

## Physics ECAT Pre Engineering Chapter 8 Waves Online Test

| Sr | Questions                                                                                                                                  | Answers Choice                                                                                                                                                                                                                                   |
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| 1  | Fidelity refers to                                                                                                                         | A. <b>Reproduction of original sound</b><br>B. Reproduction of original image<br>C. Reproduction of music<br>D. Reproduction of a CD from original copy                                                                                          |
| 2  | The loudness and pitch of a sound note depends on                                                                                          | A. Intensity and velocity<br>B. Frequency and velocity<br>C. <b>Intensity and frequency</b><br>D. Frequency and number of harmonic                                                                                                               |
| 3  | The velocity of sound in air not effected by changes in                                                                                    | A. Moisture contents in air<br>B. Temperature of air<br>C. <b>The atmosphere pressure</b><br>D. The composition of air                                                                                                                           |
| 4  | The ratio of velocity of sound in air at 4 atm pressure and that at 1 atm pressure would be                                                | A. <b>1 : 2</b><br>B. 4 : 1<br>C. 1 : 4<br>D. 2 : 1                                                                                                                                                                                              |
| 5  | It is possible to recognize a person by hearing his voice even if he is hidden behind a solid wall. This is due to the fact that his voice | A. <b>Has a definite pitch</b><br>B. Has a definite quality<br>C. Has a definite capacity<br>D. Can penetrate the wall                                                                                                                           |
| 6  | If two waves of length 50 cm and 51 cm produced 12 beats per second, the velocity of sound is                                              | A. 360 m/s<br>B. <b>306 m/s</b><br>C. 331 m/s<br>D. 340 ms                                                                                                                                                                                       |
| 7  | To hear a clear echo, the reflecting surface must be at a minimum distance of                                                              | A. 10 m<br>B. <b>16.5 m</b><br>C. 33 m<br>D. 66 m                                                                                                                                                                                                |
| 8  | The speed of sound in a medium depends on                                                                                                  | A. The elastic property but not on the inertia property<br>B. The inertia property but not on the elastic property<br>C. <b>The elastic property as well as the inertia property</b><br>D. Neither the elastic property nor the inertia property |
| 9  | When two waves with same frequency and constant phase difference phase difference interfere                                                | A. There is a gain of energy<br>B. There is a loss of energy<br>C. The energy is redistributed and the distribution changes with time<br>D. <b>The energy is redistributed and the distribution remains constant with time</b>                   |
| 10 | Which of the following changes at an antinode in a stationary wave?                                                                        | A. Density only<br>B. Pressure only<br>C. Both pressure and density<br>D. <b>Neither pressure nor density</b>                                                                                                                                    |
| 11 | The velocity of sound in air depends upon                                                                                                  | A. <b>Density and elasticity of gas</b><br>B. Pressure<br>C. Wavelength<br>D. Amplitude and frequency of sound                                                                                                                                   |
| 12 | In stationary waves                                                                                                                        | A. Energy is uniformly distributed<br>B. Energy is minimum at nodes and maximum at antinodes<br>C. <b>Energy is maximum at nodes and minimum at antidotes</b><br>D. Alternating maximum and minimum energy producing at nodes and antinodes      |
| 13 | When a wave is reflected from a free end                                                                                                   | A. <b>Increases</b><br>B. <b>Decreases</b><br>C. <b>Remains same</b><br>D. <b>Increases or decreases</b>                                                                                                                                         |

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| 13 | When temperature increase, the frequency of a tuning fork                   | C. Remains same<br>D. Increase or decreases depending on the material                                                                          |
| 14 | If a wave can be polarized, it must be                                      | A. An electromagnetic wave<br>B. A longitudinal wave<br>C. A progressive wave<br>D. A transverse wave                                          |
| 15 | Which one of the following could be the frequency of ultraviolet radiation? | A. $1.0 \times 10^6 \text{ Hz}$<br>B. $1.0 \times 10^9 \text{ Hz}$<br>C. $1.0 \times 10^{12} \text{ Hz}$<br>D. $1.0 \times 10^{15} \text{ Hz}$ |