

Class : XIth
Date :

Subject : BIOLOGY
DPP No. : 2

Topic :- Cell Cycle and Cell Division

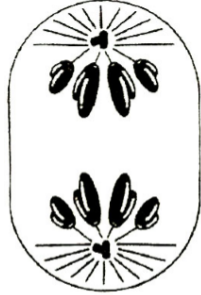
- During mitosis, number of chromosomes gets
 - Change
 - No change
 - May be change if cell is mature
 - May be change if cell is immature
- Chromosomes cluster at opposite spindle poles their identity is lost as discrete elements
 - Nuclear envelope assembles around the chromosome clusters
 - Nucleolus, Golgi complex and ER reformAbove features indicates which phase of mitosis
 - Anaphase
 - Telophase
 - Cytokinesis
 - S-phase
- What would be the change in the chromosome number, during S-phase?
 - No change
 - The number of chromosome doubles
 - The number of chromosome doubles only in case of diploid cell
 - The number of chromosome doubles only in case of haploid cell
- Arrange the following events of meiosis in a correct sequence and choose the correct option
 - Terminalisation
 - Crossing over
 - Synapsis
 - Disjunction of genomes
 - IV, III, II and I
 - III, II, I and IV
 - II, I, IV and III
 - I, IV, III and II
- What is the approximate percentage duration of cell cycle that comes under interphase in humans?
 - 99%
 - 95%
 - 25%
 - 5%
- Which of the following stage of meiosis is responsible for deciding genetic constitution of gametes?
 - Metaphase-II
 - Anaphase-II
 - Metaphase-I
 - Anaphase-I

7. ...A.... mitotic cell division is only seen in the diploid somatic cells, while the ...B... can show mitotic divisions in both haploid and diploid cells.

Identify A and B from the options given below

- a) A-Animals; B-plants b) A-Plants; B-animals c) A-Bacterial; B-viruses d) None of these

8. Given diagram indicates which of the following phase of mitosis? Choose the correct option



- a) Interphase b) Prophase c) Metaphase d) Anaphase

9. In meiosis, the chromosome number

- a) Reduces by half b) Increase by twice
c) Increase by four times d) Reduces by one-fourth

10. The phase between two successive M-phase is called

- a) S-phase b) G₁-phase c) G₂-phase d) Interphase

11. At the end of meiosis-II, number of haploid cells formed are

- a) Two b) Four c) Eight d) None of these

12. The transition between meiosis-I and meiosis-II is

- a) Interkinesis b) Cytokinesis c) Diakinesis d) Karyokinesis

13. Synapsis occurs between

- a) A male and a female gamete
b) mRNA and ribosomes
c) Spindle fibres and centromere
d) Two homologous chromosomes

14. In which stage of cell division, chromosomes are most condensed?

- a) Prophase b) Metaphase c) Anaphase d) Telophase

15. Which of the protein is found in spindle fibre?

- a) Tubulin b) Albumin c) Mucin d) Haemoglobin

16. Which of the following events occurs during G_1 -phase?
a) DNA replication
b) Growth and normal function of cell
c) Mutation
d) Fertilization
17. Select the correct statements regarding S-phase of interphase
I. Occurs between G_1 and G_2
II. DNA replication begins in the nucleus
III. Centrioles duplicate in the cytoplasm
IV. As DNA is doubled, number of chromosomes also doubles
The option with correct statements is
a) IV and III b) I, II, III and IV c) II, III and IV d) I, II and III
18. A material, which arrests cell division, is obtained from
a) *Crocus* b) *Colchicum* c) *Dalbergia* d) *Chrysanthemum*
19. During cell division, sometimes there will be failure of separation of sister chromatids. This event is called
a) Interference b) Complementation c) Non-disjunction d) Coincidence
20. I. The cells that do not divide further, exit G_1 -phase to enter an inactive stage called ...A... phase of the cell cycle
II. The cells that are in G_2 -phase definitely continue with the ...B... phase.
Identify A and B to complete the given NCERT statements
a) A- G_0 ; B-S b) A-S; B- G_0 c) A-M; B- G_0 d) A- G_0 ; B-M