

M. SC. (MICROBIOLOGY) SEM-I (C.B.C.S.) (2012 COURSE) :

WINTER - 2017

SUBJECT : GENETICS & MOLECULAR BIOLOGY

Day : Saturday
Date : 28/10/2017

Time : 03.00 PM TO 06.00 PM
Max. Marks : 60

W-2017-0803

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat and labeled diagrams **WHEREVER** necessary.
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Q.1 Explain the replication of Eukaryotic chromosome. **(15)**

OR

Describe and differentiate between the process of translation in prokaryotes and eukaryotes. Add a note on protein sorting in the cell.

Q.2 a) Write in details about different classes of restriction enzymes. **(08)**

b) What is feedback inhibition? How does it regulate the synthesis of amino acids? **(07)**

Q.3 Attempt any **THREE** of the following: **(15)**

- a)** Name and describe the antibiotics that affect DNA structure.
- b)** Justify: Genetic code is triplet non overlapping code.
- c)** Differentiate between Maxam and Gilbert's method and Sanger's method of DNA sequencing.
- d)** What are transgenic animals? Give their importance.

Q.4 Write in short on any **THREE** of the following: **(15)**

- a)** Cosmid vector
- b)** Termination of translation
- c)** cDNA library
- d)** Therapies for genetic diseases

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