Roll No.....

Total No. of Units : 04
Total No. of Printed Pages : 03

Code No. : 02/108

Second Semester Examination, May 2019

M.Sc. BIOTECHNOLOGY

Paper - I

MOLECULAR BIOLOGY

Time : 3 Hrs. **Max. Marks : 80**

- Part A and B of each question in each unit consist of very short answer type questions which are to be answered in one or two sentences.
  Part C (Short answer type) of each question should be answered in 200-250 words.
  Part D (Long answer type) of each question should be answered within the word limit 400-450.

Unit - I

Q.1 A. Name enzymes of DNA replication. **(2)**

Q.1 B. What is meant by Oxidative DNA damage? **(2)**

Q.1 C. Describe RNA editing. **(4)**

OR

Describe process of translation.

Q.1 D. Discuss mechanism and regulation of replication in prokaryotes and eukaryotes. **(12)**

OR

Discuss post translational modification of peptides.

P.T.O.

Unit - II

Q.2 A. What do you mean by DNA recombination? **(2)**

Q.2 B. What do you mean by mitochondrial mutation or disorder? **(2)**

Q.2 C. Differentiate between metastasis and angiogenesis. **(4)**

OR

Describe nucleosome model.

Q.2 D. Describe autonomy of mitochondria and chloroplast. **(12)**

OR

Discuss protein machinery involved in homologous recombination.

Unit - III

Q.3 A. Define molecular chaperons. **(2)**

Q.3 B. What is singal sequences for protein sorting? **(2)**

Q.3 C. What are the clinical significances of human chaperone proteins? **(4)**

OR

Describe chaperonin and proteasomes.

Q.3 D. Discuss mechanism of transport of proteins in different cell organelles. **(12)**

OR

Discuss DNA binding protein in genomes.

Unit - IV

Q.4 A. Defien origin of life. **(2)**

Q.4 B. What do you mean by RNA World? **(2)**

Q.4 C. Differentiate in between si-RNA and mi-RNA. **(4)**

OR

Describe generation of si-RNA.

Q.4 D. Discuss therapeutic applications of si-RNA. **(12)**

OR

Discuss therapeutic application of mi-RNA.

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