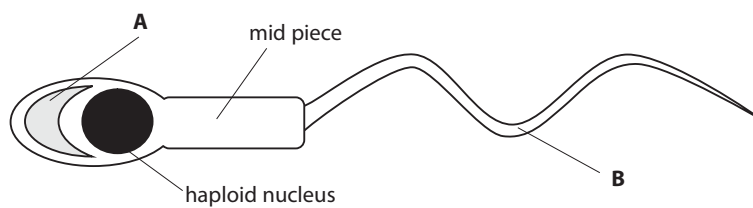


**5** Fertilisation involves the fusion of haploid nuclei.

(a) The diagram below shows a human sperm cell.



(i) Name the structures labelled **A** and **B**.

(2)

**A** .....

**B** .....

(ii) Explain why it is important that the sperm has a nucleus that is haploid.

(2)

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- (i) Describe the effect of temperature on the mean length of pollen tubes for variety A.

(2)

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- (ii) Compare the effect of temperature on the mean length of pollen tubes in variety A with variety B, between 15 °C and 30 °C.

(2)

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- (iii) Suggest an explanation for the change in the mean length of pollen tubes when the temperature increased from 35 °C to 40 °C.

(1)

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**(Total for Question 5 = 12 marks)**

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N 3 4 4 0 9 A 0 1 3 2 0