

Chapter – 10 | Cell Cycle and Cell Division

QUIZ PART-03

1. Division of cytoplasm is called —

- A. Karyokinesis
- B. Cytokinesis
- C. Synapsis
- D. Crossing over (B)

Explanation : Cytokinesis is the division of cytoplasm into two daughter cells.

2. Nuclear division is called —

- A. Karyokinesis
- B. Cytokinesis
- C. Interkinesis
- D. Diakinesis (A)

Explanation : Karyokinesis is the division of nucleus into two daughter nuclei.

3. Cytokinesis in animal cells occurs by —

- A. Cell plate formation
- B. Furrow formation
- C. Synaptonemal complex
- D. Chiasmata formation (B)

Explanation : Animal cells divide by formation of a groove in the plasma membrane.

4. Cytokinesis in plant cells occurs by —

- A. Cell plate formation
- B. Furrow formation
- C. Nuclear envelope breakdown
- D. Chromatid separation (A)

Explanation : In plant cells, a cell plate forms in the centre and grows outward.

5. The cell plate represents the future —

- A. Nuclear membrane
- B. Middle lamella
- C. Spindle fibre
- D. Chromosome (B)

Explanation : The cell plate represents the middle lamella between two adjacent daughter cell walls.

6. If nuclear division occurs without cytoplasmic division, it forms —

- A. Bivalent
- B. Syncytium
- C. Tetrad only
- D. Chiasma (B)

Explanation : A multinucleate cell formed without cytokinesis is called syncytium.

7. Example of syncytium given in the PPT is —

- A. Liquid endosperm of coconut
- B. Maize root tip
- C. Onion peel
- D. Human RBC (A)

Explanation : Liquid endosperm of coconut is an example of multinucleate condition.

8. Mitosis helps in maintaining —

- A. Nuclear-cytoplasmic ratio
- B. Only chromosome reduction
- C. Only gamete formation
- D. Only crossing over (A)

Explanation : Cell growth disturbs the nuclear-cytoplasmic ratio, and mitosis restores balance.

9. Continuous replacement of epidermal cells, gut lining cells and blood cells occurs due to —

- A. Mitosis
- B. Meiosis
- C. Fertilisation
- D. Synapsis (A)

Explanation : Mitosis helps in repair, regeneration and replacement of worn-out cells.

10. In plants, lifelong growth mainly occurs due to mitosis in —

- A. Guard cells
- B. Meristems
- C. Dead xylem
- D. Mature bark (B)

Explanation : Apical and lateral meristems divide mitotically and help in plant growth.