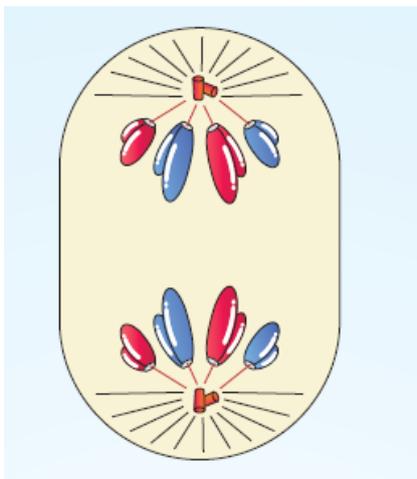


1. Choose the incorrect statement w.r.t. cell cycle and cell division

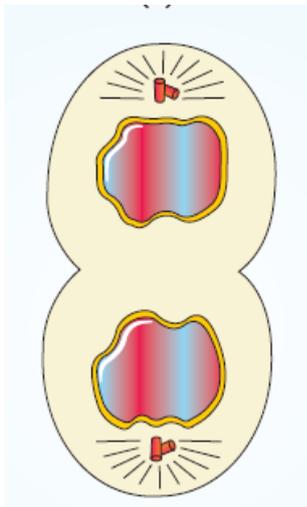
1. Cell division, DNA replication, and cell growth take place in a coordinated way to ensure correct division and formation of progeny cells containing intact genomes.
2. The sequence of events by which a cell duplicates its genome, synthesises the other constituents of the cell and eventually divides into two daughter cells is termed cell cycle.
3. Although cell growth (in terms of cytoplasmic increase) is a continuous process, DNA synthesis occurs only during one specific stage in the cell cycle.
4. The cell cycle events are not under genetic control.

2. Which of the following represents telophase

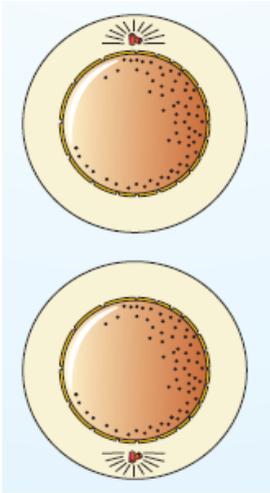
1.



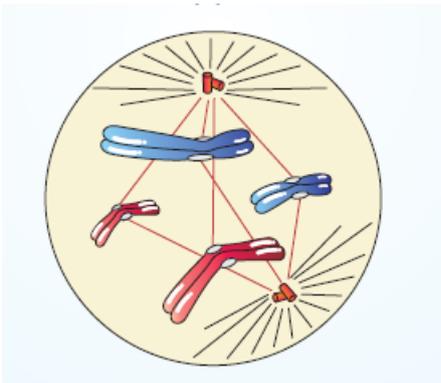
2.



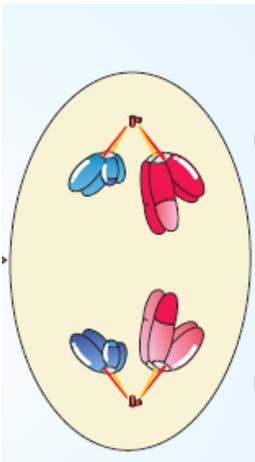
3.



4.

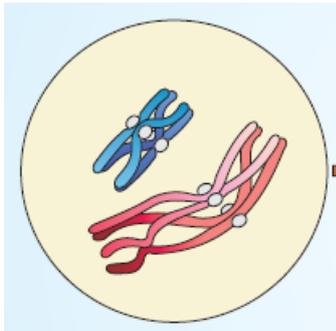


3. What does the following diagramme represents



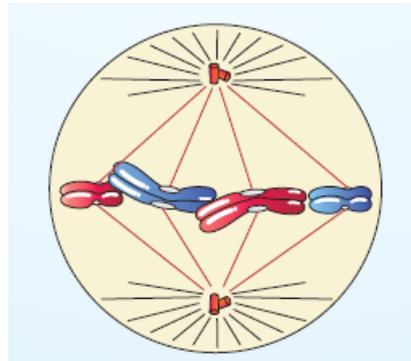
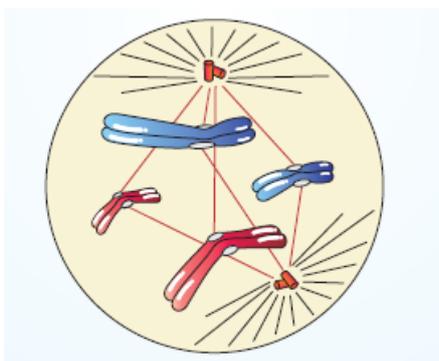
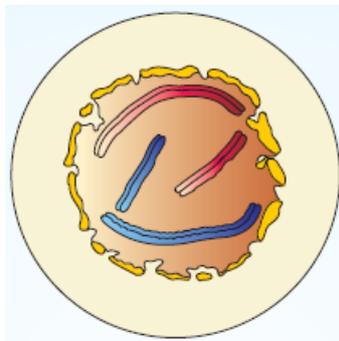
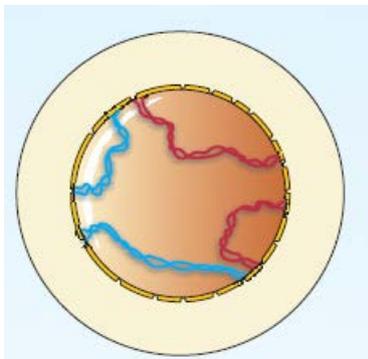
1. Anaphase I of meiosis I
2. Anaphase II of meiosis II
3. Anaphase of mitosis
4. Telophase I of meiosis I

