

Quadrant II – Transcript and Related Materials

Programme: Bachelor of Science (Third Year)

Subject: Botany

Paper Code: BOC - 106

Paper Title: Cell Biology and Plant Biochemistry

Unit: 03

Module Name: Overview of Cell Cycle

Module No: 26

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Glossary of terms/words:

- 1. Cell cycle:-** It is the process by which a cell replicates its genetic material and synthesize the other elements of the cell and at the end it is divided into two daughter cells is known as Cell cycle.
- 2. Centrosome :-** It is a microtubule-organizing structure and help to separate DNA during M phase.
- 3. Chromatid:-** It is one of two strands of a copied chromosome. Chromatids that are joined together at their centromeres are called sister chromatids. These chromatids are genetically identical. Chromatids are formed in both the cellular division processes of mitosis and meiosis.
- 4. Cytokinesis:-** It means “cytoplasmic division”. Cytokinesis takes place after the karyokinesis during cell division.
- 5. G1 phase:-** It is also called as G phase or first Gap phase. In this the cell grows physically larger, copies organelles, and makes the molecular building blocks it will need in later steps.
- 6. G2 phase:-** It is also called as second gap phase. In this cell prepares its self for mitosis. G2 is usually shorter than G1.

- 7. G0 phase:-** When the cells exit the G1, phase and enters into a resting state the phase is called G0 phase. In G0, a cell is not actively preparing to divide. G0 is a permanent state for some cells, while others may restart division if they get the right signals.
- 8. Interphase:-** Interphase is basically called the resting phase of the cell because during this period the cell prepares itself for cell division by experiencing both cell growth as well as DNA replication. It consists of G1, S, and G2 phases.
- 9. Karyokinesis:-** Karyokinesis is the step during cell division where the nucleus divides to form two daughter nuclei.
- 10. M phase:-** It is also called as Mitotic phase. It is the division phase in which parent cell is divided into two daughter cells.
- 11. S phase:-** It is also called as Synthesize phase. In S phase, the cell synthesizes a complete copy of the DNA in its nucleus.