



QP CODE: 21101170



Reg No :

Name :

B.Sc DEGREE (CBCS) EXAMINATION, APRIL 2021

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

2017 Admission Onwards

B6E9E21B

Time: 3 Hours

Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. Name the organell that play a major role in energy production.
2. What are chromatids?
3. Define karyotype.
4. Write notes on the S phase of cell division.
5. Name the substages of Prophase I of Meiosis.
6. Define monosomy.
7. Differentiate between transition and transversion.
8. What are pyrimidines?
9. What are the pyrimidine bases in DNA ?
10. Give a short note on Okazakki fragment.
11. Who proposed the term gene ?
12. What is wooble hypothesis?

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Explain the ultra structure of a cell.
14. Explain the terms euploidy and aneuploidy.





15. List the differences between mitosis and meiosis.
16. What are the characteristic features of Klinefelter's syndrome?
17. Describe the evidences for RNA as genetic material.
18. Give an account on DNA ligase.
19. Explain the mechanism of transport of RNAs from nucleus to cytoplasm.
20. Differentiate between inducible and repressible system. Give examples.
21. Write a short note on carcinogens.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. What are giant chromosomes? Explain the structure of Lampbrush chromosome.
23. What are chromosomal aberrations? Explain different types of aberrations and its significance.
24. Describe the importance of central dogma in molecular biology.
25. Explain why lac operon is called as inducible operon?

(2×10=20)

