

28/c-7

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

CLASS: B.E.
BRANCH: ALL

SEMESTER : III
SESSION : MO/2014

SUBJECT : BT3021 BIOLOGICAL SCIENCES

TIME: 1.5 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total value of the questions are 30 marks.
2. Candidates may attempt for all 30 marks.
3. In those cases where the marks obtain exceed 25 marks. The excess will be ignored.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. The missing data, if any, may be assumed suitably.

- Q1. (a) Define life. What are the characteristics of life? [2]
(b) Discuss the miller's experiment with suitable diagram. What are the findings of Miller's experiment? [3]
- Q2. (a) Discuss the 5-kingdom classification system to classify the organisms on earth [2]
(b) What are the levels of biological organization? [3]
- Q3. (a) Write short notes on the following biomolecules : [3]
(i) Carbohydrates
(ii) Lipids
(b) Give an account on the role of water in living cell. [2]
- Q4. (a) Write short notes on: [3]
(i) Water soluble vitamins
(ii) Minerals
(b) What are the functions of DNA and RNA in living cell? [2]
- Q5. (a) What are the differences between aerobic and anaerobic respiration? [2]
(b) Discuss the steps involved in glycolysis. [3]
- Q6. (a) Discuss the Tricarboxylic acid cycle (TCA cycle). [3]
(b) How many ATPs are formed in prokaryotic and Eukaryotic cells when one molecule of glucose is utilized? [2]