

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

**CLASS: B.TECH  
BRANCH: CSE/IT/ECE/EEE**

**SEMESTER: III  
SESSION : MO/2019**

**SUBJECT : BE101 BIOLOGICAL SCIENCE FOR ENGINEERS**

**TIME: 2:00 HOURS**

**FULL MARKS: 25**

**INSTRUCTIONS:**

1. The total marks of the questions are 25.
  2. Candidates may attempt for all 25 marks.
  3. Before attempting the question paper, be sure that you have got the correct question paper.
  4. The missing data, if any, may be assumed suitably.
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- Q1 Outline the basic concept of Modern Theory of Origin of life. [5]
- Q2 (a) Enlist the name of any two vitamins, with their source and disease caused by deficiency of these vitamins. [2]
- Q2 (b) Give a comparative overview on the Mitosis and Meiosis. [3]
- Q3 (a) State the first law of thermodynamics and give a suitable mathematical expression for it. [2]
- Q3 (b) How will you differentiate between Plant and Animal cells? Explain with their contrasting features. [3]
- Q4 (a) Draw the structure of glucose and fructose. [2]
- Q4 (b) Distinguish between aerobic and anaerobic respiration with suitable examples. [3]
- Q5 How glucose molecules are broken down into pyruvates? Give the metabolic steps involve in it. [5]

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