

GUJARAT TECHNOLOGICAL UNIVERSITY
BE SEM-III Examination-Dec.-2011

Subject code: 130401**Date: 20/12/2011****Subject Name: Introductory Biology****Time: 2.30 pm -5.00 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)** What is biology? How biology developed in ancient India? **07**
(b) Comment on the nature and methods of science. **07**
- Q.2 (a)** Explain the various “levels of biological organization”. **07**
(b) Describe the characteristics of the living organisms. **07**
- OR**
- (b)** Comment on Lamarckism and Darwinism. **07**
- Q.3 (a)** Discuss use and misuse of biology in the modern context. **07**
(b) Describe the internal structure of *Monocot* leaf with the help of a labeled diagram. **07**
- OR**
- Q.3 (a)** Describe structure, location and functions of nervous tissue with suitable diagrams. **07**
(b) Describe structure, location and functions of muscular tissue with suitable diagrams. **07**
- Q.4 (a)** What is transpiration? Describe various kinds of transpiration and mention its significance. **07**
(b) Define photosynthesis and describe the mechanism of light reaction. **07**
- OR**
- Q.4 (a)** What is nutrition? Describe plant nutrition with respect to micronutrients and macronutrients. **07**
(b) Describe various modes of nutrition in animals. Briefly explain the nutritional deficiencies and disorders. **07**
- Q.5 (a)** Describe the basics of human nervous system. **07**
(b) Describe the basics of human endocrine system. **07**
- OR**
- Q.5 (a)** Describe the mechanism of cellular respiration. **07**
(b) Describe human digestive system with suitable diagram. **07**
