

C 4698

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Name.....

Reg. No.....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2016

(CUCSS)

General Biotechnology

GB 2C 2—MOLECULAR BIOLOGY

(2010 Admissions)

Time : Three Hours

Maximum : 36 Weightage

Section A

*Answer **all** questions, each with weightage 1.*

1. Chargoff 's rule.
2. DNA supercoiling.
3. Topo isomerase.
4. SOS repair.
5. Holiday model.
6. Ac and Dc elements.
7. HFr strain.
8. Spliceosome.
9. RNA Editing.
10. RB gene.

(10 x 1 = 10 weightage)

Section B

*Answer any **seven** questions, each with weightage 2.*

11. Salient features of genetic code.
12. Explain arc operon.
13. Describe mRNA maturation in eukaryotes.
14. Explain 3'ending and polyadenylation.
15. Different types of transposons based on mechanism of action.
16. Explain replication of circular DNA.
17. Discuss different forms of DNA.
18. Brief account on cellular oncogenes.

Turn over

19. Explain Rho-dependent and independent termination.
20. Give a note on nucleoproteins.

(7 x 2 = 14 weightage)

Section C

*Answer any **two** questions, each with weightage 6.*

21. Describe the mechanism of DNA replication. What are the enzymes involved in this process ?
22. Define mutation. Explain different types of mutations and **mutagens**.
23. Explain gene regulation in **Eukaryotes**.

(2 x 6 = 12 weightage)