MASTER OF SCIENCE (MICROBIOLOGY) (CBCS - 2018 COURSE)
M.Sc. (Microbiology) Sem-I : WINTER :- 2021
SUBJECT: GENETICS & MOLECULAR BIOLOGY

Day : Monday
Date 7/2/2022

W-18585-2021

Time : 02:00 PM-05:00 PM
Max. Marks: 60

N. B. :

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.

Q. 1 With suitable diagrams explain in detail the structure of Eukaryotic chromosome. **(15)**

OR

Write an essay on Agarose Gel electrophoresis as a technique in genetic engineering.

Q. 2 **a)** Write structure and working of *tol* operon. **(08)**

b) Write the nature and various characteristics of genetic code. **(07)**

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

a) Write the mechanism of antibiotic mediated inhibition of DNA replication.

b) Describe the termination step in protein synthesis.

c) Explain use of plasmid as vectors.

d) Write the steps in cloning of genomic DNA.

e) Explain in brief molecular structure of protein.

Q. 4 Write short note on **ANY THREE** of the following: **(15)**

a) Transgenic animals

b) c-DNA cloning

c) Feedback inhibition

d) m-RNA synthesis

e) Protein sorting

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