



KC-491

Seat No. _____

B. Sc. (Sem. V) Examination

October / November - 2017

Microbiology : MB-503

(Classical Genetics)

(Core Compulsory)

Time : 3 Hours]

[Total Marks : 70

1 (a) Answer any two questions from following : 12

- (1) Genetics and historical landmarks.
- (2) Draw a labelled diagram of a nucleotide and explain it.
- (3) Enlist field of genetics.

(b) Answer any two questions from following : 6

- (1) Define : Trait, chromosome
- (2) Name any two scientists involved in genetics and its role
- (3) Define: Genetics.

2 (a) Answer any two questions from following : 12

- (1) Write in brief Monohybrid test cross.
- (2) Write down result of Segregation of two or more genes using Mendel's principle
- (3) Write in brief Dihybrid test cross

- (b) Answer any two questions from following : 6
- (1) Principle of independent assortment.
 - (2) Define : Phenotype and Genotype
 - (3) Define law of segregation
- 3 (a) Answer any two questions from following : 12
- (1) X-linked inheritance
 - (2) Enlist various steps of mitosis
 - (3) Meiosis
- (b) Answer any two questions from following : 5
- (1) Significance of mitosis
 - (2) Explain semi-conservative nature of DNA.
 - (3) What is a contribution of Morgan in genetics ?
- 4 (a) Answer any two questions from following : 12
- (1) Tetrad analysis.
 - (2) Linkage
 - (3) Genetic mapping
- (b) Answer any two questions from following : 5
- (1) Explain recombination of gene.
 - (2) Significance of crossing over
 - (3) Contribution of T. H. Morgan in genetics.