

5 Meiosis is involved in producing gametes such as sperm cells and egg cells.

(a) Describe **three** structural differences between a human sperm cell and a human egg cell.

(3)

1 .....

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2 .....

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3 .....

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(b) When a sperm cell reaches an egg cell, enzymes are released from the head of the sperm. Explain the reasons for the release of these enzymes.

(2)

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(c) Describe what happens in the egg cell once the sperm cell nucleus has entered it.

(2)

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(d) In plants, a double fertilisation occurs.

(i) One fertilisation involves a male gamete nucleus fusing with the egg cell nucleus. Give **two** functions of this fertilisation.

(2)

1 .....

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2 .....

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(ii) In the second fertilisation, the other male gamete nucleus fuses with two polar nuclei forming a triploid structure. Name the triploid structure formed.

(1)

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**(Total for Question 5 = 10 marks)**

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