

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

P. Pages : 2

Time : Three Hours



GUG/W/24/12013

Max. Marks : 50

1. What is operon ? Discuss in details about Regulation of Lac operon. **10**

OR

- a) Write a note on Nucleosome. **2½**
- b) Write in brief about central dogma of molecular biology. **2½**
- c) Write a note on Negative control of gene expression. **2½**
- d) Discuss Recon, Muton, Cistron. **2½**

2. Discuss the roles of enzymes involved in DNA replication in details. **10**

OR

- a) Discuss Frameshift mutation in brief. **2½**
- b) Write a note on physical mutagens. **2½**
- c) Add a note on Ame's test. **2½**
- d) Write a note on BER. **2½**

3. Write in detail about translation process. **10**

OR

- a) Write about processing of m-RNA. **2½**
- b) Give different characteristics of Genetic code. **2½**
- c) Write a note on Reverse transcription. **2½**
- d) Write about RNA polymerase. **2½**

4. What is Transduction ? Describe generalized Transduction in details. 10

OR

- a) Write a note on Griffith experiment. 2½
- b) Write about U tube experiment. 2½
- c) Write a note on abortive transduction. 2½
- d) Discuss mechanism of conjugation in brief. 2½

5. Solve **any ten**.

- a) What is inducer of lac operon. 1
- b) What is Intron. 1
- c) What is Exon. 1
- d) What is Transition mutation. 1
- e) What is NER. 1
- f) Write names of any two chemical mutagens. 1
- g) What is the role of Sigma factor. 1
- h) What is m-RNA capping. 1
- i) Write the names of stop codons. 1
- j) What is transposons. 1
- k) What are HFr cells. 1
- l) What is sexduction. 1
