

Question number	Answer	Notes	Marks
1(a)	any two from MP1. (same) speed(in a vacuum); MP2. transverse waves; MP3. travel through vacuum/do not require a medium; MP4. em wave/spectrum; MP5. carry information ; MP6. transfer energy;	ignore refraction reflection diffraction interference heat produced by Sun effects on body do not accept unqualified energy	(2)
(b)	infrared: skin burns; ultraviolet: damage to surface cells; OR blindness;	ignore for IR skin cancer/ cell mutation /sunburn accept causes (skin) cancer for UV sunburn for UV damage to eye for UV	(2)
(c)	red;		(1)

Total for Question 1 = 5 marks

Question number	Answer	Notes	Marks
2 (a)	A carbon;		(1)
(b)	A negatively charged electrons;		(1)
(c)	D steel;		(1)
(d)	C 2 N poles facing;		(1)

Total for Question 2 = 4 marks