

**Answer ALL questions.**

**1** The table shows the main sections of the electromagnetic spectrum.

Gamma rays	X-rays	Ultraviolet	Visible	Infrared	Microwaves	Radio
------------	--------	-------------	---------	----------	------------	-------



(a) (i) State two sections of the spectrum that are used for communications.

(2)

1 .....

2 .....

(ii) State two sections of the spectrum that are used for cooking.

(2)

1 .....

2 .....

(b) The arrow below the table shows the direction of

(1)

- ☐ **A** increasing wave amplitude
- ☐ **B** increasing wave frequency
- ☐ **C** increasing wave speed
- ☐ **D** increasing wavelength

(c) A radio station broadcasts at a frequency of 200 kHz.

The wavelength of the radio waves is 1500 m.

(i) State the equation linking wave speed, frequency and wavelength.

(1)

(ii) Calculate the speed of these radio waves and give the unit.

(3)

speed = ..... unit .....

**(Total for Question 1 = 9 marks)**

