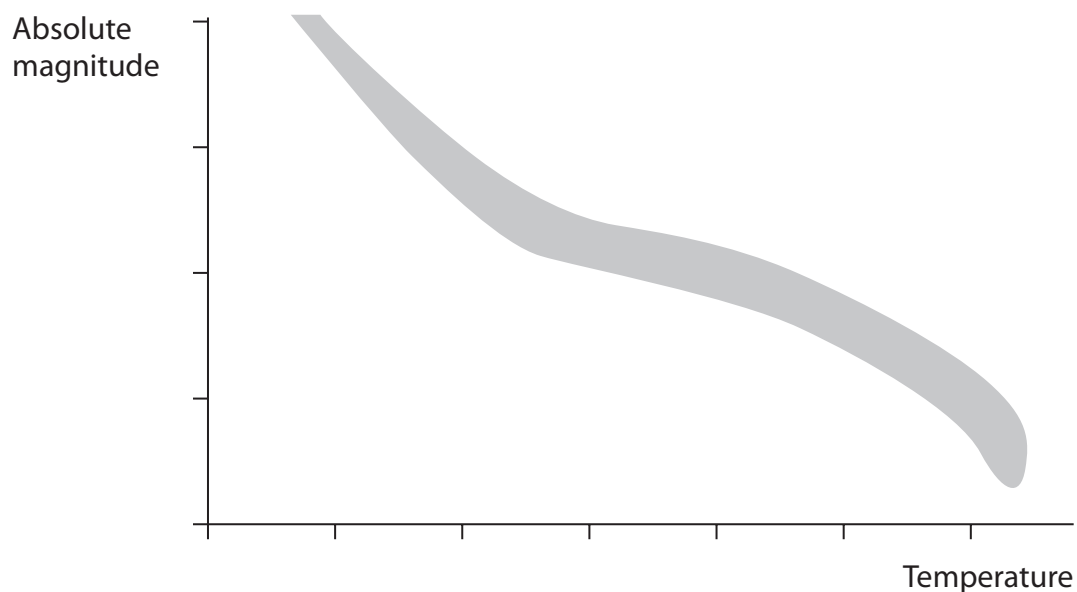


**Answer ALL questions.**

- 1 (a) This is an incomplete Hertzsprung-Russell diagram.



- (i) Which of these is in the shaded area of the diagram?

(1)

- ☐ A black holes
- ☐ B main sequence stars
- ☐ C neutron stars
- ☐ D protostars

- (ii) On the diagram, draw the area to show the position of white dwarf stars.

Label this area WD.

(1)

- (iii) On the diagram, draw the area to show the position of red giant stars.

Label this area RG.

(1)

- (iv) State what is meant by the term **absolute magnitude**.

(2)

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(b) The Sun emits various parts of the electromagnetic spectrum.

(i) Which part of the electromagnetic spectrum causes damage to human surface skin cells?

(1)

- ☐ A microwaves
- ☐ B radio waves
- ☐ C ultraviolet
- ☐ D visible light

(ii) Which of these increases the risk of damage to human surface skin cells?

(1)

- ☐ A sunbathing
- ☐ B using protective sun cream
- ☐ C very cloudy weather
- ☐ D wearing sunglasses

**(Total for Question 1 = 7 marks)**

