

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E. Sem-III (Biotechnology) Examination December 2009

Subject code: 130401**Subject Name: Introductory Biology****Date: 17 / 12 / 2009****Time: 11.00 am - 1.30 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 (a) Comment on the “levels of biological organization”. **07**
(b) Describe the basic characteristics of living organisms and briefly explain the biological significance of death. **07**

Q.2 (a) Summarize Miller’s experiment for organic synthesis. **07**
(b) Explain Oparin-Haldane hypothesis about primeval earth’s conditions. **07**

OR

(b) Write a note on use and misuse of biology. **07**

Q.3 (a) “Flower is a modified shoot” justify the statement. **07**
(b) Describe the various parts of a typical angiospermic plant with a well-labelled diagram. **07**

OR

Q.3 (a) Describe the role of various agents in the dispersal of fruits and seeds. **07**
(b) Describe structure, location and functions of connective tissue with suitable diagrams. **07**

Q.4 (a) Describe the importance of transpiration in plant and briefly explain any four factors that affect transpiration. **07**
(b) Discuss the cohesion-tension theory for uptake of water in plants. **07**

OR

Q.4 (a) Explain the mechanism of photosynthesis in plants. **07**
(b) What are macronutrients? Give the functions and deficiency symptoms of important macronutrients. **07**

Q.5 (a) Discuss the nutritional deficiencies and disorders with the remedy available if any. **07**
(b) Describe the functions of various components of human nervous system. **07**

OR

Q.5 (a) What are endocrine glands? Discuss the basics of human endocrine system. **07**
(b) Explain the hormonal control of digestion in human. **07**
