

**USMBT08 - Microbiology Paper-II : Microbial Genetics and Molecular Biology**

P. Pages : 1

GUG/W/22/12013

Time : Three Hours



Max. Marks : 50

1. Describe the trp operon in detail. **10**
- OR**
- a) Write about Intron and exon. **2½**
- b) Write about Recon, Muton and Cistron. **2½**
- c) Describe in brief central dogma of gene action. **2½**
- d) Explain Nucleosome Model. **2½**
2. Describe the DNA replication process in bacteria. **10**
- OR**
- a) Explain NER **2½**
- b) Describe replica plating technique. **2½**
- c) Explain the formation of thymine dimer. **2½**
- d) Write about base analogue mutation **2½**
3. Write in detail about translation in bacteria. **10**
- OR**
- a) Describe m – RNA processing. **2½**
- b) Write about reverse transcription. **2½**
- c) Write any two characteristics of genetic code. **2½**
- d) Explain spliceosome. **2½**
4. Explain Griffith and ‘U’ tube experiment. **10**
- OR**
- a) Describe complete and abortive transduction. **2½**
- b) Describe the mechanism of conjugation **2½**
- c) Write about artificial induced competence. **2½**
- d) Write about sexduction. **2½**
5. Write **any ten** each one mark. **10**
- a) What is pseudo genes?
- b) What is split genes?
- c) What is repression?
- d) What is transition mutation?
- e) What is silent mutation?
- f) What is Non Sense mutation?
- g) What is pribnow box?
- h) What is SnRNPs?
- i) Name the first amino acid produced in translation.
- j) What is Hfr cells?
- k) What is transposon?
- l) Name the gene transferred by specialized transduction.

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