

B.Sc.(Part-II)(With Credits)-Regular-Semester 2012 Sem III
B.Sc. 2372 - Biotechnology : Paper-II (Molecular Biology And Enzymology)

P. Pages : 2

Time : Three Hours



GUG/W/16/3329

Max. Marks : 50

1. Describe in details different models of enzyme catalyzed reaction. 10

OR

Define inhibitor ? Describe reversible & irreversible inhibition with suitable example. 10

2. Describe the process of DNA replication in prokaryotes. 10

OR

Describe in detail the process of protein synthesis. 10

3. a) What are the different classes of enzyme ? Explain. 2½

b) What are the different methods of enzyme immobilization. 2½

c) Explain the concept of promoter in transcription. 2½

d) What is wobble hypothesis ? Explain. 2½

OR

e) Describe the nomenclature of enzymes. 2½

f) Explain Lineweaver- Burke plot ? 2½

g) Describe Meselson-Stahl experiment of semiconservative mode of replication. 2½

h) Give the general characteristics of genetic code. 2½

4. a) Explain the term allosteric enzyme & modulator. 2½

b) Derive MM equation in brief. 2½

c) Describe Lac operon in brief. 2½

d) Write a note on termination codon. 2½

OR

e) Write a short note on cofactor & coenzyme. 2½

f) Explain the effect of pH & temperature on enzyme activity. 2½

g) Explain the roles of DNA polymerase I, II & III in DNA replication. 2½

h) Describe the concept of couple transcription translation in brief. 2½

5. Attempt **any ten** of followings.

a) Define haloenzyme & apoenzyme. 1

b) Define active site. 1

c) Define isoenzyme. Give its example. 1

d) What is the unit of enzyme activity ? 1

e) What is biocatalyst ? 1

f) What is the role of Helicase enzyme ? 1

g) What is pribnow box ? 1

h) What is anticodon? 1

i) What is the role of ρ (rho) factor in transcription ? 1

j) What is stop codon ? 1

k) What is the shine-Dalgarno sequence. 1

l) What is primer ? 1
