QP CODE: 25020685

25020685

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE / MERCY CHANCE EXAMINATIONS, FEBRUARY 2025

Sixth Semester

CORE COURSE - BO6CRT10 - CELL AND MOLECULAR BIOLOGY

Common for B.Sc Botany Model I, B.Sc Botany Model II Food Microbiology, B.Sc Botany Model II Environmental Monitoring And Management, B.Sc Botany Model II Horticulture and Nursery Management, B.Sc Botany Model II Plant Biotechnology & B.Sc Botany and Biotechnology Model III Double Main

2017 Admission Onwards

363E6597

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. What are cristae?
2. What is telomere?
3. Define C-value.
4. What is cell cycle?
5. What are chiasmata?
6. Define monosomy.
7. Name a mutagen that causes base damage.
8. What are purines?
9. What are the pyrimidine bases in DNA ?
10. Who proposed the semiconservative method of DNA replication ?
11. Which is the site where RNA polymerase binds to the DNA during transcription?
12. Name any one of the termination codons.

(10×1=10)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Write notes on cytoskelton.Differentiate between microtubules and microfilaments.

14. Describe the structure of Polytene chromosomes.

15. Enumerate the significance of mitosis.

16. What are the characteristic features of Down's syndrome phenotype?

17. Briefly describe the transformation experiment by Avery et al.

18. Write a note on DNA polymerase.

19. Explain the process of reverse transcription.

20. Differentiate between negative and positive control of gene expression. Give examples?

21. Give an account on tumour suppressor genes.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Describe in detail the structure of a typical chromosome.

23. What are chromosomal abberrations? Explain different types of abberrations and its significance.

24. What are split gennes? What is its significances?

25. Explain why lac operon is called as inducible operon?

(2×10=20)