

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

CLASS: BPHARM  
BRANCH: PHARMACY

SEMESTER : II  
SESSION : SP/18

SUBJECT: BP2005 BIOCHEMISTRY

TIME: 3.Hours

FULL MARKS: 60

**INSTRUCTIONS:**

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
  2. Candidates may attempt any 5 questions maximum of 60 marks.
  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) Differentiate Glycogen and Starch. [2]  
Q.1(b) Describe the classification and biological role of lipids. [4]  
Q.1(c) Define High energy compounds. Describe the classification and biological significance of High energy compounds. [6]
- Q.2(a) Explain the energetics of Glycolysis. [2]  
Q.2(b) Describe the hormonal regulation of Blood Glucose level. [4]  
Q.2(c) Describe the enzymatic steps of HMP Shunt pathway and its significance. [6]
- Q.3(a) Write short note on Hypercholesterolemia. [2]  
Q.3(b) Define Ketone bodies. Describe the synthesis of Ketone bodies. [4]  
Q.3(c) Describe the de novo synthesis of Fatty acids. [6]
- Q.4(a) Define the role of Transamination in amino acid metabolism. [2]  
Q.4(b) Draw a flow chart showing Urea Cycle. [4]  
Q.4(c) Describe the catabolism of Phenylalanine and its metabolic disorders. [6]
- Q.5(a) Differentiate different types of DNA. [2]  
Q.5(b) Describe the process of Transcription in detail [4]  
Q.5(c) Describe the biosynthetic pathway of pyrimidine nucleotides. [6]
- Q.6(a) Explain coenzymes with examples. [2]  
Q.6(b) Define enzyme kinetics and explain Michaelis plot. [4]  
Q.6(c) Define Enzymes. Explain the properties and IUB classification of enzymes. [6]
- Q.7(a) Write short note on Hyperbilirubinemia. [2]  
Q.7(b) Define Genetic code. Explain the properties of Codons. [4]  
Q.7(c) Describe the organization of Respiratory chain in mitochondria. Explain the inhibitors of respiratory chain. [6]

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