

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. Sem-III Remedial Examination May 2011****Subject code: 130401****Subject Name: Introductory Biology****Date: 30/05/2011****Time: 10.30 am – 01.00 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) Explain biology as the “science of life” and comment on the emergence of contemporary biology. **07**
- (b) How biology developed in ancient India? Explain with reference to different areas of biology. **07**

- Q.2** (a) Briefly describe the important characteristics of living organisms. **07**
- (b) Explain Lamarckism and Darwinism in the context of evolution of life. **07**

OR

- (b) What is speciation? Describe different types of speciation. **07**

- Q.3** (a) Briefly describe the morphology of a typical flower with the help of schematic diagram. **07**
- (b) Define plant tissue and describe various types of plant tissues. **07**

OR

- Q.3** (a) What is animal tissue? Describe structure, location and functions of epithelial tissue. **07**
- (b) Describe the internal structure of a typical monocot stem with the help of a labeled diagram. **07**

- Q.4** (a) Define transpiration and briefly describe different types of transpiration. Mention the importance of transpiration. **07**
- (b) Write a note on “nitrogen metabolism”. **07**

OR

- Q.4** (a) Explain the “Light Reaction” of photosynthesis. **07**
- (b) Discuss water potential and mention its uses. **07**

- Q.5** (a) Define respiration and briefly describe the mechanism of cellular respiration. **07**
- (b) Draw a schematic diagram of human digestive system and briefly describe its different components. **07**

OR

- Q.5** (a) Comment on respiratory disorders in human. **07**
- (b) Describe the circulatory system in human. **07**
