

## Biology (New Book) - 9th Class Biology Urdu Medium Chapter 4 Preparation

Q1. Difference between Cytokinesis and Karyokinesis

**Ans 1:** Cytokinesis

The process of cytoplasmic division is called cytokinesis

Karyokinesis

The process of nuclear division is called karyokinesis

Q2. What are sister chromatids, and when do they separate in meiosis.

**Ans 1:** Sister chromatids are identical copies of a single chromosome. These sister chromatids are separated during anaphase-II of meiosis.

Q3. Define synapsis.

**Ans 1:** During meiosis the homologous chromosomes move close together and pair up. This pairing of homologous chromosomes is called synapsis.

Q4. Difference between Mitosis and Meiosis

**Ans 1:** Mitosis

It takes place in somatic cells

It consists of one division

Chromatids divide at anaphase

Two diploid daughter cells are formed.

The number of chromosomes remains constant.

**Ans 2:** Meiosis

It takes place in germ line cells of sex organs.

It consists of two divisions

Chromatids do not divide at anaphase-I

Four haploid daughter cells are formed.

The number of chromosomes becomes half in meiosis

Q5. Enlist the events that occur during G1 phase of interphase.

**Ans 1:** G1 phase is called the growth phase

During this phase cells make proteins and organelles and so grow in size.

Cells also make enzymes that are required in S phase for DNA replication.

Q6. What is the function of the centrosome during cell division.

**Ans 1:** During cell division the centrosome of cell duplicates into two these two centrosomes migrate to the opposite side of the nucleus and make network of microtubules called spindle fibers. These spindle fibers ensure accurate separation of chromosomes.

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Q7. What is the role of spindle fibres in mitosis.

**Ans 1:** During mitosis, spindle fibres ensure the accurate separation of sister chromatids of chromosomes attached with spindle fibres in telophase.

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Q8. What are the key events of anaphase in mitosis.

**Ans 1:** Constriction of spindle fibers towards their respective poles  
Equal separation of sister chromatids of chromosomes.

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Q9. Define Cell cycle.

**Ans 1:** It is a series of events that take place in a eukaryotic cell from its formation to the division into two daughter cells.

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Q10. What is the main purpose of the S phase in the cell cycle.

**Ans 1:** The main purpose of S phase in the cell cycle is to copy cell's DNA, doubling the amount of DNA in the cell.

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