1) Wave front in consideration when the source at infinity
    a) Spherical
    b) Parallel
    c) Cylindrical
    d) None of the above
2) What was the approximation that Fraunhofer did for Fresnel theory
    a) Distance between source and screen at infinity
    b) Distance between source and screen should tend to zero
    c) Source should be at 50 Cm from the screen
    d) None of the above
3) How different kinds of zone plates are there
    a) 1
    b) 2
    c) 5
    d) 3
4) How many half period zones will attribute total intensity
    a) First two
    b) Only first one
    c) All the half period zones
    d) None of the above
5) Relation between phase and path difference
    a) Phase difference=(2π/Lambda)*path difference
    b) Phase difference=lambda/(2π *path difference)
    c) Phase difference=π/(lambda*path difference)
    d) None of the above
6) Which of the following is correct regarding a standing wave in a closed organ pipe?
    a) At the open end it has node and at the closed end it has antinode.
    b) At the open end it has antinode and at the closed end it has node.
    c) At the both the ends it has antinode.
    d) At the both the ends it has node.
7) In a standing wave for a pipe which is open at one end and closed at the other the fifth harmonic has?
    a) 3 nodes and 3 anti-nodes
    b) 5 nodes and 4 anti-nodes
    c) 4 nodes and 4 anti-nodes
    d) 5 nodes and 5 anti-nodes
8) When two waves of same frequency and amplitude move with the same speed in the opposite direction produces _____

a) **Stationary Waves**
b) Beat
c) Progressive wave
d) None of the above

9) For a stationary wave if frequency is equal to _____ then it is called second harmonic. (v is the speed of travelling waves on the string of length
   a) v/L
   b) 2v/L
   c) v/2L
   d) v/4L

10) The Tension of the string is doubled, change in frequency is_____
   a) √2
   b) √3
   c) √4
   d) None of the above

11) Range of thin film lies in_____
   a) Visible region
   b) X-rays
   c) UV- rays
   d) Radio waves

12) Condition for constructive interference
   a) Path difference=$n\pi$
   b) Path difference=$n\lambda$
   c) Path difference=$(2n+1)\lambda/2$
   d) Path difference=2λ

13) Condition for destructive interference
   a) Path difference=$(2n+1)\lambda$
   b) Path difference=$n\lambda$
   c) Path difference=$(2n+1)\lambda/4$
   d) Path difference=$(2n+1)\lambda/2$

14) Choose the angles of biprism
   a) 160°,10°,10°
   b) 179°, 0.5°, 0.5°
   c) 150°, 20°,10°
   d) 135°,25°,25°

15) Superposition two wave is nothing but
   a) Refraction
   b) Diffraction
   c) Interference
   d) Reflection

16) For a medium to allow wave propagation, it must satisfy conditions

a) **The medium must be elastic**
b) **The medium should be able to store energy**
c) The medium should offer heavy damping effect
d) All the above

17) Choose the correct statements
a) **When a wave propagates through any medium, only the disturbance in the form of wave travels forward**
b) **There is a regular phase change between the various particles of the medium.**
c) **The velocity of the wave is different from the velocity with which the particles of the medium vibrate about their mean positions.**
d) The wave travels with a non-uniform velocity while the velocity of the particle is the same at different positions

18) A string of mass 2 gmm^{-1} carries progressive waves of amplitude 1.5 cm, frequency 60 Hz, and speed 200 ms^{-1}. The rate of energy propagation in the wire is
a) **6.4 W**
b) 8 W
c) 10 W
d) 4. 4 W

19) Decrease in temperature of medium increases velocity of sound in it.
a) True
b) **False**

20) The resultant of superposition of two harmonic oscillations with equal frequencies is a harmonic oscillation with the same frequency
a) **True**
b) False