QP CODE: 24027215

24027215

Reg No : .....

Name : .....

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

Third Semester

B.Sc Botany Model II Plant Biotechnology

VOCATIONAL COURSE - BO3VOT30 - BASICS OF MOLECULAR CLONING TECHNIQUES

2017 Admission Onwards

D9064B7C

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. Name enzyme is commonly regarded as molecular knife and comment .why?
2. What is reverse transcriptase?
3. What is meant by polylinker?
4. What are episome?
5. What is pUC 18?
6. Give 2 examples of vectors from bacteriophage.
7. What are lamda based vectors?
8. Name one expression vector.
9. Mention two types of molecular probes.
10. What is the use of GFP?
11. Give one difference between colony hybridization and plaque hybridization.
12. What do you mean by dideoxy nucleotide?

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Give a brief account of DNA polymerase.
14. What are the applications of terminal transferase in genetic engineering?
15. Describe the construction of cosmids in detail.

16. Briefly describe shuttle vectors and its role in gene cloning.

17. What are the methods for preparation of molecular probes?

18. Write a short note on northern blotting.

19. Briefly describe the steps in a PCR reaction.

20. Write five applications of PCR.

21. Explain the steps involved in automated DNA sequencing.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Explain M13 based vectors and comment on its relevance in gene cloning.

23. Write an essay on molecular probes and its applications.

24. What is nucleic acid hybridization? Explain its principle and applications.

25. Write an essay on DNA sequencing.

(2×10=20)