

20 Multiple choice questions

1. the range of electromagnetic waves from high frequency gamma waves to low frequency radio waves
 - a. electromagnetic radiation
 - b. electromagnetic spectrum
 - c. periodic motion
 - d. microwaves

2. electromagnetic waves with wavelengths ranging from 1 mm to 0.1 mm
 - a. laser
 - b. ionosphere
 - c. phase
 - d. microwaves

3. a system that uses satellites to determine position on the Earth
 - a. longitudinal wave
 - b. global positioning system (GPS)
 - c. optical fibre
 - d. nodal lines

4. a point at which light rays meet or appear to diverge from
 - a. focus
 - b. normal
 - c. pitch
 - d. phase

5. an acronym for Light Amplification by the Stimulated Emission of Radiation; a source of intense coherent light
 - a. focus
 - b. pitch
 - c. phase
 - d. laser

6. a spherical shell of ionised gas surrounding the Earth; can be used to reflect long-wave radio waves
 - a. laser
 - b. microwaves
 - c. ionosphere
 - d. phase

7. the alteration of some electronic or acoustic parameter by another
 - a. medium
 - b. modulation
 - c. focus
 - d. nodal lines

8. a wave in which the particles vibrate parallel to the direction of energy transfer
 - a. microwaves
 - b. nodal lines
 - c. optical fibre
 - d. longitudinal wave

9. number of waves to pass a point per second; the number of oscillations of a particle per second
 - a. phase
 - b. focus
 - c. frequency
 - d. period

10. lines joining points of destructive interference
 - a. modulation
 - b. nodal lines
 - c. normal
 - d. medium

11. transverse waves composed of alternating electric and magnetic fields, the components of which are perpendicular to each other and to the direction of the energy flow
 - a. electromagnetic radiation
 - b. electromagnetic spectrum
 - c. periodic motion
 - d. frequency modulation

12. a region through which a wave propagates
 - a. medium
 - b. phase
 - c. period
 - d. focus

13. a type of modulation where the frequency of the carrier wave is altered by an imposed signal
- modulation
 - frequency
 - frequency modulation
 - periodic motion
14. a relationship in which one quantity is directly proportional to the inverse of another quantity squared
- frequency
 - ionosphere
 - normal
 - inverse square law
15. the time for one wave to pass a point; the time for a particle executing simple harmonic motion to complete one oscillation
- normal
 - pitch
 - period
 - medium
16. motion which repeats itself at regular intervals of time
- periodic motion
 - period
 - modulation
 - medium
17. a quantity which tells us what a particle undergoing periodic motion is doing
- laser
 - phase
 - period
 - pitch
18. a line drawn at right angles to another line or surface
- focus
 - medium
 - period
 - normal

19. a subjective quantity related to the frequency of sound; the higher the pitch, the higher the frequency
- pitch
 - phase
 - period
 - focus
20. a glass fibre consisting of two layers, the outer layer has a lower refractive index than the inner layer; used to transmit light over long distances
- ionosphere
 - nodal lines
 - optical fibre
 - phase