

Chapter – 10 | Cell Cycle and Cell Division**QUIZ
PART-04**

1. Meiosis was first named by —

- A. Strasburger and Flemming
- B. Farmer and Moore
- C. Schleiden and Schwann
- D. Watson and Crick (B)

Explanation : Farmer and Moore first named meiosis in 1905.

2. Meiosis is important in sexual reproduction because it produces —

- A. Diploid somatic cells
- B. Haploid gametes
- C. Multinucleate cells
- D. Identical body cells (B)

Explanation : Meiosis halves the chromosome number and produces haploid gametes.

3. Meiosis-I is called reduction division because —

- A. DNA becomes zero
- B. Diploid cell forms haploid cells
- C. Four diploid cells are formed
- D. Cytoplasm does not divide (B)

Explanation : In meiosis-I, homologous chromosomes separate and chromosome number becomes half.

4. Prophase-I is divided into —

- A. Three stages
- B. Four stages
- C. Five stages
- D. Six stages (C)

Explanation : Prophase-I includes leptotene, zygotene, pachytene, diplotene and diakinesis.

5. Chromosomes become long thread-like and gradually visible in —

- A. Leptotene
- B. Pachytene
- C. Diakinesis
- D. Telophase-I (A)

Explanation : Leptotene is marked by thread-like chromosomes becoming visible.

6. Synapsis occurs during —

- A. Leptotene
- B. Zygotene
- C. Anaphase-I
- D. Telophase-I (B)

Explanation : Pairing of homologous chromosomes, called synapsis, occurs in zygotene.

7. The complex formed by a pair of synapsed homologous chromosomes is called —

- A. Bivalent or tetrad
- B. Kinetochore
- C. Aster
- D. Cell plate (A)

Explanation : Synapsed homologous chromosomes form a bivalent or tetrad.

8. Crossing over occurs during —

- A. Pachytene
- B. Telophase-I
- C. Metaphase-II
- D. G₀ phase (A)

Explanation : Exchange of genetic material between non-sister chromatids occurs in pachytene.

9. The X-shaped structure at the crossing-over point is called —

- A. Synaptonemal complex
- B. Chiasma
- C. Centriole
- D. Spindle fibre (B)

Explanation : Chiasmata are X-shaped structures seen at exchange points in diplotene.

10. The final stage of prophase-I is —

- A. Leptotene
- B. Zygotene
- C. Diplotene
- D. Diakinesis (D)

Explanation : Diakinesis is the last stage of prophase-I and shows terminalisation of chiasmata.