



QP CODE: 20100500

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20100500

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

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Time: 3 Hours

Marks: 60

Part A

Answer any ten questions.

Each question carries 1 mark.

1. Give the significance of dictyosomes.
2. What do you mean by kinetochore?
3. Define heterochromatin.
4. What is cell cycle?
5. What are chiasmata?
6. What is paracentric inversion?
7. Name a chemical mutagen that causes deamination of bases.
8. Who discovered nucleic acids?
9. Name the chemical bond that holds the two strands of DNA together.
10. What is the origin of replication ?
11. Who proposed central dogma ?
12. Which is the major bond formed between aminoacids during polypeptide formation and name the enzyme involved in it?

(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. Explain briefly the Lampbrush chromosome.
15. List the differences between mitosis and meiosis.
16. What are the characteristic features of Down's syndrome phenotype?
17. Write an account on mRNA.
18. Write a note on DNA polymerase.
19. Write a short note on post-transcriptional modifications in eukaryotes.
20. Give an account on try operon regulation when tryptophan is present in the medium.
21. What are the differences between benign tumour and malignant tumour?

(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 is polyploidy? Discuss the different types of polyploidy.
24. What are split genes? What is its significances?
25. Explain the operon concept and gene regulation in prokaryotes.

(2×10=20)

