



TOPIC: CELL CYCLE

- In yeast, duration of cell cycle is about :-
(1) 80 minutes (2) 99 minutes (3) 1.5 hrs. (4) 60 minutes
- In which phase of the cell cycle centrioles start to move towards opposite poles of the cell.
(1) Anaphase (2) Metaphase (3) Telophase (4) Prophase
- Which one of the following is correctly matched?
(1) Leptotene - formation of bivalents
(2) Diplotene - chiasmata formation
(3) Pachytene - chiasmata terminalisation
(4) Zygotene - formation of Synaptonemal complex
- Crossing over that results in genetic recombination in higher organisms occurs between-
(1) Non-sister chromatids of a bivalent (2) Two daughter nuclei
(3) Two different bivalents (4) Sister chromatids of a bivalents
- The formation of recombination nodules and terminalisation occur respectively during
(1) Pachytene and diakinesis (2) Leptotene and zygotene
(3) Zygotene and diakinesis (4) Diplotene and diakinesis
- Identify the meiotic stage in which the homologous chromosomes separate while the sister chromatids remain associated at their centromeres:
(1) Metaphase I (2) Metaphase II (3) Anaphase I (4) Anaphase II
- Which of the events listed below is not observed during mitosis?
(1) Chromatin condensation
(2) Movement of centrioles to opposite poles
(3) Appearance of chromosomes with two chromatids joined together at the centromere.
(4) Synaptonemal complex formation.
- In which stage of meiosis II, the chromosomes are composed of two chromatids?
(1) Prophase II and metaphase II (2) Anaphase II and telophase II
(3) Prophase II and telophase II (4) Metaphase II and anaphase II
- A bivalent of meiosis -I consists of
(1) Two chromatids and one centromere (2) Two chromatids and two centromeres
(3) Four chromatids and two centromeres (4) Four chromatids and four centromeres.
- Few of the events of prophase-I are given following. Read and arrange them in the sequence of occurrence.
A. Crossing over
B. Disappearance of nucleolus and nuclear membrane
C. Formation of synaptonemal complex
D. Formation of chiasmata
(1) C → A → B → D (2) C → A → D → B (3) A → C → B → D (4) A → C → D → B
- Which of the following statement is true?
(1) Mitosis occurs only in diploid cells in plants and animals.
(2) Mitosis occurs in haploid cells in animals and diploid cells in plants.
(3) Mitosis doesn't occur in haploid cells neither in plants nor in animals.
(4) Mitosis occurs in diploid cells in animals and haploid as well as diploid cells in plants and insects

12. Given below is the representation of a certain event at a particular stage of a type of cell division. Which is this stage?



(1) Both prophase and metaphases of mitosis.

(2) Prophase I during meiosis.

(3) Prophase II during meiosis.

(4) Prophase of mitosis

13. Which of the following does not occur in Anaphase-I but occurs in Anaphase-II

(1) Condensation of chromosomes

(2) Poleward movement of chromosome

(3) Contraction of spindle fibers

(4) Splitting of centromere

14. Which one of the following statements is correct?

(1) syncytium is produced as a result of endo-duplication

(2) DNA is replicated before the start of meiosis only and not in mitosis

(3) Spindles consisting of microtubules are formed only in mitosis

(4) Exchange of genetic materials occurs only in meiosis

15. Which one is correct for G_0 stage?

I. It is a quiescent stage.

II. In this phase cell cycle is stopped.

III. G_0 cells do not grow or proliferate but are metabolically active.

IV. G_0 cells can divide in response to some stimulus

(1) All are correct

(2) I,II,III are only correct

(3) I,II are only correct

(4) Only I and IV are correct