QP CODE: 24020110

24020110

Reg No : .....

Name : .....

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

Second Semester

B.Sc Botany and Biotechnology Model III Double Main

Core Course - BO2CRT17 - MOLECULAR BIOLOGY & METHODS IN MOLECULAR BIOLOGY

2017 ADMISSION ONWARDS

5B9AF039

Time: 3 Hours Max. Marks : 60

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Part A

*Answer any **ten** questions.*

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

1. Differentiate S strain and R strain of Pneumococcus bacteria.
2. Draw the structure of purines present in DNA.
3. What is meant by bidirectional replication?
4. What is the function of resolvase?
5. Which are the bases present in a RNA molecule?
6. Differentiate between miRNA and siRNA.
7. What is translation?
8. What is atteunation?
9. Name the main enzyme involved in direct repair mechanism.
10. Which type of mutation in telomerase could be associated with cancer cells?
11. What are different types of DNA sequencing methods?
12. What are the main steps involed in amplification of a PCR product?

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. DNA is the source of genetic information' Substantiate this statement.
14. Explain the features of Watson-Crick model of DNA.
15. What are the key features of DNA replication?
16. Write an account on RNA editing.
17. Write a note on translation inhibitors in treatment of bacterial diseases.
18. Write in detail on two types of histine modification see in eukaryotic genes.
19. What is mutagen?Write on few chemical mutagens.
20. What is Cancer? Give an account on the role of various factors in the development of Cancer.
21. Write in detail on RAPD.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Write an essay on DNA polymerase enzyme and its function in DNA replication.
23. Explain the process of mRNA synthesis in eukaryotes.
24. Give a detailed account on proceessing of various types of RNA molecule in eukaryotes.
25. Write in detail the Sangers method of DNA sequencing.

(2×10=20)