Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V(New) • EXAMINATION – WINTER 2016

Subject Code:2153605 Date:30/11/2016

Subject Name:Microbiology & Formulation Technology of Liquids & Topicals(Department Elective- IV)

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		**Short Questions**	**14**
	1	Define Suspension	
	2	Classify emulsion	
	3	Enlist the suspending agents	
	4	Give definition of Cell	
	5	Composition of flagella.	
	6	Creation of first Microscope by whom?	
	7	Define syrup	
	8	Define elixers	
	9	What is dry syrup	
	10	Deep freezing of microorganisms requires a cryoprotectant such as_____.	
	11	Name of dye which can be used in negative staining technique.	
	12	What is the function of Mitochondria in cell?	
	13	Types of Staining.	
	14	Give examples of marketed syrup formulation	
Q.2	**(a)**	Explain in detail formulation components of suspension	**03**
	(b)	Write a short note on emulsion instability	**04**
	(c)	Describe Motility detection methods in detail.	**07**
		OR	
	(c)	Design and describe the gram staining technique.	**07**
Q.3	**(a)**	Give the Chemical requirements (Nutritional factors) for Bacterial Growth.	**03**
	(b)	Difference between: Prokaryotic cell and Eukaryotic cell.	**04**
	(c)	Describe any three cell parts (organelles) in detail	**07**
		OR	
Q.3	**(a)**	Briefly explain prokaryotic Flagella	**03**
	(b)	Difference between: Gm+ and Gm- bacteria.	**04**
	(c)	Explain Culture Preservation in detail.	**07**
Q.4	**(a)**	Write short note: Western Blotting.	**03**
	(b)	Describe the function of cell wall.	**04**
	(c)	Explain the tests used to identify the type of emulsion	**07**
		OR	
Q.4	**(a)**	Write different parts of compound microscope.	**03**
	(b)	Write short note: Radioimmunoassay(RIA)	**04**
	(c)	(i).Write down the evaluation tests for suspension.	**03**
		(ii). Draw flow diagram of the pharmaceutical industry	**04**

Q.5	**(a)**	Differentiate between syrup and elixir formulation	**03**
	(b)	Classify syrup and state the difference between USP and IP syrup	**04**
	(c)	Write down the formulation component of the ointments	**07**

OR

Q.5	**(a)**	Define ointment and classify the ointment bases	**03**
	(b)	Give the difference between suspension and emulsion	**04**
	(c)	Define liniment and lotions and write packaging aspects	**07**

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