

QP CODE: S0100500



Reg No : .....  
Name : .....

**BSc DEGREE (CBCS) EXAMINATION, MARCH 2020**

**Sixth Semester**

**Core course - BO6CRT10 - CELL AND MOLECULAR BIOLOGY**

B.Sc Botany Model I, B.Sc Botany Model II Environmental Monitoring And Management, B.Sc Botany Model II Food Microbiology, B.Sc Botany Model II Horticulture and Nursery Management, B.Sc Botany Model II Plant Biotechnology

2017 Admission Onwards

726A2885

Time: 3 Hours

Max. Marks : 60

**Part A**

*Answer any **ten** questions.*

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

1. What do you mean by smooth endoplasmic reticulum?
2. Define euchromatin.
3. Define endomitosis.
4. What is cell cycle?
5. What is the significant molecular event occurring during the pachytene stage?
6. Define polyploidy.
7. What are spontaneous mutations?
8. Name a virus with RNA as the genetic material.
9. State Chargaff's rule.
10. Name the protein enzyme that copies DNA ?
11. What is splicing?
12. What is meant by codon?

(10×1=10)

**Part B**

*Answer any **six** questions.*

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

13. Explain with diagram the fluid mosaic model of plasma membrane.



14. Classify chromosome based on its morphology.
15. Enumerate the significance of mitosis
16. What are the characteristic features of Klinefelter's syndrome?
17. Write an account on mRNA.
18. Briefly explain the steps of semiconservative replication.
19. Differentiate gene and split gene.
20. Explain the major events of termination in translation.
21. Give an account on tumour suppressor genes.

(6×5=30)

### Part C

*Answer any two questions.*

*Each question carries 10 marks.*

22. Give a detailed account on chromosome structure and function.
23. Illustrate structural aberrations of chromosomes. What genetic effects are brought about by these aberrations?
24. Explain the process of reverse transcription?
25. Why the tryptophan operon called as repressible operon? Illustrate its regulation.

(2×10=20)