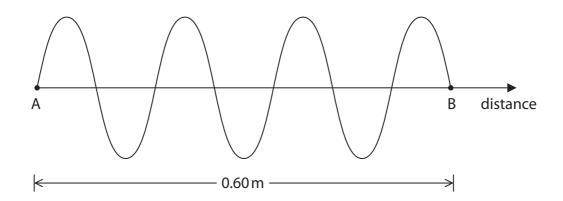
6 (a) The diagram represents a microwave travelling in free space from point A to point B.



(i) The distance from A to B is 0.60 m.

Calculate the wavelength of this microwave.

(2)

wavelength = m

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

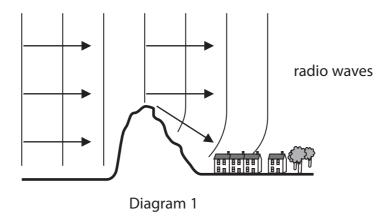
(1)

(iii) Calculate the frequency of this microwave. [speed of microwave in free space = 3.0×10^8 m/s]

(3)

frequency = Hz

(b) The diagrams show what happens to radio waves and microwaves as they move past a hill.



microwaves

Diagram 2

(i) Name the effect shown by the radio waves in diagram 1.

(1)

(ii) Suggest why this effect is not shown by the microwaves in diagram 2.

(2)

(Total for Question 6 = 9 marks)

TURN OVER FOR QUESTION 7

