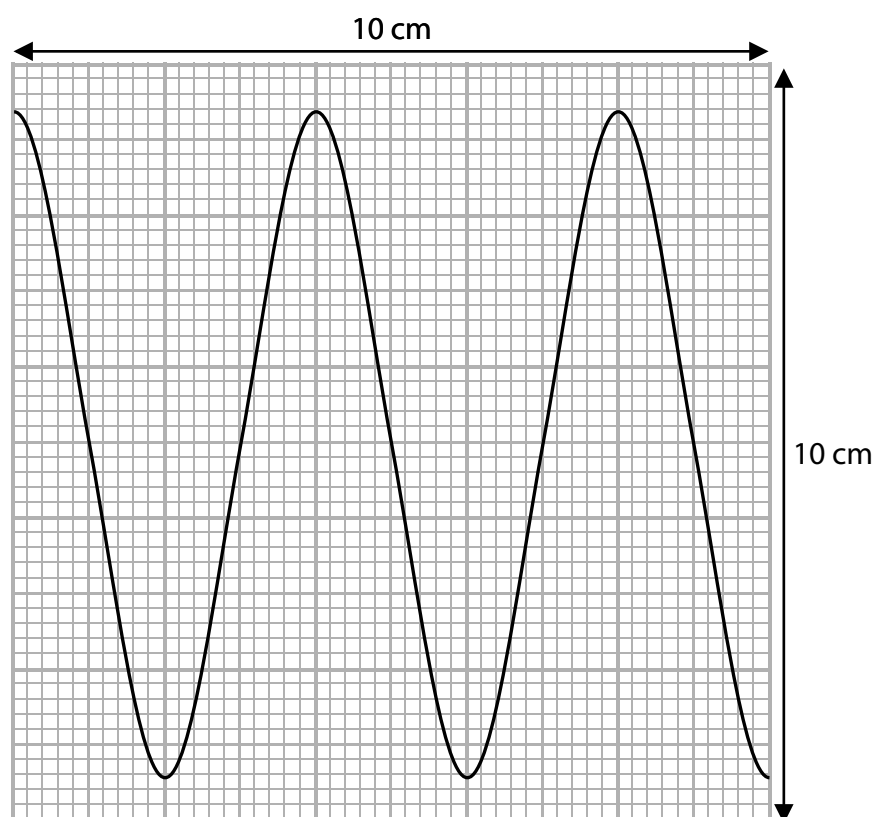


4 This question is about waves.

(a) The diagram shows a wave.



(i) What is the wavelength of the wave?

(1)

- ☐ A 4.0 cm
- ☐ B 4.4 cm
- ☐ C 5.0 cm
- ☐ D 8.8 cm

(ii) What is the amplitude of the wave?

(1)

- ☐ A 4.0 cm
- ☐ B 4.4 cm
- ☐ C 5.0 cm
- ☐ D 8.8 cm

(b) The diagram shows the types of radiation in the electromagnetic spectrum.

radio waves	microwaves	infrared	visible light	ultraviolet	x-rays	gamma rays
-------------	------------	----------	---------------	-------------	--------	------------

(i) Which of the following statements about electromagnetic waves is correct?

(1)

- ☐ **A** they all have the same amplitude
- ☐ **B** they all have the same frequency
- ☐ **C** they all have the same speed in free space
- ☐ **D** they all have the same wavelength

(ii) Electromagnetic waves have many different uses.

Explain the uses of **three** different radiations in the electromagnetic spectrum.

(6)

1 .....

Use .....

2 .....

Use .....

3 .....

Use .....

**(Total for Question 4 = 9 marks)**