

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

**CLASS: B.PHARM  
BRANCH: PHARMACY**

**SEMESTER: II  
SESSION: SP/25**

**SUBJECT: BP203T BIOCHEMISTRY**

**TIME: 3.00 Hours**

**FULL MARK: 75**

**INSTRUCTIONS:**

1. The missing data, if any, may be assumed suitably.
2. Before attempting the question paper, be sure that you have got the correct question paper.
3. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
4. This question paper consists of (03) three parts. Read the part wise instructions before attempting the questions.

**PART-I**

**Objective type questions (Instruction: Answer all questions)**

Q1.	(10 x 2 = 20 Marks)	CO
A. Define disaccharides with examples.		1
B. Write the types of bonds present in Starch.		1
C. Define Ketone Bodies.		1
D. Why Kreb's cycle is called as amphibolic cycle.		3
E. Draw the structure of Phenyl Alanine and Glycine.		1
F. Write significance of urea cycle and why it takes place in Liver.		4
G. Draw the structure of tRNA.		1
H. Define codons with example.		1
I. Differentiate coenzyme and cofactor.		3
J. Write the energetics of TCA cycle.		4

**PART-II**

**Short Answers**

**(Instruction: Answer seven out of nine questions)**

	(7 x 5 = 35 Marks)	CO
Q2. Describe the classification and biological role of Lipids.		1
Q3. Explain the enzymatic steps involve in HMP Shunt and its significance.		3
Q4. Define Bioenergetics. Describe the laws and important terms of bioenergetics.		2
Q5. Explain the organization and significance of flow of electrons in mitochondria.		3
Q6. Define Diabetes mellitus and explain the regulation of glucose in blood.		4
Q7. Explain Krebs-henseleit cycle along with the disorders related to it.		2,4
Q8. Describe the structure and functions of DNA along with its types.		1
Q9. Define enzymes. Explain the properties and mechanism of action of enzymes.		1
Q10. Illustrate the IUB system of classification and nomenclature for enzymes.		1

**PART-III**

**Long Answers**

**(Instruction: Answer two out of three questions)**

	(2 x 10 = 20 marks)	CO
Q11. Describe the enzymatic steps involve in aerobic oxidation of glucose into pyruvic acid along with its energetics.		3
Q12. Explain the process of Transcription in detail. Differentiate the process in prokaryotes and Eukaryotes.		2
Q13. Illustrate the pathway for beta oxidation of even carbon Fatty acid. Explain the energetics of palmitic acid.		3

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