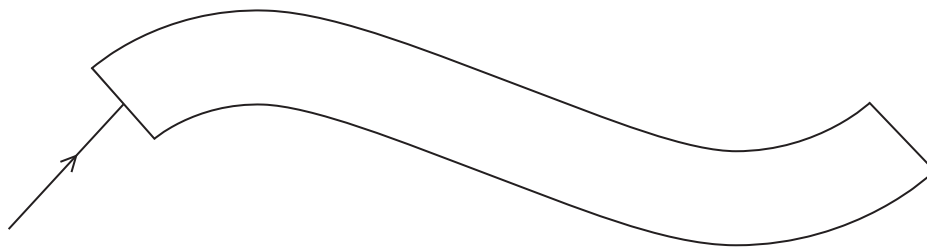


(b) Light can also reflect along optical fibres by total internal reflection.

- (i) Complete the diagram to show the path of the ray of light as it enters and passes through the optical fibre.

(2)



- (ii) State **two** conditions required for total internal reflection to happen.

(2)

1 .....

.....

2 .....

.....

- (iii) Telephone signals can be sent along optical fibres using light. In earlier systems the signals were sent using electric currents in copper wires.

Suggest **one** advantage of sending signals using optical fibres.

(1)

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**(Total for Question 2 = 9 marks)**

