Speed of light: 3.00 x 10^8 m/s

1. The number of waves passing a point in a certain time is termed:

A. wavelength. B. cycles
C. frequency D. period

2. All travelling wave motions transmit:

A. energy. B. sound
C. matter D. particles.

3. The angle of reflection, when measured from the normal, is equal to the angle of:

A. refraction B. diffraction
C. interference D. incidence

4. A compression wave is also known as a:

A. longitudinal wave B. transverse wave
C. rarefaction wave D torsion wave

5. A radio station transmits at a frequency of 105 MHz. The wavelength is closest to:

A. 0.31 m B. 0.35 m
C. 2.86 m D. 3.24 m

6. Frequency of a sound increases as the number of vibrations increases. This means the:

A. compressions and rarefactions are further apart.
B. compressions and rarefactions increase in strength.
C. compressions and rarefactions become closer.
D. amplitude of vibration has increased.

7. One difference between light and infra-red radiation is that light:

A. travels much faster than infra-red.
B. can be reflected, infra-red cannot.
C. can travel through a vacuum, infra-red cannot.
D. is visible when reflected , infra-red is not.

8. If the frequency of a wave is doubled, then its wavelength:

A. is halved B. is doubled
C. remains constant D. increases

9. Radio waves are similar to light rays. We cannot SEE radio waves because they:

A. travel faster than light.
B. travel slower than light.
C. have too long a wave length.
D. have too short a wave length.

10. The list with the highest frequencies of electro magnetic radiation is:

A.	UV	IR	visible light
B.	Radio	IR	X rays
C.	Microwaves	UV	IR
D.	Gamma rays	UV	X rays

11. Which of the following statements about the electromagnetic spectrum is INCORRECT?

A. All can travel through a vacuum.
B. All have the same frequency.
C. All travel at the speed of 3 x 10^8 m/s.
D. There are many different wavelengths.

A person watches a boat bob up and down. They notice that it takes 2 seconds for the boat to rise from trough to crest. The total height the boat rises is 3 metres.

12. The frequency of the wave is:

A. 0.25 Hz B. 0.5 Hz
C. 2 Hz D. 4 Hz

13. The amplitude of the wave is:

A. 3 m B. 1.5m
C. 2 m D. 6 m

14. The loudness of a voice is controlled by the:

A. pitch of the person's voice
B. the diameter of the windpipe.
C. the velocity of the sound in air
D. amplitude of vibration of the vocal chords.

15. A mobile telephone involves the transfer of waves. The voice sounds must be converted into other types of waves because:

A. sound energy would travel too slowly and can not be transferred without energy losses.
B. sound energy and electricity can not pass through the same medium.
C. sound waves can not travel in a vacuum
D. sound is a longitudinal wave.