

C 6723

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Name.....

Reg. No.....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2010

General Biotechnology

GBT. 202—MOLECULAR BIOLOGY

Time : Three Hours

Maximum : 80 Marks

Section A

*Answer any **two** questions.*

1. Explain the mechanism of DNA replication in detail.
2. Write in detail about post-translational modifications of proteins in Prokaryotes.
3. Write a detailed account on nucleic acid hybridizations techniques.

(2 x 10 = 20 marks)

Section B

*Answer any **ten** questions.*

4. Differentiate the prokaryotic and **eukaryotic** translation.
5. Write a note on RNA editing.
6. Discuss the steps involved in the DNA replication fork formation.
7. Write a brief account on tumor suppressor genes.
8. Comment on transcription regulation.
9. Describe about DNA repair pathways with suitable diagram.
10. How are the proteins transported to nucleus ?
11. Briefly discuss on the types restriction enzymes.
12. What are vectors ? Mention about any *two* bacterial vector with its **plasmid** map.
13. Describe the importance of **ribozymes**.
14. What are **topoisomerases** ? Explain in brief with its types.
15. Give the principle of DNA **Footprinting**.

(10 x 5 = 50 marks)

Turn over

Section C*Answer all questions.*

16. RNA splicing.
17. DNA polymerase.
18. Topoisomerase.
19. Cosmids.
20. Poly A tail.

(5 x 2 = 10)