

Question Number	Answer	Mark
5(a)	C red The only correct answer is C red A is not correct because blue has a shorter wavelength than red B is not correct because green has a shorter wavelength than red D is not correct because yellow has a shorter wavelength than red	(1)

Question Number	Answer	Additional guidance	Mark
5(b)	an explanation linking: infrared is absorbed / blocked (by the armchair/objects) / cannot pass through it OR radio waves can go through (the armchair/objects) (1) WITH (infrared and radio have) different wavelengths / frequencies OR infrared requires 'line-of-sight' (idea) OR radio waves do not require 'line-of-sight' (idea) OR diffraction (idea) (1)	allow stopped transmitted accept comparison	(2)

Question Number	Answer	Additional guidance	Mark
5(c)(i)	evidence of use of scale on horizontal distance axis only (1) 12 (cm) (1)	may be seen on the diagram range 11.5 to 12.5 (cm) award full marks for the correct answer without working 6 (cm) or 30(cm) scores 1 mark (evidence of use)	(2)

Question Number	Answer	Additional guidance	Mark
5(c)(ii)	a description to include: moves up and down (1) at right angles / normal / perpendicular to (direction of) wave/travel (1)	independent marking points vertical (oscillations) not in the (direction of) wave / travel accept 'transverse wave' for 2nd MP	(2)

Question Number	Answer	Additional guidance	Mark
5(d)	recall and substitution (1) ($v =$) 0.25×1.5 evaluation (1) 0.38 (m/s)	accept 0.375 or 0.37 (m/s) accept 37.5, 37 or 38 for 1 mark only award full marks for the correct answer without working	(2)

(Total for Question 5 = 9 marks)
