

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)

CLASS: B.TECH  
BRANCH: BIOTECH

SEMESTER : III  
SESSION : MO/19

SUBJECT: BE204 BIOCHEMISTRY AND ENZYME TECHNOLOGY

TIME: 3 HOURS

FULL MARKS: 50

**INSTRUCTIONS:**

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
  2. Attempt all questions.
  3. The missing data, if any, may be assumed suitably.
  4. Before attempting the question paper, be sure that you have got the correct question paper.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Explain the significance of Monosaccharide with structure of glucose and fructose. [4]  
Q.1(b) Analyze importance of essential fatty acids. [3]  
Q.1(c) Clarify the role of lipids in biological membranes. [3]
- Q.2(a) Schematically present the process of glycolysis with regulatory enzymes. [5]  
Q.2(b) Assess the role of acetyl Co-A in metabolic processes. [5]
- Q.3(a) Mention the role of Deamination process in amino acid metabolism. [3]  
Q.3(b) Analyze the role of glutamate and alpha keto glutarate in protein metabolic pathway. [3]  
Q.3(c) Evaluate different steps of Urea Cycle. [4]
- Q.4(a) Analyze different mechanisms of inhibition of enzyme. [5]  
Q.4(b) Explain the mechanism of action of enzyme proteins. [5]
- Q.5(a) Comments on applications of immobilized enzymes. [2]  
Q.5(b) Mention the role of two enzymes in different applications. [4]  
Q.5(c) Evaluate the process of protein engineering in enhancing the stability of enzyme proteins. [4]

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