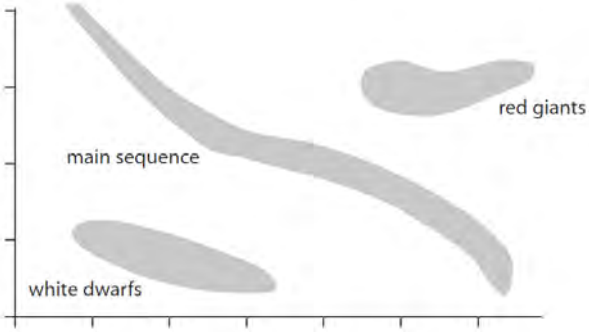


| Question number | Answer | Notes | Marks |
|-----------------|---|--|-------|
| 1 (a) (i) | B - main sequence stars; A is not correct as black holes do not appear on the HR diagram C is not correct as neutron stars are not part of the main sequence. D is not correct as protostars are not part of the main sequence | | 1 |
| (ii) | bottom left area of the HR diagram; | unlabelled scores 0 | 1 |
| (iii) | top right hand area of HR diagram;  | unlabelled scores 0 | 1 |
| (iv) | a measure of brightness/luminosity; idea that a star would be at a standard distance (10 parsecs/32(.6) light years); | accept power ignore lack of or incorrect value for distance | 2 |
| (b) (i) | C - ultraviolet; A is not correct as microwaves cause internal heating B is not correct as radio waves do not give skin burns D is not correct as visible light cannot harm skin cells. | | 1 |
| (ii) | A - sunbathing; B, C and D are not correct as all reduce the absorption of UV by skin. | | 1 |

Total for Question 1: 7 marks