B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, MARCH 2024

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

D54B9381

Time: 3 Hours   Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1.   Give the names of two micobodies .

2.   What do you mean by kinetochore?

3.   What is a metacentric chromosome?

4.   What is cell cycle?

5.   What are chiasmata?

6.   Define Robertsonian translocation.

7.   Differentiate between transition and transversion.

8.   What are pyrimidines?

9.   Which sugar is present in DNA ?

10. Give a short note on Okazakki fragment.

11. Who proposed the term gene ?

12. What is reverse transcription ?

(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. Describe the chemical composition of Chromatin.

15. List the differences between mitosis and meiosis.

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

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

18. Give an account on DNA ligase.

19. Give an account on initiation complex and the significance of t-RNAfmet.

20. Give an account on different genes in an operon.

21. Give an account on tumour suppressor genes.

(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 is polyploidy? Discuss the different types of polyploidy.

24. Explain the transcription in prokaryotes.

25. Why the tryptophan operon called as repressible operon? Illustrate its regulation.

(2×10=20)