

Enrollment No:-_____

Exam Seat No:-_____

C.U.SHAH UNIVERSITY

Summer-2015

Subject Code: 4LS03MBO1 **Subject Name: Genetics**

Course Name: B.Sc. (Micro)

Semester:III

Date: 7/5/2015

Marks: 70

Time:02:30 TO 05:30

Instructions:

- 1) Attempt all Questions of both sections in same answer book/Supplementary.
 - 2) Use of Programmable calculator & any other electronic instrument prohibited.
 - 3) Instructions written on main answer book are strictly to be obeyed.
 - 4) Draw neat diagrams & figures (if necessary) at right places.
 - 5) Assume suitable & perfect data if needed.
-

SECTION - I

Q-1 Define the following terms:

- | | |
|-------------------|-----|
| i. replication | [2] |
| ii. t-RNA | [2] |
| iii. gene mapping | [2] |
| iv. ribosomes | [1] |

Q-2

- | | |
|---|-----|
| a) Describe in detail Various models of replication | [5] |
| b) Describe in vitro DNA synthesis | [5] |
| c) Describe different types of mutations. | [4] |

OR

- | | |
|---|-----|
| a) Write a short note on lambda phage. | [5] |
| b) Write a short note on RNA phages. | [5] |
| c) Write a short note on isolation of mutants | [4] |

Q-3

- | | |
|--|-----|
| a) Discuss Reversion test | [7] |
| b) Discuss Genetic recombination in phages | [7] |

OR

- | | |
|---|-----|
| a) Describe structure of DNA. | [7] |
| b) Explain Genetic Vs environmental effects | [7] |



SECTION - II

Q-4 Define the following terms :

- i. m-RNA [2]
- ii. Nucleic acids [2]
- iii. Conjugation [2]
- iv. chromosome [1]

Q-5

- a) Discuss the in brief the major type of DNA damage. [5]
- b) Discuss the types of plasmids [5]
- c) Write a note on transposons [4]

OR

- a) Write a note F factor in conjugation, [5]
- b) Write a note nucleic acid sequencing [5]
- c) Describe the movable genes [4]

Q-6

- a) Write a note Transcription & post transcriptional modification [7]
- b) .Write a note Process of transformation, [7]

OR

- a) Discuss in detail the life cycle of bacteriophage. [7]
- b) Write a short note on Tumor viruses and cancer [7]

