

**12** Infrared cameras are used to create images that show the infrared radiation emitted by objects.

The photographs show the same scene taken first with an ordinary camera and then with an infrared camera.

- (a) Deduce whether the objects shown in the photographs would be expected to have peak emissions at infrared wavelengths. Your answer should include a calculation.

(4)

longest wavelength of visible red light  $\approx 700 \text{ nm}$

- (b) The photograph shows the result when someone tries to take an infrared photograph of the same scene through a window. The image does not show the outdoor scene but does show an image of the photographer.

State what can be concluded about glass and infrared radiation.

(2)

**(Total for Question 12 = 6 marks)**