

## PPSC Physics Topic 5 Waves and Wave Properties of Light

| Sr | Questions  | Answers Choice   |
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| 1  | The spectrum of radiation due to transitions between energy levels in an atom, other absorption or emission is called.   | A. Atomic spectrum<br>B. Molecular spectrum<br>C. Grating spectrum<br>D. Normal spectrum   |
| 2  | Difference in the density of two medium when waves are passing from one into another medium always results in the change in.                                     | A. Wave speed<br>B. Wave direction<br>C. Both speed and direction<br>D. Wave frequency   |
| 3  | In order to hear an echo what is the minimum distance between the sound and reflecting surface.  | A. 0.65 m<br>B. 16.5 m<br>C. 1.65 m<br>D. 165 m  |
| 4  | A stretched wire with clamped ends has a fundamental frequency of 1,000 Hz. What will be the new fundamental frequency if tension in the wire is increased by 2% | A. 980 Hz<br>B. 1,000 Hz<br>C. 1,010 Hz<br>D. 1,020 Hz   |
| 5  | The loudness of a sound depends on its   | A. Wavelength<br>B. Frequency<br>C. Wave amplitude<br>D. Regularity  |
| 6  | The speed of a sound wave is independent of  | A. Nature of medium<br>B. Pressure<br>C. Temperature<br>D. Mass and energy   |
| 7  | If a wave vibrates 10 times in one second with a speed of 10 m s <sup>-1</sup> the wavelength will be.   | A. 1 m<br>B. 10 m<br>C. 20 m<br>D. 100 m   |
| 8  | Air bubble in water shines because of  | A. Reflection<br>B. Refraction<br>C. Diffraction<br>D. Total internal reflection   |
| 9  | The main advantage of a grating over Young's apparatus is the  | A. Sharpness of the bright lines<br>B. Absence of dark fringes<br>C. Absence of bright fringes<br>D. Greater deviation of light  |
| 10 | Longitudinal waves cannot be   | A. Reflected<br>B. Diffracted<br>C. Dispersed<br>D. Polarized  |
| 11 | Huygen's concept of secondary waves.   | A. Allow us to find the focal length of a thick lens<br>B. Is a geometrical method to find a wave front.<br>C. Is used to determine the velocity of light<br>D. Is used to explain polarization    |
| 12 | What is shape of a pure note   | A. Sinwave<br>B. Sawtooth<br>C. Square wave<br>D. Triangular wave  |
| 13 | LASER is a device for  | A. Producing a beam of white light<br>B. Producing a beam of monochromatic and coherent light<br>C. Producing a beam of high intensity incoherent light.<br>D. Producing highly penetrating X-rays |
| 14 | Which of the following proves that light waves are transverse in nature.   | A. Diffraction<br>B. Interference<br>C. Polarization<br>D. Refraction  |

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15 Which of the following represents an elastic wave.

A. Light waves  
B. Radiowaves  
C. X-rays  
D. Sound waves

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16 Which term best describes the nature of light from modern view point.

A. Waves  
B. Rays  
C. Particles  
D. Photons

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17 Velocity of sound in air at a given temperature.

A. Increases with increase in pressure  
B. Decrease with increases in pressure  
C. Is independent of pressure  
D. Becomes quadruples

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18 X-rays can cause

A. Malaria  
B. Dysentery  
C. Cancer  
D. Blood pressure

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19 A wave source of frequency 1000 Hz emits waves of wavelength 0.1 m How long does it take for the waves to travel 2500 m.

A. 20 s  
B. 25 s  
C. 40 s  
D. 100 s

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20 Which is the best sound source to produce a pure note.

A. Tuning fork  
B. Flute  
C. Drum  
D. Harmonium

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