

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

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

**SEMESTER: SP/22
SESSION: 2021-22**

SUBJECT: BP203T BIOCHEMISTRY

TIME: 3.00 Hours

FULL MARK: 75

INSTRUCTIONS:

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

Objective type questions (Instruction: Answer all questions)

- Q1. (10 x 2 = 20 Marks)
- A. Draw the structure of Tyrosine and Tryptophan.
 - B. Define Gibb's free energy, Enthalpy and Entropy.
 - C. Describe the energetics of Beta oxidation of Palmitic acid.
 - D. Explain the significance of HMP shunt.
 - E. What are Ketone Bodies?
 - F. Define Obesity.
 - G. Define Transamination.
 - H. Write Michaelis-Menten equation.
 - I. Define Coenzymes.
 - J. Differentiate different types of DNA.

PART-II

Short Answers

(Instruction: Answer seven out of nine questions)

- (7 x 5 = 35 Marks)
- Q2. Describe the biological significances of ATP and Cyclic AMP.
 - Q3. Describe Glycolysis Pathway in detail.
 - Q4. Describe the electron transport chain along with its inhibitors.
 - Q5. Explain the beta oxidation of saturated fatty acid in detail.
 - Q6. Write short note on Jaundice and Phenyl Ketone Urea.
 - Q7. Explain Urea Cycle along with the disorders related to it.
 - Q8. Describe the organization of Mammalian Genome.
 - Q9. Explain the properties of enzymes. Describe the IUB system of enzyme classification.
 - Q10. Describe the synthesis and utilization of Ketone Bodies.

PART-III

Long Answers

(Instruction: Answer two out of three questions)

- (2 x 10 = 20 marks)
- Q11. Describe the enzymatic steps involve in Kreb's cycle along with its energetics. Explain the reason why it is called as Amphibolic cycle.
 - Q12. Describe the structure and functions of DNA. Explain the process of DNA replication in detail.
 - Q13. Define carbohydrates. Describe the properties, classification and biological role of carbohydrates.

:::20/07/2022:::