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

Q1. Difference between Mitosis and Meiosis

Ans 1: Mitosis:
It takes place in somatic cells
It consists of one division
Crossing over does not take place drung prophase
Chromatides divides at anaphase
Individiual duplicated chromosome align at the metaphase plate during metaphase
Daughter chromosoem mvoe to opposite poles during anaphase
Two dipliud daughter cells are formed.
The number of chromosomes remains censtant.

Ans 2: Meiosis:
It takes place in germ line cells of sex organs.
It consists of two divisions
Crossing over takes place duirng prophase-I
Chromatids does not divide at anaphase-I
Paired homolgous chromosomes align at metaphase plate during metaphase-I
Homolgous chromosomes with two sister chromatids, separate and move to opposite poles during anaphase-I
Four haploid daughter cells are formed.
The Number of chrosomes becomes half in meiosis.
Meiotic product cannot undergo further divisions.

Q2. During which phase of mitosis sister chromatides separate?

Ans 1: During anaphase spidnle fibres attached with chromosoems pull towards teh poles, making the sister chromatids for chromosomes separated.

Q3. Difference between Centromeres and Centrioles

Ans 1: Centromeres:
The centromere is a constriction in chromosome, where chromatids are joind with eachother.

Ans 2: Centrioles:
a pair of centrioles locatd near the anterior surface of the nucleus. It consist of triple of microtublues arrange dto form a hollow cylinder.

Q4. What are sister chromatides, and when do they separate in meiosis.

Ans 1: Sister chromatide are identical copies of a single chromosomess. These sister chromatides are separated during anaphase -II of mciosis.

Q5. Difference between Cytokinesis and Karyokinesis.

Ans 1: Cytokineis:
The process of cytoplasmic division to called cytokinesis

Ans 2: Karyokinesis:
The process of nuclear division is called karyokinesis

Q6. Enlist the events that occur during the G1 Phase of interphase.

Ans 1: During G1 phase of interphase followign events occur.
i. Cell makes proteins and organelles and so grow in size.
ii. Cell also makes enzymes required in S-phase for replication of DNA.

Q7. Difference between Chromatin and Chromosome

Ans 1: Chromatin
In the beginning of prophase. The chromosome are not visibel as they are in the form of fine thread like structures called chromatin

Ans 2: Chromosome:
During prophase the chromatin begins to shorten, thicken and coil by a process called condensation. It results in the appearence of chromosmes.

Q8. How does crossing over contribute to genetic variation in meiosis?

Ans 1: During crossing over, exchange of segements of non -sister chromatide os homolgous chromosomes take place. This process leads to recombination of genetic material andincrease genetic diversity.

Q9. What is the function of the centrosome during cell division.

Ans 1: During cell division the centrosome of cell duplicates into two these wo centrosomes migrate to the opposite side of the nucleus and make netwrok of microtubules called spindle fibres These spidle fibre ensure accurate separation of chromosomes.

Q10. Difference between Diploid cells and Haploid cells

Ans 1: Diploidmeans cells have full number of chromosomes
Somatic cells are diploid (2n) cells.
These are responsible for growht and maintenance of the organismsm
These are producred by meiosis.
Diploid number of chromosomes in man in 46

Ans 2: Haploid Cells:
Haploid means cells having half number of chromosomes
Germ line cells are haploid (n) cells.
These are involved in sexual reproduction.
Theser are proeuced by mitosis
The haploid number of chromosomes in man is 23
