

## Multiple Choice

### 13.1 Types of Waves 28.

What kind of waves are sound waves?

- a. Mechanical waves
- b. Electromagnetic waves

29.

What kind of a wave does a tuning fork create?

- a. Pulse wave
- b. Periodic wave
- c. Electromagnetic wave

30.

What kind of waves are electromagnetic waves?

- a. Longitudinal waves
- b. Transverse waves
- c. Mechanical waves
- d. P-waves

31.

With reference to waves, what is a *disturbance*?

- a. It refers to the resistance produced by some particles of a material.
- b. It refers to an oscillation produced by some energy that creates a wave.
- c. It refers to the wavelength of the wave.
- d. It refers to the speed of the wave.

### 13.2 Wave Properties: Speed, Amplitude, Frequency, and Period 32.

Which of these is not a characteristic of a wave?

- a. amplitude
- b. period
- c. mass
- d. velocity

33.

If you are in a boat at a resting position, how much will your height change when you are hit by the peak of a wave with a height of 2 m?

- a. 0 m
- b. 1 m
- c. 2 m
- d. 4 m

34.

What is the period of a wave with a frequency of 0.5 Hz?

- a. 0.5 s
- b. 1 s
- c. 2 s
- d. 3 s

35.

What is the relation between the amplitude of a wave and its speed?

- a. The amplitude of a wave is independent of its speed.
- b. The amplitude of a wave is directly proportional to its speed.
- c. The amplitude of a wave is directly proportional to the square of the inverse of its speed.
- d. The amplitude of a wave is directly proportional to the inverse of its speed.

36.

What does the speed of seismic waves depend on?

- a. The speed of seismic waves depends on the size of the medium.
- b. The speed of seismic waves depends on the shape of the medium.
- c. The speed of seismic waves depends on the rigidity of the medium.

### 13.3 Wave Interaction: Superposition and Interference 37.

What is added together when two waves superimpose?

- a. amplitudes
- b. wavelengths
- c. velocities

38.

Pure constructive interference occurs between two waves when they have the same \_\_\_\_\_.

- a. frequency and are in phase
- b. frequency and are out of phase
- c. amplitude and are in phase
- d. amplitude and are out of phase

39.

What kind(s) of interference can occur between two identical waves moving in opposite directions?

- a. Constructive interference only
- b. Destructive interference only
- c. Both constructive and destructive interference

- d. Neither constructive nor destructive interference

40.

What term refers to the bending of light at the junction of two media?

- a. interference
- b. diffraction
- c. scattering
- d. refraction

41.

Which parameter of a wave gets affected after superposition?

- a. wavelength
- b. direction
- c. amplitude
- d. frequency

42.

When do the amplitudes of two waves get added?

- a. When their amplitudes are the same
- b. When their amplitudes are different
- c. When they propagate in perpendicular directions
- d. When they are propagating along the same line in opposite directions