

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– V (New) EXAMINATION – WINTER 2019****Subject Code: 2153605****Date: 29/11/2019****Subject Name: Microbiology & Formulation Technology of Liquids & Topicals****Time: 10:30 AM TO 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.

		MARKS
Q.1	(a) What are the ideal properties and advantages of suspensions ?	03
	(b) Explain the concept of allergy	04
	(c) Define ointment. Describe in detail how ointments are made.	07
Q.2	(a) Define taxonomy	03
	(b) Write a note on emulsion instabilities	04
	(c) Mention the principle behind the sterility testing. Explain the sterility test methods in detail	07
	OR	
	(c) Explain Culture Preservation in detail	07
Q.3	(a) Explain the morphology of Virus	03
	(b) Explain: Scanning and Tanning Electron Microscope	04
	(c) Describe gram staining method in detail	07
	OR	
Q.3	(a) Explain: Capsule & Slime Layer	03
	(b) Explain the steps involved in the virus replication	04
	(c) Define Antigen & Antibodies. Discuss the structure of Antigen briefly indicating epitopes and their role. Also discuss the structure of an antibody with the help of schematic and describe its various parts	07
Q.4	(a) Classify emulsions in detail	03
	(b) Write a note on Emulsion formulation components	04
	(c) What are the formulation components of the syrup, write in brief	07
	OR	
Q.4	(a) Define Emulsions and Suspensions	03
	(b) Write a note on syrup	04
	(c) Explain in detail tests to identify emulsion type	07
Q.5	(a) Explain (1). Magnification, (2). Resolution (3). Numerical Aperture	03
	(b) Differentiate between: anionic and cationic stain, basic and acidic stain	04
	(c) List out any five methods of measuring microbial growth. Discuss the serial dilution method in detail with the help of figures	07
	OR	
Q.5	(a) Write Differences between Wet mount and Hanging Drop Technique	03
	(b) Write short note: Radioimmunoassay(RIA)	04
	(c) Which are the different methods of maintaining and preserving pure cultures. Explain each method briefly	07
