Question number	Answer	Notes	Marks
5 (a)	;;; Coolest → Hottest B, A, Sun, Sirius, Rigel	1 star in correct place scores 1 mark 2 stars in correct places scores 2 marks 3 marks for all stars in correct places accept colours instead of names i.e. red, orange, yellow, white condone a mix i.e. Betelgeuse, orange, yellow, Sirius	3
(b)	any THREE from MP1. red supergiant; MP2. supernova; MP3. neutron star; MP4. (or) black hole;	 allow super red giant 2 marks max for any incorrect order including incorrect stages e.g. dust/gas cloud or protostar	3
(c)	any pair of readings from the graph; correct substitution into formula to find constant; different pair of readings used correctly to find constant; statement that the results agree with the conclusion; e.g. when temp = 10 kK wavelength = 280 nm 280 × 10 = 2800 140 × 20 = 2800 constants are the same so results agree with proposal	 allow ECF for this mark alone DOP allow idea that the constants are not the same so that the results do not agree with the conclusion	4

(Total for Question 5 = 10 marks)