C 83657 **(Pages : 2)** **Name.....**

Reg. No.....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2015

(CUCSS)

General Biotechnology

GB 2C 2—MOLECULAR BIOLOGY

Time : Three Hours Maximum : 36 Weightage

Section A

Answer **all** *the ten questions with one* **or** *two sentences.*
Each question carries a weightage of 1.

1. Helicase.
2. Primase.
3. Operon.
4. Wobble hypothesis.
5. 16s rRNA.
6. P^{53} gene.
7. Z-DNA.
8. Ministatellite DNA.
9. Telomerase.
10. Sn RNA.

(10 x 1 = 10 weightage)

Section B (Short Answer)

Answer any **seven** *questions.*
Each question carries a weightage of 2.

11. Describe the catalytic role of RNA.
12. Describe the replication of reteroviruses.
13. Describe the differences in prokaryotic and eukaryotic transcription.
14. Discuss the biological significance of degeneracy of genetic code.
15. Describe the process of polypeptide elongation.
16. Discuss the regulation of gene expression at transcriptional level.
17. Structure and function of DNA polymerase III.

Turn over

18. Explain the functions of proteins associated with DNA replication.

19. Describe different DNA repair mechanisms.

20. Describe the cloner leaf model of tRNA.

(7 x 2 = 14 weightage)

Section C (Essay Questions)

Answer any **two** *questions.*
Each question carries a weightage of 6.

21. Describe any *two* experiment, which proves DNA as genetic material.

22. Briefly explain overall steps in eukaryotic protein synthesis.

23. Explain gene regulation in prokaryotes.

(2 x 6 = 12 weightage)