

**AQA, OCR, Edexcel**

**A Level**

# **A Level Biology**

## **Meiosis Answers**

Name:

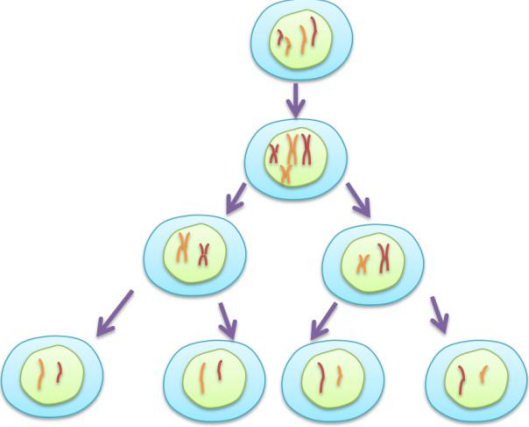
**M**

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**Mathsmadeeasy.co.uk**

**Total Marks: /21**

Answer	Marks
<p>1.</p> <p>a)</p> <p>i) – male and female sex cells - egg cell and sperm cells</p> <p>ii) – body cells are diploid and have two of each chromosome -Gametes are haploid cells and only contain half the amount of chromosomes/1 copy of each</p> <p>iii) Fertilisation is the fusion of two gametes so the cell produced has the correct number of chromosomes</p> <p>b)</p> <p>i) – each pair of chromosomes has one maternal and one paternal chromosome. -they are the same size and contain the same genes at the same loci.</p> <p>ii) Chromosomes arrange themselves into homologous pairs</p> <p>iii) Pairs of sister chromatids in each chromosome separate</p> <p>c)</p> 	<p>2 marks</p> <p>2 marks</p> <p>1 mark</p> <p>2 marks</p> <p>1 mark</p> <p>1 mark</p> <p>3 marks</p>

<p>2. A) i) – parts of the chromatids cross over and swap places/ Chiasmata form -this occurs in meiosis one -it creates a unique combination of alleles</p> <p>ii)- separation of chromosomes into the daughter cells - random process.</p> <p>iii) The fusion of gametes in fertilisation is random</p> <p>b) i) – different number of chromosomes -means there is one unpaired chromosome - cannot make eggs or sperm in meiosis.</p>	<p>3 marks</p> <p>2 marks</p> <p>1 mark</p> <p>3 marks</p>
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