sqrt{2}$ F.
65. Measure of intensity level.
66. Constructive and destructive interference both.
67. Pressure.
68.13
69.414 T
70.5000 Hz.
71. Quadrupled.
72.0.21
73. Decrease in pitch
74.256 Hz 248 Hz
75. Quality

76.1/$\sqrt{6}$ second
77. 2000 Hz
78. Both frequency and wavelength increases.
79. The length of the pendulum
80. Length
81. Intensity
82. Mean position.
83. Beats
84. Waves length
85. Doubled
86Interference
87. Decibel
88. Remains the same
89.2000
90. Standing wave
91. One
92. remains constant
93. - kx
94.0.5 Hz
95. Frequency
96. Sound waves
97. 4
98. A parabola.
99.5000
100. Temperature
101. Harmonics
102. Polarization
103. Loudness of sound
104. Interference
105. Sound waves
106. $\lambda/2$
107. 7
108.40 b
109. Infrasonic
110. Intensity level
111. Solid
112. Quality
113. Frequency
114.$\sqrt{2}$ Times
115. v = 1 /2 z $\sqrt{g}$ /L
116. InteRference
117. The wave length of increases
118. Increases
119.2 times
120.200
121.6
122.2 times
123. Solids
124. A = -$\sqrt{k}$ x^2
125. Watt/m^2
126. The wheel of an automobile
127. Frequency
128. Zero
129. Perpendicular to each other
130. Sound wave
131.4
132. Infrasonic waves.