

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

CLASS: MSc
BRANCH: BIOTECH

SEMESTER : I
SESSION : MO/2022

SUBJECT: BT402 METABOLISM AND BIOENERGETICS

TIME: 3:00 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 How the metabolic pathways maintain the homeostasis in the body. [10]
- Q.2(a) What is the difference between Glycogenesis and Gluconeogenesis? (Make the Flow chart if necessary). [5]
- Q.2(b) Describe the role of citric acid cycle in the metabolic regulation. [5]
- Q.3(a) Describe about the different class of membrane lipids and their role. [5]
- Q.3(b) What are the different pathways for nucleotide synthesis, explain briefly. [5]
- Q.4 How the urea cycle is able to regulate the amino acid metabolism. [10]
- Q.5(a) Describe the difference between exothermic and endothermic reaction with suitable example. [5]
- Q.5(b) Describe the difference between enthalpy and entropy. [5]

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