

Roll No.

41268

**B. Sc. (Hons.) Chemistry 4th Semester
Examination – May, 2019**

ZOOLOGY (MICROBIOLOGY)

Paper : CH(N)-4050Pt-ii

Time : Three hours] [Maximum Marks : 50

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all. Question No. **1** is *compulsory*. Attempt remaining *four* questions, selecting *one* from each Unit. Marks are shown against each question.

1. Define the following in about **20** words each :

10 × 1 = 10

(a) Bacteriophage

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- (b) Junk DNA
- (c) Mutagens
- (d) Plasmid
- (e) Helicases
- (f) Genetic code
- (g) Housekeeping genes
- (h) Inducer
- (i) Operon
- (j) Diauxic growth

UNIT – I

2. Write note on Bacterial Gene Mapping by Conjugation. 7.5

3. What are transposons ? How they affect genes ? 7.5

P. T. O.

(2)

UNIT – II

4. Write detailed note on different types of DNA replication mechanisms. 7
5. Write note on the following : 1
- (a) Chemical mutagenesis.
- (b) PCR mutagenesis.

UNIT – III

6. (a) How protein was ruled out as molecule of genetic information ? Explain. 3
- (b) Describe bacterial replication in detail. 4.5
7. Write short note on the following :
- (a) RNA Polymerases 3
- (b) Types of DNA 4.5

UNIT – IV

8. What is Human Genome Project ? Discuss its goals. 7.5
9. Discuss the mitochondrial genome : structure, replication, transcription and translation. 7.5
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