

Step Academy official

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STUDENT NAME	
PAPER CODE	41236
TIME ALLOWED	60
Paper Date	07-02-2026



CLASS	New 1st Year (FSC/ICS)
SUBJECT	Physics
TOTAL MARKS	25
Paper Type	

Q1. Write short answers of the following questions.

10X2=20

- 1 . Explain, why sound travels faster in warm air then in cold air?
- 2 . What are the conditions for interference to occur?
- 3 . Give an example of interference in daily life.
- 4 . Which is richer harmonics, and why?
- 5 . What is meant by diffraction of waves? For what purpose, the ripple tank is used?
- 6 . How can you demonstrate diffraction using a ripple tank?
- 7 . Why is it difficult to recognize beats when the frequency difference is greater than 10 Hz? Exemplify
- 8 . Why is intensity important in wave phenomena?
- 9 . Which measurement of a wave is the most important when determining the wave's intensity?
- 10 . Distinguish between longitudinal and transverse waves.

Q2. Write detailed answers of the following questions.

1X5=5

1 .

An organ pipe has a length of 1m. Determine the frequencies of the fundamental and the first two harmonics: (a) if the pipe is open at both ends and (b) if the pipe is closed at one end. (Speed of sound in air is 340ms^{-1})