

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III • EXAMINATION – SUMMER 2013****Subject Code: 130401****Date: 31-05-2013****Subject Name: Introductory Biology****Time: 02:30 pm – 05:00 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) Narrate the contributions of Aristotle. **07**
(b) Write about role of biology in dispelling myths, misconceptions and disbeliefs. **07**
- Q.2** (a) What are the basic characteristics that unify all living organisms? **07**
(b) Explain the concept of biological species and evolutionary species. **07**
- OR**
- (b) Distinguish between homologous and analogous organs. Give examples of each. **07**
- Q.3** (a) Explain different modifications acquired by the roots with example. **07**
(b) Write a short note on different parts of leaf with a neat diagram. **07**
- OR**
- Q.3** (a) Write a detailed account on complex tissues found in plants. **10**
(b) Explain internal structure of dicotyledonous root with a neat diagram. **04**
- Q.4** (a) Draw a chart showing classification of connective tissue in animals and explain each in brief. **10**
(b) What is transpiration? Explain the factors affecting it. **04**
- OR**
- Q.4** (a) Explain the mechanism of absorption and movement of water in plant roots. **07**
(b) Explain C4 pathway in plants. **07**
- Q.5** (a) Explain the process of digestion in animals. **10**
(b) Draw a neat diagram of human respiratory system and explain it. **04**
- OR**
- Q.5** (a) Mention four cerebral lobes and state their major functions. **07**
(b) Discuss the role of hypothalamus and pituitary in maintaining physiological processes. **07**
