

BACHELOR OF SCIENCE (B.Sc.) FOURTH SEMESTER
B.Sc. 2461 - MICROBIOLOGY Paper-I (Microbial Genetics)

P. Pages : 2

Time : Three Hours



GUG/W/18/1298

Max. Marks : 50

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1. Explain regulation of gene expression by Lac operon. 10
- OR**
- Write about different types of mutation in details. 10
2. Describe the process of translation in detail. 10
- OR**
- Explain Griffith's experiment? Write about process of transformation. 10
3. a) Write about split genes. 2½
- b) Describe the formation of Thymine dimer. 2½
- c) Explain NER. 2½
- d) Write the methods of artificially induced competence. 2½
- OR**
- e) Write about mutagenesis, recombination and cistron. 2½
- f) Explain Ames Test. 2½
- g) Describe the Modes of replication. 2½
- h) Describe the formation of F' (prime) cells. 2½
4. a) Live the concept of Gene within Gene. 2½
- b) Write about base deaminating mutation. 2½
- c) Explain Wobble hypothesis of genetic code. 2½
- d) Describe the process of Generalized transduction. 2½
- OR**
- e) Live the concept of gene & Genome. 2½
- f) Describe elongation step in transcription. 2½
- g) Describe base analogue mutation. 2½

h) Explain the process of sexduction. 2½

5. Write **any ten**.

- a) What is polycistronic gene? 1
- b) What is nucleosome? 1
- c) What is central dogma of life? 1
- d) Give the example DNA intercalating agents. 1
- e) What is induced mutation? 1
- f) What is carcinogen? 1
- g) What is the role of DNA polymerase? 1
- h) What is stop codon? Give example. 1
- i) What is reverse transcription? 1
- j) What is Hfr cells? 1
- k) What is IS elements? 1
- l) What is abortive transduction? 1
