6 (a) The box lists some devices that can be used to transfer energy from one form into another.

an aerial a loudspeaker a microphone a microwave oven

Select a device from the box to complete each sentence.

(2)

Sound energy is changed into electrical energy using

Electrical energy is changed into sound energy using

(b) A radio station uses a short wavelength radio wave for broadcasting information.

The wavelength is 25 m.

The frequency is 12000 kHz.

(i) State the relationship between the speed, frequency and wavelength of a wave.

(1)

(ii) Calculate the speed of the short wavelength radio wave.

(3)

speed = m/s

(Total for Question 6 = 6 marks)