4. What does the following diagramme represents



1. Anaphase I of meiosis I
2. Prophase II of meiosis II
3. Prophase I of meiosis I
4. Prophase of mitosis

5. The last diagramme in the series represents



1. Metaphase I of Meiosis I
2. Prophase I of Meiosis I
3. Metaphase of Mitosis
4. Prophase of Mitosis

6. Some cells in the adult animals do not appear to exhibit division (e.g., heart cells) and many other cells divide only occasionally, as needed to replace cells that have been lost because of injury or cell death. These cells that do not divide further exit G1 phase to enter an inactive stage called

1. Pro-active stage
2. Resting stage
3. quiescent stage
4. Non- quiescent stage

7. Choose the correct statements w.r.t. the completion of prophase

a. Chromosomal material condenses to form compact mitotic chromosomes. Chromosomes are seen to be composed of two chromatids attached together at the centromere.

b. Initiation of the assembly of mitotic spindle, the microtubules, the proteinaceous components of the cell cytoplasm

c. Cells at the end of prophase, when viewed under the microscope, do not show golgi complexes, endoplasmic reticulum, nucleolus and the nuclear envelope.

1. a only
2. b only
3. a and b
4. a, b, and c

8. The key events shown by the telophase stage is/are:

a. Chromosomes cluster at opposite spindle poles and their identity is lost as discrete elements.

b. Nuclear envelope assembles around the chromosome clusters.

c. Nucleolus, golgi complex and ER reform.

1. a only
2. a and b only
3. b and c only
4. a, b and c

9. Choose the incorrect one w.r.t. cytokinesis in plants

1. In plant cells, wall formation starts in the centre of the cell and grows outward to meet the existing lateral walls.

2. The formation of the new cell wall begins with the formation of a simple precursor, called the cell-

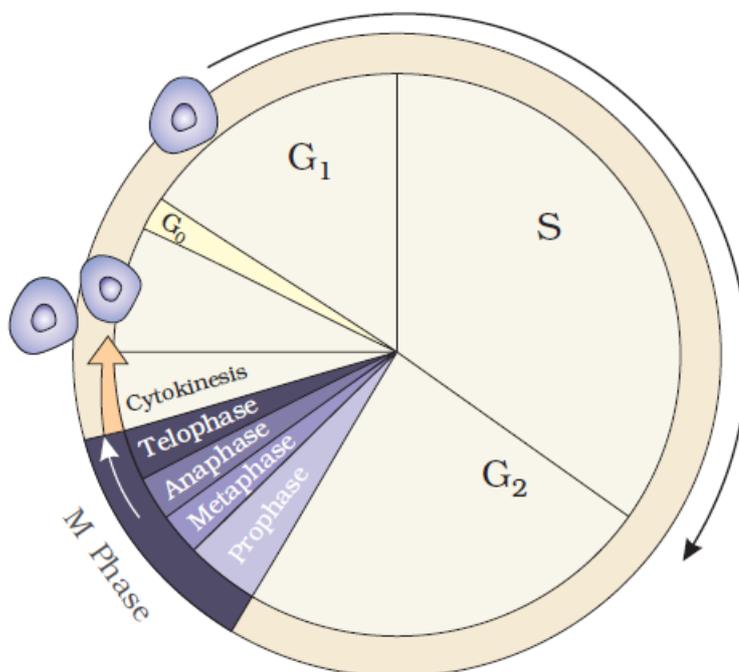
plate.

3. the cell-plate represents the middle lamella between the walls of two adjacent cells.
4. The cytokinesis in a plant cell is achieved by the appearance of a furrow in the plasma membrane called the cell cleavage.

10. Which of the following is not the key features of meiosis :

1. Meiosis involves two sequential cycles of nuclear and cell division called meiosis I and meiosis II but only a single cycle of DNA replication.
2. Meiosis I is initiated after the parental chromosomes have replicated to produce identical sister chromatids at the S phase.
3. Meiosis involves pairing of homologous chromosomes and recombination between them.
4. Four haploid cells are formed at the end of meiosis I.

11. DNA replication takes place in



1. G₁
2. S
3. G₂
4. M

12. Bacterial cells are prokaryotic; in comparison to a typical eukaryotic cell they would

1. be smaller.
2. have a smaller nucleus.

3. lack a plasma membrane.
4. have fewer internal membranous compartments.

13. You would expect a cell with an extensive Golgi apparatus to

1. make a lot of ATP.
2. secrete a lot of material.
3. move actively.
4. store large quantities of food

14. Which of the following correctly matches an organelle with its function?

1. mitochondrion . . . photosynthesis
2. nucleuscellular respiration
3. ribosome manufacture of lipids
4. central vacuole . . . storage

15. Of the following organelles, which group is involved in manufacturing substances needed by the cell?

1. lysosome, vacuole, ribosome
2. ribosome, rough ER, smooth ER
3. vacuole, rough ER, smooth ER
4. smooth ER, ribosome, vacuole

Answers

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