17) What is the frequency of a wave that has a speed of 0.4 m/s and a wavelength of 0.020 meter?

1. 10 hertz. 2. 20 hertz.
3. 0.008 hertz. 4. 0.5 hertz.

18) Many wave properties are dependent upon other wave properties. Yet, one wave property is independent of all other wave properties. Which one of the following properties of a wave is independent of all the others?

1. wavelength 2. frequency
3. period 4. velocity

19) A pendulum makes exactly 40 vibrations in 20.0 s. Its period is ____. (Be cautious of the units.)

1. 0.500 Hz. 2. 0.500 s.
3. 2.00 Hz. 4. 2.00 s.

20) 20. A period of 0.005 seconds would be equivalent to a frequency of ____ Hz.

1. 20 2. 50
3. 200 4. 500

Please mark TRUE or FALSE:

01) The number of waves generated per second by a source is called the frequency of the source.

02) The SI unit for frequency is hertz .

03) Doubling the frequency of a wave source (without altering the medium) doubles the speed of the waves.

04) If the frequency of a wave is doubled and if the speed remains constant, its wavelength is unchanged.

05) Constructive interference of waves occurs when two crests meet.

SCIENCE - 11 | WAVES Questions

Name :- ……

01) A single disturbance that moves from point to point through a medium is called a ___.

1. period 2. periodic wave
3. wavelength 4. pulse

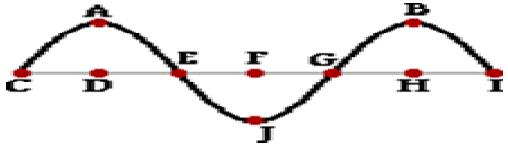
02) 2. If the particles of the medium are vibrating to and fro in the same direction of energy transport, then the wave is a ____ wave.

1. longitudinal 2. sound
3. standing 4. transverse

03) When the particles of a medium are vibrating at right angles to the direction of energy transport, then the wave is a ____ wave.

1. longitudinal 2. sound
3. standing 4. transverse

04) A transverse wave is traveling through a medium. See diagram below. The particles of the medium are vibrating _____.



1. parallel to the line joining AD.
2. along the line joining CI.
3. perpendicular to the line joining AD.
4. at various angles to the line CI.

05) If the energy in a longitudinal wave travels from south to north, the particles of the medium would be vibrating _____.

1. from north to south, only 2. both north and south
3. from east to west, only 4. both east and west

06) As a pulse travels though a uniform medium, the speed of the pulse

1. Decreases 2. Increases
3. Remains the same 4. Non above the all

07) The main factor which affects the speed of a sound wave is the ____.

1. Amplitude of the sound wave 2. Intensity of the sound
3. Loudness of the sound 4. Properties of the medium

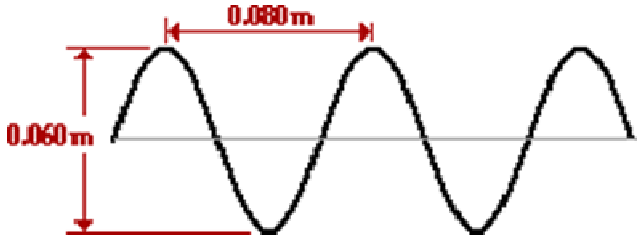
08) As a wave travels into a medium in which its speed increases, its wavelength would ____.

1. Decrease 2. Increase
3. Remain the same 4. Non above the all

09) As a wave passes across a boundary into a new medium, which characteristic of the wave would NOT change?

1. Speed 2. Frequency
3. Wavelength 4. amplitude

10) What is the amplitude of the wave in the diagram below?



1. 0.03 m. 2. 0.04 m.
3. 0.05 m. 4. 0.06 m.

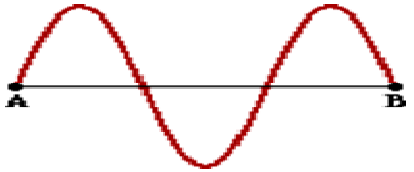
11) The wavelength of the wave in the diagram above (Question 10) is ____ m.

1. 0.030 2. 0.040
3. 0.060 4. 0.080

12) A wave X meters long passes through a medium with a speed of Y meters per secon4. The frequency of the wave could be expressed as

1. Y/X cycles/se3. 2. X/Y cycles/se3.
3. XY cycles/se3. 4. (X + Y) cycles/se3.

Consider the following diagram for **Questions 13,14**.)



13) How many complete waves are shown in the diagram?

1. 1 2. 2
3. 3 4. 1.5

14) If the distance from point A to point B in the diagram is 60 cm, then the wavelength is ____.

1. 20 cm. 2. 40 cm.
3. 60 cm. 4. 90 cm.

15) The number of cycles of a periodic wave occurring per unit time is defined as a wave's ____.

1. wavelength. 2. perio4.
3. amplitude. 4. frequency.

16) A periodic and repeating disturbance in a lake creates waves which emanate outward from its source to produce circular wave patterns. If the frequency of the source is 2.00 Hz and the wave speed is 5.00m/s then the distance between adjacent wave crests is ___ meter.

1. 0.200 2. 0.400
3. 1.25 4. 2.50