Turn Over

QP CODE: 24020565

Reg No : ..... Name : .....

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

# Second Semester

B.Sc Botany Model II Plant Biotechnology

## Vocational Course - BO2VOT27 - MOLECULAR BIOLOGY

2017 ADMISSION ONWARDS

C1D139A1

Time: 3 Hours

Part A

#### Answer any ten questions.

#### Each question carries 2 marks.

- 1. Name two types of DNA with major groove and minor groove.
- 2. Which are the prine bases present in DNA?
- 3. Give two differences between RAPD and RFLP.
- 4. What is a metacentric chromosome?
- 5. What is euchromatin?
- 6. Amanita phalloides is a deadly toxic mushroom with a toxin amanitin, which inhibits a crucial enzyme involved in gene expression. Which is that enzyme?
- 7. Which is the most abundant form of RNA in cells?
- 8. What do you mean by catabolite repression?
- 9. What acts like a primer in retroviral reverse trancription?
- 10. What do you mean by metastasis?
- 11. What is RB gene?

12. What is hereditary cancer?

(10×2=20)

Part B

Answer any **six** questions.

Each question carries **5** marks.

# 

39A1

Max. Marks : 80



- 13. Write a short note on various chemical mutagens.
- 14. Briefly explain RAPD.Add a note on its applications.
- 15. How can you use DNA fingerprinting to analyse genetic polymorphism?
- 16. What is the role of chromosome in determining a linkage group?
- 17. Give five differences of introns and exons.
- 18. Briefly explain the role of RNA Polymerase in transcription.
- 19. Describe t RNA with special mention to its clover leaf structure.
- 20. Explain the structure of eukaryotic gene.
- 21. Comment on the changes which make a cell cancerous.

(6×5=30)

#### Part C

### Answer any **two** questions. Each question carries **15** marks.

- 22. With neat diagram, describe the steps involved in DNA replication.
- 23. Write an essay on chromatin condensation into a chromosome.
- 24. Explain the steps involved in translation of mRNA in prokaryotes.
- 25. Explain gene regulation by attenuation with an example.

(2×15=30)