C 42818 (Pages : 2) Name.....

Reg. No.....

SECOND SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY) EXAMINATION, APRIL 2023

(CBCSS)

Zoology

ZOL 2C 05—MOLECULAR BIOLOGY

(2019 Admission onwards)

Time : Three Hours Maximum : 30 Weightage

I. Answer any *four* of the following. Short Answer Type Questions. Weightage 2 :

1 Define Okazaki fragments.

2 Write a short note Transcription factor.

3 Write a note on the active site of ribosomes.

4 Differentiate Proto-oncogenes and Oncogenes.

5 What is the evolutionary clock ?

6 What are the types of transposition mechanism ?

7 What is gene conversion ?

(4 x 2 = 8 weightage)

II. Answer any *four* of the following. Short Essay Type Questions. Weightage 3 :

8 Write a detailed account of restriction enzymes.

9 Write the difference between prokaryotic and eukaryotic protein synthesis.

10 Write the features of the eukaryotic genome.

11 Write a note on the modification and formation of interrupted genes.

12 Explain the Prokaryotic genome with a diagram.

13 How does cancer develop and how does it differ from normal cells ?

14 What is genetic recombination in bacteria ? When does genetic recombination occur in bacteria ?

(4 x 3 = 12 weightage)

Turn over

III. Answer any *two* of the following. Long Essay Type Questions. Weightage 5 :

15 Write the mechanism of RNA editing.

16 Write the eukaryotic gene regulation.

17 Describe the gene transfer mechanism in bacteria and its types.

18 Write a brief note on Transposons in Bacteria.

(2 × 5 = 10 weigh