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**25-BT-43**

# **M.Sc. IV SEMESTER [MAIN/ATKT] EXAMINATION MAY - JUNE 2025**

## **BIOTECHNOLOGY**

Paper - III

**[Cancer Genetics]**

*[Max. Marks : 75]*

*[Time : 3:00 Hrs.]*

*[Min. Marks : 26]*

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**Note :** Candidate should write his/her Roll Number at the prescribed space on the question paper.  
Student should not write anything on question paper.  
Attempt all five questions. Each question carries an internal choice.  
Each question carries **15 marks**.

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**Q. 1** What is Mutation ? Explain types and mechanism at mutation.

**OR**

What is Cancer Cell ? Explain in details at cell cycle check points in cancer cells.

**Q. 2** Write in detail about Oncogenes and their amplification.

**OR**

Write notes on -

- i) Genetic Heterogeneity.
- ii) Telomerase activity.

**Q. 3** What is Retinoblastoma ? Explain role of Retinoblastoma in cell cycle.

**OR**

Write notes on -

- i) Sporadic cancer.
- ii) Wilm's Tumor.

**Q. 4** Explain in detail Angiogenesis.

**OR**

Write about different types of tumor specific markers and their application.

**Q. 5** What is Carcinogenesis ? Explain the mechanism of biological carcinogenesis.

**OR**

Discuss in detail cancer risk assessment.