Oxford Cambridge and RSA

A Level Physics A

H556/01 Modelling physics

Question Set 15

1 Fig. 19 is an incomplete Hertzsprung-Russell (HR) diagram of stars in our galaxy.

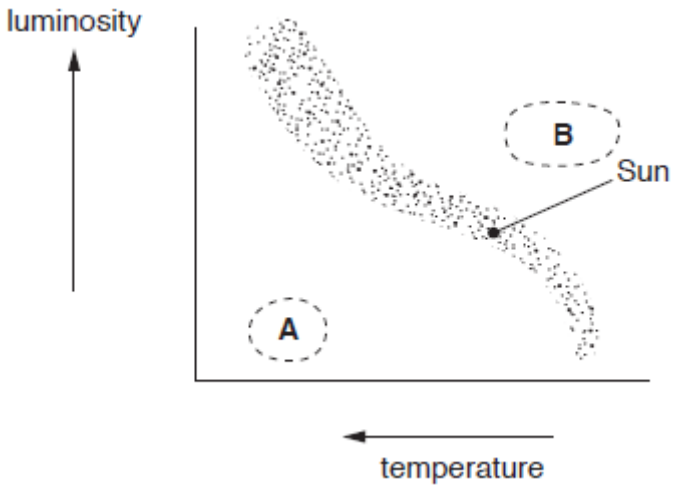

Fig. 19

The position of the Sun on the HR diagram is shown in Fig. 19.

(a) State the type of stars found in regions **A** and **B**.

A..... **B**..... **[1]**

(b) The Sun is a main sequence star. Its surface temperature is 5800 K. The wavelength of the emitted light at maximum intensity is 550 nm.

Beta Pictoris is also a main sequence star. The wavelength of the emitted light at maximum intensity from this star is 370 nm.

(i) Calculate the surface temperature of Beta Pictoris.

temperature = ... K **[2]**

(ii) On Fig. 19, mark the likely position of Beta Pictoris with a letter **P**. **[1]**

Total Marks for Question Set 15: 4