

Code No: RA-09A52305

RA

B. Tech III Year II Semester Examinations, April/May - 2012
FUNDAMENTALS OF ENZYME MECHANISMS & TECHNOLOGY
(BIOTECHNOLOGY)

Time: 3 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks

1. Explain about different immobilization techniques used for enzymes with the advantages and disadvantages of each technique. [15]
- 2.a) Define whole cell and isolated enzyme systems. Write their industrial applications.
b) Discuss the factors that affect enzyme activity. [15]
3. Explain the mechanism of enzyme action with special reference to acid-base catalysis. [15]
4. Derive Brigg's-Haldane relationship for the conversion of Glucose-6-phosphate to Fructose-6-phosphate by phosphoglucoisomerase. [15]
5. Derive rate equation for substrate A, a lead molecule, in the following reaction
 $A+B-P \rightleftharpoons A-P+B$ [15]
6. Explain mechanism of action of Chymotrypsin on a protein. [15]
- 7.a) Explain how to determine the number of active sites on an enzyme
b) Discuss about rapid mixing methods and relaxation kinetics. [15]
8. Discuss in detail about different factors that affect substrate approach and catalysis to the immobilized enzyme particle on a porous support. [15]

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