2   A student determines the wavelength of the light from a laser using a double slit, as shown in Fig. 2.1.
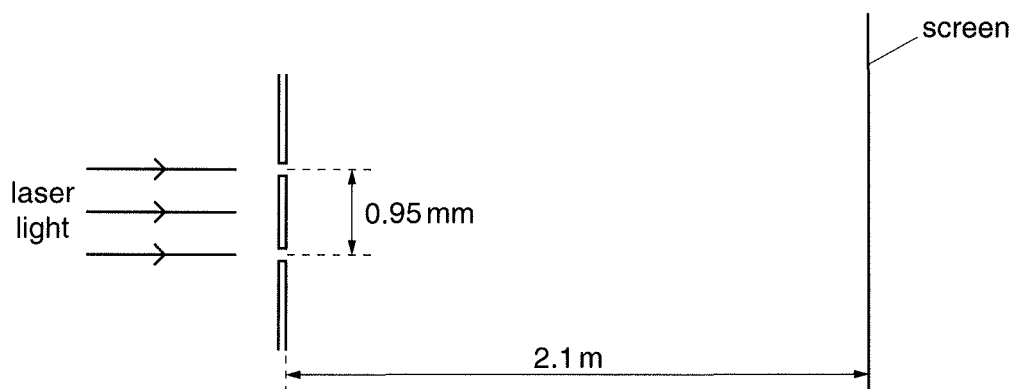

Fig. 2.1 (not to scale)

The separation of the slits is 0.95 mm. The fringes are viewed on a screen, placed parallel to and at a distance of 2.1 m from the plane of the double slit.
The separation of the bright fringes on the screen is 1.4 mm.

(a)   Determine the wavelength λ of the laser light.

$\lambda =$ .... m [2]

(b)   The laser beam is adjusted so that the intensity of the light passing through one of the two slits is reduced. Describe the changes, if any, in the appearance of the fringes on the screen.

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....[3]

(c)   In an attempt to produce brighter fringes, the student widens each of the two slits, keeping their separation constant. Fringes are no longer observed.
Suggest why the fringes are no longer observed.

....

....

....[2]