

APRIL 2014

55657/MDH3B

---

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer any TEN questions.

All questions carry equal marks.

Each answer should not exceed 50 words.

Write short notes on :

1. Replication fork.
2. Primase.
3. Stop codon.
4. Catenane.
5. Leading strand.
6. Major groove and minor groove.
7. Attenuation.
8. Cis-acting proteins.
9. Transcriptome.
10. Provirus.
11. Rolling circle.
12. Exon.

PART B — (5 × 5 = 25 marks)

Answer any FIVE questions.

All questions carry equal marks.

Each answer should not exceed 200 words.

13. What is meant by DNA methylation?
14. Elucidate the denaturation of DNA and renaturation of DNA.
15. Explain the structure and function of DNA gyrase
16. Write down the characteristics of RNA polymerase.
17. Explain the Wobble hypothesis.
18. How do you explain the translational proofreading?
19. Discuss the gene regulation of Lac-repressor.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions.

All questions carry equal marks.

Each answer should not exceed 500 words.

20. Discuss the different inhibitors of nucleic acid biosynthesis.
21. Describe the DNA replication in prokaryotes.

22. Illustrate the transcription in eukrnyotes.
  23. Discuss the post translational modifications of protein.
  24. Analyze the role of chromatin in gene expression.
  25. Evaluate the gene regulation of Ara Operon concept.
-