

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-III (NEW) EXAMINATION – SUMMER 2019****Subject Code: 2130401****Date: 07/06/2019****Subject Name: Introductory Biology****Time: 02:30 PM TO 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.

		<b>MARKS</b>
<b>Q.1</b>	(a) Explain the concept of speciation.	<b>03</b>
	(b) Write a note on use and misuse of biology.	<b>04</b>
	(c) Explain different modifications acquired by the roots with example.	<b>07</b>
<b>Q.2</b>	(a) Define the term transpiration and water potential.	<b>03</b>
	(b) Explain the terms hypothesis and observation.	<b>04</b>
	(c) Explain morphology of a flower with a neat diagram	<b>07</b>
<b>OR</b>		
	(c) Draw neat diagram of human heart with proper annotation.	<b>07</b>
<b>Q.3</b>	(a) What is macro and micro nutrient? Enlist them.	<b>03</b>
	(b) Draw a neat diagram of neuron.	<b>04</b>
	(c) Comment on the modes of nutrition in animals and briefly describe nutritional deficiency disorders.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) Give classification of plant tissues and their function.	<b>03</b>
	(b) Draw a neat diagram of respiratory tract of humans.	<b>04</b>
	(c) Explain biology as the “science of life” and comment on the emergence of contemporary biology	<b>07</b>
<b>Q.4</b>	(a) Comment on Darwinism.	<b>03</b>
	(b) Draw a neat diagram of monocot root with proper annotation.	<b>04</b>
	(c) Describe the process of absorption and movement of water in a plant tissue.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) What is role of joints in movement?	<b>03</b>
	(b) Explain inflorescence.	<b>04</b>
	(c) What are endocrine glands? Discuss the basics of human Endocrine system.	<b>07</b>
<b>Q.5</b>	(a) What is adventitious root? Give example.	<b>03</b>
	(b) Enlist various factors affecting photosynthesis. Explain any two in detail.	<b>04</b>
	(c) Explain Calvin cycle of photosynthesis.	<b>07</b>
<b>OR</b>		
<b>Q.5</b>	(a) Where does light reaction take place? What are the products of light reaction?	<b>03</b>
	(b) Explain skeletal and cardiac muscle tissue.	<b>04</b>
	(c) Explain epithelial tissue in detail.	<b>07</b>

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