BMA College Baheri, Darbhanga

Date 11.11.2020

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Department of Zoology

Class - XI (Biology)

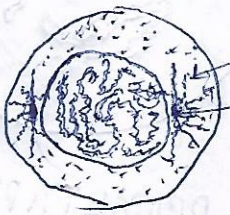
MITOSIS

Karyokinesis or Nuclear Division

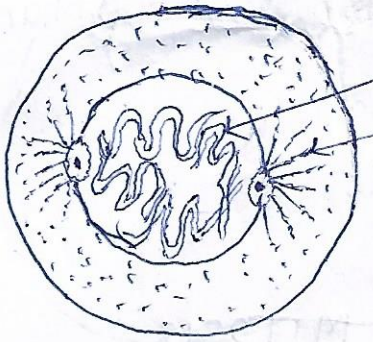
It includes the four stages
(i) Prophase (ii) Metaphase (iii) Anaphase (iv) Telophase

(i) PROPHASE

(i) The Centriole divides during the interphase separate and begin to move towards opposite poles of the nucleus.
(ii) Around the each Centriole appear fine thread like structure of cytoplasmic in origin. These together form an aster.
(iii) The chromosome are thread like structure. on the chromosome are found small bead like structure called chromomeres.
(iv) Each chromosomes are divides longitudinally into two and each half is called chromatid. Both attachment at centriole
(v) The Nucleolus decreases in size and disappear at the late prophase.
(vi) The Nuclear membrane are also breaks and begins to disappear from late prophase.
(vii) Nuclear membrane Completely disappears.
(viii) Chromosomes start moving towards the equatorial plane of the cell.



EARLY PROPHASE



LATE PROPHASE

② METAPHASE

(i) The chromosomes reach equater and arranged themselves in the equatorial plate or Metaphase plate

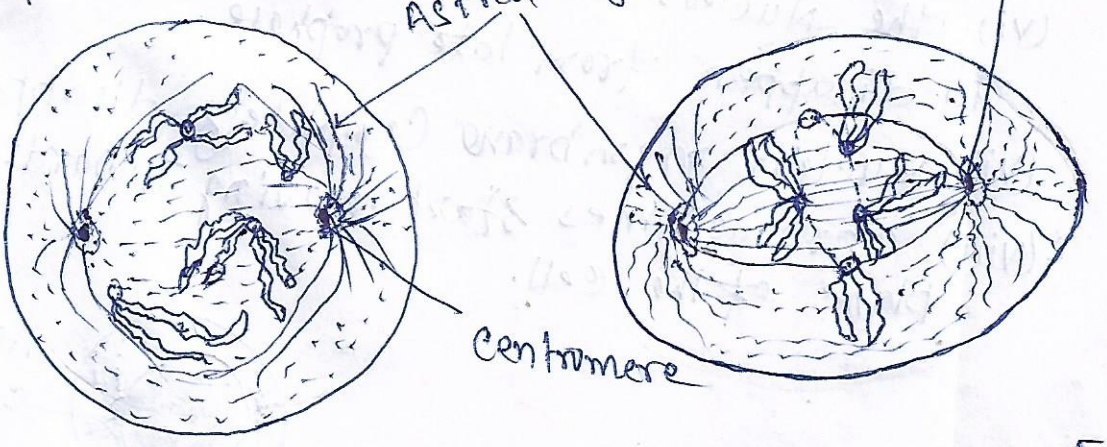
(ii) The centromere are exactly on the equatorial plane and aims the directly towards the poles.

(iii) chromosomes remains attached by spindle fibres

Two types of spindle fibres becomes during the cell-division.

(A) Continuous fibres extending from pole to pole without attaching to chromosomes.

(B) Chromosomal fibres extending from pole to centromere. In addition when chromatids are separated the spindle fibres between the two is called interzonal fibres.



PROMETAPHASE

METAPHASE

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