

Seat No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV(NEW) – EXAMINATION – SUMMER 2019****Subject Code:2140402****Date:17/05/2019****Subject Name: Basic Taxonomy and Techniques****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.

		MARKS
Q.1	(a) What is the tree of life? Who introduced the concept of cladiograms?	03
	(b) What is serology and phage typing?	04
	(c) 16s rRNA analysis is significant technique for finding degree of similarity among the species. Justify	07
Q.2	(a) Highlight contribution of Aristotle in the field of taxonomy.	03
	(b) Briefly explain the concept of family, class, phylum and kingdom	04
	(c) What is Numerical Taxonomy? Mention the relevance of Numerical Taxonomy for microbial classification.	07
	OR	
	(c) Describe characteristics of any three phyla of animals with example of each.	07
Q.3	(a) Write a note on earthworm and its phylum.	03
	(b) Comment on biochemical characterization of microorganisms.	04
	(c) Explain DNA homology experiment and its significance in taxonomy.	07
	OR	
Q.3	(a) Highlight the early attempts of animal classification	03
	(b) Write a note on scope and importance of microbial taxonomy.	04
	(c) Comment on anatomical characterization of animals.	07
Q.4	(a) What are conserved sequences?	03
	(b) Write key characteristics of family <i>Leguminosae</i> .	04
	(c) Explain molecular characterization methods useful in taxonomic studies.	07
	OR	
Q.4	(a) Compare the terms taxonomy and classification.	03
	(b) Write a note on division of plants with no vascular tissues.	04
	(c) Explain binomial nomenclature.	07
Q.5	(a) Write the significance of % G + C ratio in taxonomy.	03
	(b) Discuss on five kingdom classification.	04
	(c) You have isolated a microbial consortium from the soil. How will you characterize, identify and classify the microbes present in that consortium?	07
	OR	
Q.5	(a) Discuss the phylum Mollusca	03
	(b) Enlist and explain various colonial characterizations for micro organism.	04
	(c) Write a note on history of plant kingdom.	07
