3499

B. Sc. (Microbiology) Examination, May 2018

MICROBIAL GENETICS

(B-206)

Time : Three Hours]   *[Maximum Marks : 50*

Note : Attempt any *Five* questions. All questions carry equal marks.

1. Write short notes on the following terms :   2×5=10

    (a) Abbreviated genotype ratio

    (b) Lethal genes

    (c) Complementary genes

    (d) Duplicated genes

    (e) Epistasis and hypostasis.

2. Describe in detail on Benzer's work on r ll locus on T_4 phage with suitable diagram and examples.   10

3. What are multiple allelic genes ? Explain the blood group in man as an example of multiple allelic gene.   10

4. Describe the term mutation, somatic and germinal mutations, mutator gene, reverse mutations. 10

5. In paramoecium the genotype and the presence or absence of kappa particle is shown in the following table find out the phenotype, whether senesitive or killer or unstbale in each case : 10

Genotype	Kappa particle Present-Absent
K/-	Present
K/-	Absent
k/k	Absent
K/k	Present

6. What do you understand by the Cytoplasmic inheritance ? Write a note on Cytoplasmic male sterility in Maize. 10

7. Explain the term in detail on an interference and coincidence. 10

8. Write in detail about the evidences suggesting the role of chlroplasts and mitochondria in cytoplasmic inheritance. 10

9. Describe the different reasons for the success of Mendel's experiments with suitable examples. 10

10. Yellow, wrinkled when crossed with yellow wrinkled produces 115 yellow wrinkled and 35 green wrinkled. Give the genotype of parents with your conclusions. 10