WORKSHEET 1

CHAPTER 1 – CELL CYCLE AND CELL DIVISION

A. Fill in the blanks.

1. The chromosome number in our skin cell is _____
2. The process by which gametes are formed is called _____
3. Meiosis I is also known as _____ division.
4. The chromosomes which are exactly similar and bear same genes at same loci are called _____ chromosomes.
5. The division of nucleus is known as _____

B. Name the following.

1. The longest phase of cell cycle.
2. The stage of mitosis during which nuclear membrane and nucleolus reappear.
3. The points where crossing over occurs.
4. The stage of mitosis where chromosomes arrange themselves on equatorial plane.
5. The structure that attaches chromosomes to the spindle during metaphase of mitosis.

C. Choose the correct option.

1. Replication of chromosome occurs in
   a. interphase. b. prophase. c. telophase. d. metaphase.
2. Correct sequence of stages in the cell cycle.
   a. G_1, S, G_2, M b. G_1, G_2, S, M c. M, S, G_1, G_2 d. G_1, M, S, G_2
3. Cytokinesis is the division of
   a. nucleus. b. cytoplasm. c. nucleoplasm. d. none of these.
4. Meiotic division occurs in
   a. vegetative cells. b. reproductive cells. c. meristematic cells. d. none of these.
5. During telophase, the
   a. nuclear membrane is formed. b. nucleolus reappears.
   c. spindle fibres disappear. d. all of these.

D. State whether the following statements are True or False.

1. The number of pairs of autosomes in man is 22.
2. Mitosis is called reduction division.
3. During telophase, the nuclear membrane disappears.

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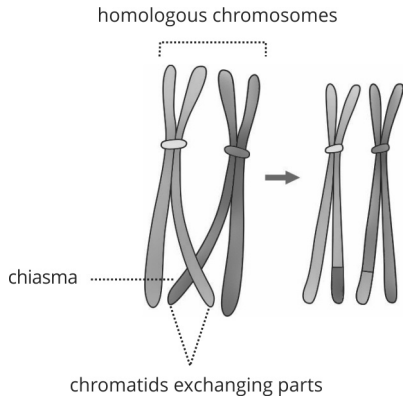
4. During anaphase, chromosomes are arranged at the equator.
5. The first meiotic division is an equational division.

E. The given figure represents a certain phenomenon that occurs during meiosis. Based on the figure, answer the following questions.



1. Name the phenomenon.
2. Define the phenomenon.
3. State the difference between chromosomes and chromatids.
4. State the significance of the phenomenon shown in the figure.
5. In which type of cell division does this phenomenon take place?

ANSWERS

WORKSHEET 1

A. Fill in the blanks.

1. 46
2. meiosis
3. reductional
4. homologous
5. karyokinesis

B. Name the following.

1. Interphase
2. Telophase
3. Chiasmata
4. Metaphase
5. Centromere

C. Choose the correct option.

1. a. 2. a. 3. b. 4. b. 5. d.

D. State whether the following statements are True or False.

1. True 2. False 3. False 4. False 5. False

E. The given figure represents a certain phenomenon that occurs during meiosis. Based on the figure, answer the following questions.

1. Crossing over
2. It is the exchange of genetic material between the non-sister chromatids of homologous chromosomes.
3. Chromosomes are the carriers of heredity whereas chromatids are the two identical strands of a duplicated chromosomes.
4. During crossing over, parts of chromatids are exchanged between homologous chromosomes which bring about variations in the offspring.
5. Meiosis