

17. Inheritance

17.3 Meiosis

Paper 1 and 2

Question Paper

Paper 1

Questions are applicable for extended candidates only

- 1 Which row shows the results of meiosis?

	cells produced are	gametes produced
A	genetically different	no
B	genetically different	yes
C	genetically identical	no
D	genetically identical	yes

- 2 When damaged tissues are repaired cells undergo division by

- A** meiosis to produce genetically identical cells.
- B** meiosis to produce genetically different cells.
- C** mitosis to produce genetically identical cells.
- D** mitosis to produce genetically different cells.

- 3 Which statements about meiosis are correct?

	produces genetically identical cells	involved in the production of gametes
A	✓	✓
B	✓	✗
C	✗	✓
D	✗	✗

key

✓ = yes

✗ = no

- 4 Which type of cell is produced by meiosis?
- A** fertilised egg cell
 - B** leaf cell
 - C** red blood cell
 - D** sperm cell

Paper 2

Questions are applicable for extended candidates only

5 What are correct statements about meiosis?

	produces genetically identical cells	involved in repair of damaged tissues
A	yes	yes
B	yes	no
C	no	yes
D	no	no

6 Which statement about meiosis is correct?

- A** Daughter cells are genetically identical.
- B** The chromosome number changes from haploid to diploid.
- C** It is used to produce body cells.
- D** It allows the formation of new combinations of chromosomes.

7 What happens during meiosis?

- A** A diploid cell divides to form diploid cells.
- B** A diploid cell divides to form haploid cells.
- C** A haploid cell divides to form diploid cells.
- D** A haploid cell divides to form haploid cells.

- 8 Meiosis is sometimes called 'reduction division'.

What is reduced during meiosis?

- A Body cells are reduced in size.
- B Chromosomes are reduced in number.
- C The number of gametes is reduced.
- D The rate of cell division is reduced.

- 9 The diagram shows the chromosomes of four daughter cells produced by meiosis.



Which parent cell produced these cells?



- 10 Which statement about meiosis is correct?

- A At the end of meiosis a zygote has been produced.
- B During meiosis the haploid number is halved in the daughter cells.
- C Meiosis is reduction division in which diploid daughter cells are produced.
- D The parent cell contains twice as many chromosomes as each daughter cell.

11 What happens as a result of meiosis?

- A Diploid cells are produced.
- B Diploid and haploid cells are produced.
- C Genetically identical cells are produced.
- D Haploid cells are produced.

12 The diploid number for mice is 40 chromosomes.

How many chromosomes will be in a mouse cell formed by meiosis?

- A 10 B 20 C 40 D 80