



Class 11 Biology | Cell Cycle And Cell Division

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. A cell has 12 chromosomes in G₁. Immediately after S phase it has

- A. 6 chromosomes and 12 chromatids
- B. 24 chromosomes and 24 chromatids
- C. 12 chromosomes and 24 chromatids
- D. 12 chromosomes and 12 chromatids

2. DNA replication occurs during

- A. S phase
- B. Telophase
- C. Cytokinesis
- D. G₁ only

3. A cell leaves the division cycle but remains metabolically active in

- A. Metaphase
- B. G₀
- C. Anaphase
- D. S phase

4. Chromosomes align at the equator during mitotic

- A. Prophase
- B. Metaphase
- C. Telophase
- D. Interphase

5. Sister chromatids separate during mitotic

- A. Prophase
- B. Metaphase
- C. G₁
- D. Anaphase

6. Plant cytokinesis usually begins with formation of a

- A. Cleavage furrow
- B. Cell plate
- C. Chiasma
- D. Synaptonemal complex

7. Failure of cytokinesis after karyokinesis can produce a

- A. Haploid gamete necessarily
- B. Virus
- C. Cell without DNA
- D. Multinucleate cell

8. Homologous chromosomes pair during

- A. Zygotene
- B. Telophase II
- C. Leptotene
- D. Anaphase II

9. Crossing over mainly occurs during

- A. Telophase I
- B. Pachytene
- C. G₁
- D. Metaphase II

10. A bivalent normally contains

- A. Four chromatids
- B. One chromatid
- C. Two chromatids
- D. Eight chromosomes

11. The reduction in chromosome number occurs when

- A. Homologues separate in anaphase I
- B. DNA replicates in S phase
- C. Sister chromatids separate in mitosis
- D. Cell growth occurs in G₁

12. A cell with $2n = 16$ completes meiosis. Each normal product has

- A. 4 chromosomes
- B. 16 chromosomes
- C. 8 chromosomes
- D. 32 chromosomes

13. Between meiosis I and II, DNA normally

- A. Replicates once fully
- B. Is completely destroyed
- C. Replicates twice
- D. Does not replicate

14. Starting with one cell, four synchronous mitotic rounds produce

- A. 32 cells
- B. 8 cells
- C. 16 cells
- D. 4 cells

15. Why does meiosis contribute to variation?

- A. Crossing over and independent assortment
- B. Identical duplication alone
- C. Permanent loss of all alleles
- D. Elimination of fertilisation

ANSWER KEY — check after completing all 15 questions

1.C 2.A 3.B 4.B 5.D 6.B 7.D 8.A 9.B 10.A 11.A 12.C 13.D 14.C 15.A

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper

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