AAFAQ ACADEMY – KASUR

Paper: Physics **Chapter (8)** **Class: F.Sc. Part – I**

WAVES

Name: _____ Roll No: (in words) _____

EVENING GROUP

OBJECTIVE TYPE

Total Marks: 12 **Paper Code: _____** **Total Time: 10 Minutes**

NOTE: Write your **Roll No.** in space provided. Using lead pencil will result in loss of marks.

Q.No.1: You have four choices for each objective type question as A,B,C and D. The choice which you think is correct; fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

Sr. No.	QUESTION	A	B	C	D
1.	Transverse and longitudinal waves are kinds of	E.M waves	Mechanical waves	Progressive waves	Matter waves
2.	Waves produced over strings are	E.M wave	Mechanical	Standing waves	Sound waves
3.	The ripple tank is used to study various features of	Particle	Wave	Light	Sound
4.	The path difference is an odd integral multiple of half wavelength in	Constructive interference	Destructive interference	Both (A) and (B)	None of these
5.	The wave propagated due to oscillation of material particle are	Sound	Mechanical	Electro - Magnetic	Periodic waves
6.	The number of nodes between two consecutive antinodes is	Two	Three	Four	One
7.	A person moves with a speed half of speed of sound away from stationary source of sound. Then the frequency of sound waves heard by the person will	Remain same	Become double	Become half	Become one fourth
8.	At the closed end of an air column it exist	Node	Crest	Anti node	Trough
9.	In which case Doppler's effect is used	Radar	Sonar	Speed of stars	All of these
10.	Ratio of the fundamental frequency of an open end and closed end organ pipe of same length.	**2:1**	**1:2**	**1:1**	**4:1**
11.	A vibrating string under certain tension produce 100vib/sec when Tension increase 4 times, the number of vibration per second becomes	**400**	**300**	**250**	**200**
12.	Energy is not carried by	Transverse wave	Longitudinal wave	Progressive wave	Stationary wave

SUBJECTIVE TYPE

Total Marks: 18 **Time Allowed: 0 Hours 40 Minutes**

SECTION – I (SHORT QUESTIONS)

2. Attempt any FIVE questions. (5×2=10)Marks

i. A wave is produced along a stretched string but some of its particles permanently show zero displacement. What type of wave is it?

ii. Why does sound travel faster in solids than in gases?

iii. How are beats useful in tuning musical instruments?

iv. As a result of distant explosion, an observer senses a ground tremor and then hears the explosion. Explain the time difference.

v. How should a sound source move with respect to an observer so that the frequency of its sound does not change?

vi. Explain why sound travels faster in warm air than in cold air?

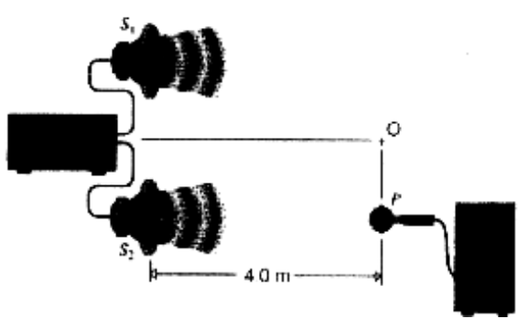
vii. Is it possible for two identical waves traveling in the same direction along a string to give rise to a stationary wave?

SECTION – II (ESSAY TYPE) Attempt given question

3. Do as directed...

i. What are stationary waves? Describe different modes of vibration in a stretched string. (5)

ii. Two speakers are arranged as shown in fig. the distance between them is 3m and they emit a constant tone of 344 Hz. A microphone 'P' is moved along a line parallel to and 4.00m from the line connecting the two speakers. It is found that tone of maximum loudness is heard and displayed on the CRO when microphone is on the centre of the line and directly opposite each speaker. Calculate the speed of sound. (3)



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SECTION – III (Practical)

4. (a) Write answer of TWO questions. (2×2=4)

i. a
ii. c
iii. v
iv. b

4. (b) Write procedure to determine the resistance of voltmeter by graph method. (3)

(OR)

Write procedure to find the unknown high resistance by using neon flash lamp. (3)

4. (c) Answer the following questions on the basis of graph drawn between potential difference (V) **and charge** (Q) **.** (4)

i. What you conclude from the graph?
ii. Find the capacitance of capacitor from the graph.

Good Luck
Ch. Khalid Mahmood Ashraf