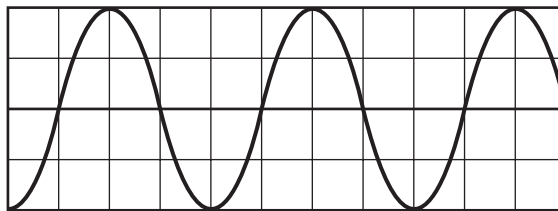


- 23** The diagram shows the waveform of a signal displayed on a cathode-ray oscilloscope.



The time-base is set at 5.0 ms per division.

The Y-gain is set at 5.0 mV per division.

What are the amplitude and the frequency of the signal?

	amplitude /mV	frequency /Hz
<b>A</b>	10	50
<b>B</b>	10	100
<b>C</b>	20	50
<b>D</b>	20	100

- 24** A jet aircraft travels at a speed of  $0.8v$  where  $v$  is the speed of sound. The aircraft approaches a stationary observer. The frequency of sound emitted by the aircraft is 100 Hz.

Which frequency does the observer hear?

- A** 56 Hz                      **B** 180 Hz                      **C** 400 Hz                      **D** 500 Hz

- 25** A telescope detects and analyses some electromagnetic radiation of wavelength 2 cm.

Which type of telescope is it?

- A** microwave telescope  
**B** optical telescope  
**C** radio telescope  
**D** X-ray telescope

- 26** What may be used to produce stationary waves?

- A** blowing air over the top of an empty bottle  
**B** making a loud sound near a mountain  
**C** passing monochromatic light through a double slit  
**D** passing water waves through a narrow slit