Total No. of Questions : 8]

SEAT No :

P 1943

[Total No. of Pages : 2

[5324]-102
M.Sc.
BIOCHEMISTRY
BCH - 171 : Enzymology and Biophysical Techniques
(2013 Pattern) (Semester - I) (Credit System)

Time : 3 Hours] *[Max. Marks : 50*

Instructions to the candidates:

1) ***Answer to both the sections should be written on separate answer sheets.***
2) ***Q.4 & Q.8 are compulsory.***
3) ***Attempt any two questions from Q1 to Q3 any two from Q5 & Q7.***
4) ***Figures to the right indicate full marks.***

SECTION - I

Enzymology

Q1) Answer the following:-

a) What is active site at an enzyme? Give its function **[2]**

b) Explain ISO-enzymes with suitable example. **[4]**

c) Define enzyme turnover? Give its significance. **[4]**

Q2) Attempt the following:

a) Distinguish between co-enzyme and prosthetic group. **[3]**

b) Give classification of enzyme inhibitor. **[3]**

c) Explain M.W.C. model for regulation at enzyme activity. **[4]**

Q3) Attempt the following:

a) Define km and give its significance. **[2]**

b) Explain ubiqutin cycle for proton degradation. **[3]**

c) Describe the effect of various factors on enzyme activity. **[5]**

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Q4) Attempt any one of the following:

a) Describe mechanism of reaction catalysed by serine protease. **[5]**

b) Derive michelis menten equation. **[5]**

SECTION - II

Biophysical Techniques

Q5) Answer the following:

a) State lamberts and beer's law. **[2]**

b) What is affinity chromatography? Explain its application in biological chemory with suitable example. **[4]**

c) Enlist various methods of cell types explain any one in detail. **[4]**

Q6) Attempt the following:

a) How you determine molecular weight of protein by using SDS-PAGE? **[3]**

b) Describe the principle of ISO-electric focussing. **[3]**

c) Write a short note on dialysis. **[4]**

Q7) Attempt the following:

a) What is principle of thin layer chromatography? **[2]**

b) What is freeze drying? Give its application. **[3]**

c) What is gel electrophoresis? How proteins are separated by using polyacrylanucle gel electrophores. **[5]**

Q8) Attempt any one of the following:

a) Distinguish between parllon & adsorption chromatography. **[5]**

b) What are cation & anion exchanges? How Jon exchange chromatography is used in protein purification. **[5]**

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