B.Sc. (CBCS Pattern) Semester - III
011B - Biotechnology Paper-II : Molecular Biology and Enzymology

P. Pages : 2

Time : Three Hours

Max. Marks : 50

1750

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1. Describe in detail classification of enzyme? **10**

OR

i) Discuss allosteric enzyme? **2½**

ii) Describe in detail induce fit model? **2½**

iii) Discuss unit of enzyme activity? **2½**

iv) Explain Lock and Key model. **2½**

2. Discuss in detail enzyme inhibition? **10**

OR

i) Derive the equation of Michaelis – Menten? **2½**

ii) Discuss factors affecting enzyme activity? **2½**

iii) Give the account of enzyme immobilization? **2½**

iv) Discuss acid base catalysis mechanism of enzyme? **2½**

3. Describe in details prokaryotes transcription? **10**

OR

i) Give the account of DNA polymerase – I? **2½**

ii) Discuss semiconservative replication? **2½**

iii) Discuss Okazaki fragments? **2½**

iv) Describe basic idea of Lac – operon? **2½**

4. Describe in detail prokaryotes Translation? **10**

OR

i) Give the account of genetic code? **2½**

ii) Discuss the concept of couple transcription – translation? **2½**

iii) Discuss Shine – Dalgarno sequence? **2½**

iv) Discuss codon – anticodon interaction? **2½**

5. Write in very short **any ten.**

    i)   What is holoenzyme? **1**

    ii)   Define Katal. **1**

    iii)   What is Active Site? **1**

    iv)   What is Lineweaver – Burk Plot? **1**

    v)   What is kM? **1**

    vi)   What is temperature quotient? **1**

    vii)   Define promoter. **1**

    viii)   What is role of topoisomerase? **1**

    ix)   What is mean by SSB? **1**

    x)   Give any one example of initiation codon. **1**

    xi)   Give example of stop codon. **1**

    xii)   What is degeneracy of codon? **1**

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