Question 8 **(5 marks)**

An experiment was conducted to observe changes in colour and intensity as a bar of dull grey tungsten metal was heated from room temperature.

When heated to 200 °C the tungsten is observed as remaining grey and dull. When heated to 700 °C the tungsten is observed as red and dull, and at 2700 °C the tungsten is observed as white and bright.

(a) Describe why the colour and intensity of the tungsten changes as it is heated. (2 marks)

The tungsten is heated further until it starts melting at approximately 3400 °C.

(b) Use the axes below to sketch labelled graphs of intensity against wavelength for the two observed spectra at 2700 °C and 3400 °C. (3 marks)