



**G-035017**

Seat No. \_\_\_\_\_

**B. Sc. (Sem. V) (Microbiology) Examination**

**April / May - 2019**

**BSCOC505A - Microbial Molecular Biology & Genetics**

**Time : 3 Hours ]**

**[ Total Marks : 70**

- 1 Write on any two of the following : 14**
- (1) Hershey and Chase experiment to prove DNA is genetic material.
  - (2) Methods of DNA replication
  - (3) Gene operon
  - (4) Genetic code is universal. Justify.
- 2 Write on any two of the following : 14**
- (1) Levels of regulation of gene
  - (2) Translation of mRNA
  - (3) Discuss any one type of lac operon regulation
  - (4) Global regulatory system
- 3 Write on any two of the following : 14**
- (1) Physical mutagenic agents
  - (2) Causes of frame shift mutation
  - (3) DNA repair mechanism
  - (4) Is
  - (5) F plasmids
- 4 Write on any two of the following : 14**
- (1) Bacterial conjugation : HFr
  - (2) Generalized transduction
  - (3) Molecular mechanism of regulation of lysogeny
  - (4) Cotransduction experiment

**5** Write in one or two sentences on the following : **14**

- (1) Define genome
  - (2) Chargaff rule
  - (3) Define nucleosome
  - (4) One name of stop codon
  - (5) Define ribozyme
  - (6) Jacob and Monod
  - (7) House keeping genes
  - (8) Define mutation
  - (9) Define prototrophs
  - (10) Define SOS response
  - (11) Define conditional mutation
  - (12) Define vertical gene transfer
  - (13) Barbara McClintock contribution
  - (14) Define merozygote
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