PHYSICS

AAKASH INSTITUTE ENGLISH

Mock Test 21: PHYSICS

Example

1. The characteristics of sound which is used to differentiate the sound of male and female

A. Loudness

B. Quality

C. Pitch

D. Amplitute

Answer: C

▶ **Watch Video Solution**

2. The intensity of sound of 50 dB (Take reference of intensity 10^{-12} W/m^2)

A. $10^{-10} \dfrac{W}{m^2}$

B. $210^{-5} \dfrac{W}{m^2}$

C. $10^{-12} \dfrac{W}{m^2}$

D. $10^{-7} \dfrac{W}{m^2}$

Answer: D

▶ **Watch Video Solution**

3. The number of decibels present in 10 bel is

A. 100 dB

B. 1 dB

C. 50 dB

D. 5 dB

Answer: A

4. The intensity of sound from a radio at a distance of 2 metres from its speaker is $1 \times 10^{-2} \mu W / m^2$. The intensity at a distance of 10 meters would be

A. $10^{-8}\dfrac{W}{m^2}$

B. $4 \times 10^{-10}\dfrac{W}{m^2}$

C. $2 \times 10^{-8}\dfrac{W}{m^2}$

D. $5 \times 10^{-9}\dfrac{W}{m^2}$

Answer: B

▶ **Watch Video Solution**

5. Which of the following statements about electromagnetic waves sound waves and water waves is/are correct?

1. They exhibit reflection

2 They carry energy

3. They exert pressure

4. They can travel in vacuum

Select the correct answer using the code given below:

A. Sound wave require medium to propagate

B. Sound wave is an electromagnetic wave

C. Sound wave do not require any medium to propagate

D. Both (2) and (3)

Answer: A

6. The equation of a wave id represented as $Y = 2\sin(\Pi x - 200\Pi t)$ where x and y are in cm and t is in second. The wave velocity is

A. 100 cm/s

B. 200 cm/s

C. 50 cm/s

D. 400 cm/s

Answer: B

▶ **Watch Video Solution**

7. The equation of a transverse wave is given by $y = 10 \sin 2\Pi(2x - 3t)$ where x and y are in cm and t is in s. Its frequency is

A. 1 Hz

B. 4 Hz

C. 2 Hz

D. 3 Hz

Answer: D

▶ **Watch Video Solution**

8. The speed of sound is maximum in

A. steel

B. water

C. vaccum

D. air

Answer: A

▶ **Watch Video Solution**

---

9. The distance between consecutive crest and

trough of a wave is $10cm$. If the speed of wave

is $200c\dfrac{m}{s}$. Then the time period of wave is

A. 0.01 s

B. 0.2 s

C. 0.02 s

D. 0.1

Answer: D

▶ **Watch Video Solution**

10. If the wave changes its medium then which
of the following physical quantity changes?

A. wavelength of wave

B. frequency of wave

C. speed of wave

D. both (1) and (3)

Answer: D

11. The equation of wave is given as $y = 7 \sin\Pi(x - 50t)$ where x and y are in cm t is in s. The ratio of wave velocity and maximum particle velocity is

12. The velocity of transverse wave in string whose linear mass density is $3 \times 10^{-2} k\frac{g}{m}$ stretched by a load of 30 kg is (Take g=10$\frac{m}{s^2}$)

A. 10m/s

B. 30m/s

C. 300m/s

D. 100m/s

Answer: D

13. According to laplace variation of speed of sound are

A. isothermal

B. isochoric

C. adiabatic

D. isobaric

Answer: C

14. The speed of wave in a certain medium is $100\frac{m}{s}$. If 1000 waves pass over a certain point of the medium in 1 minute 40 second, the wavelength is

A. 2m

B. 4m

C. 8m

D. 10m

Answer: D

15. The velocity of sound in air is $340\frac{m}{s}$. If the density of air is increased to 4 times, the new velocity of sound will be

A. 170m/s

B. 340m/s

C. 680m/s

D. 85m/s

Answer: A

▶ **Watch Video Solution**