

C 56815

Name

Reg. No

**SECOND SEMESTER M.Sc. DEGREE EXAMINATION
JULY 2009**

General Biotechnology

GBT 202 – MOLECULAR BIOLOGY

Maximum : 80 Marks

Time : Three Hours

Section A

*Answer any **two** questions.
Each question carries 10 marks.*

1. Explain the mechanism of transcription in **eukaryotes** in detail.
2. Describe the excision repair and SOS repair mechanisms of damaged DNA.
3. Explain protein trafficking with suitable examples. (2 x 10 = 20 marks)

Section B

*Answer any **ten** questions.
Each question carries 5 marks.*

4. Write a note on **RecBCD** pathway.
5. Explain RNA splicing.
6. Explain the importance of homologous recombination during meiosis.
7. Comment on **retroviral oncogenes** and their cellular origins.
8. Write an account on regulation of **lac operon**.
9. Comment on tumor suppressor genes and their recessive nature.
10. Explain the mechanism of action of DNA **polymerase**.
11. Describe the post translational modification of proteins.
12. What are genetic markers and explain their importance in molecular biology.
13. Give an account on expression vectors.
14. Write a brief note on **mRNA** transport.
15. Briefly describe the synthesis of membrane proteins and its transportation. (10 x 5 = 50 marks)

Section C

*Answer **all** questions.
Each question carries 2 marks.*

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| 16. Cosmids. | 17. 5'-Capping. | 18. Nucleosome. |
| 19. YAC. | 20. ELISA. | (5 x 2 = 10 marks) |