TM154660A **Reg. No:.....**

Name:.....

M. Sc. DEGREE (C.S.S.) EXAMINATION, MARCH 2017
SEMESTER IV - ZOOLOGY
ZY4EA01TM - MOLECULAR BIOLOGY

Time: Three Hours **Maximum Marks: 75**

PART A

I. Answer any five questions. Each question carries 3 marks

1. Comment on C- value paradox.
2. Write short notes on telomeres.
3. What is DNA transposition?
4. Briefly explain Wobble hypothesis.
5. What are riboswitches?
6. Write short notes on protein glycosylation.
7. Comment on signal peptide hypothesis.

(5x3=15)

PART B

II. Answer any six questions. Each question carries 5 marks

8. Give an account on post transcriptional modifications.
9. Comment on satellite DNA and its functions.
10. Give an account on the enzymes involved in DNA replication.
11. Briefly explain nucleotide excision and its repair.
12. Explain co-translational translocation.
13. List out the antibiotics inhibiting translation and their mode of action.
14. Explain the role of ubiquitin and proteasomes.
15. Discuss the evidence for DNA as genetic material.
16. Explain DNA supercoiling.

(6x5=30)

PART C

III. Answer any two questions. Each question carries 15 marks

17. Explain prokaryotic transcription. Point out the differences between prokaryotic and eukaryotic transcription.
18. Explain the regulatory mechanisms involved in translation.
19. Explain the targeting of proteins to ER, mitochondria, lysosomes and nucleus.
20. Explain DNA replication in eukaryotes.

(2x15=30)