Seat No.:	Enrolment No.
Deat 11011	

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER – V (NEW) EXAMINATION – WINTER 2015

Su	bject	Code: 2153605 Date:14/12/201 Name: Microbiology & Formulation Technology of Liquids &	.5
Ti	_	(Department Elective-IV) 0:30am to 1:00pm Total Marks:	70
	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	Explain the cell structure of bacteria and brief about each organelle What are the different methods of isolation of microorganisms .? Explain each method briefly.	07 07
Q.2	(a)	Describe the composition of Gram positive and Gram negative cell wall with a	07
	(b)	schematic diagram. Define Pre formulation. What is the need of Pre formulation studies? Explain the steps involved in Pre formulation studies. OR	07
	(b)	(i).Explain in detail : Formulation development of suspension (ii).Classify various dosage forms.	05 02
Q.3	(a)	(i) Enlist different types of light microscope. Explain (1). Refractive index and (2). Focal length	05
	(b)	 (ii) Enlist out types of bacteria based on shape (i) Explain (a). Antigen, (b). Antibodies. (ii) Differentiate between disinfection and sterilization. OR	02 05 02
Q.3	(a).	Explain briefly the principle and working of (a). Hot air oven, (b). Autoclave, (c). Bacteriological incubator.	07
	(b).	What is pure culture? Describe different types of culture media.	07
Q.4	(a) (b)	Write in detail ideal characteristics of Suspending agents & Emulsifying agents. Define Biphasic dosage form. Explain Emulsion, the methods of Emulsion manufacturing and the defects of Emulsions. OR	07 07
Q.4	(a).	Explain the different liquid dosage forms. What are the differences between biphasic solutions and monophasic solutions.	07
	(b).	Discuss in detail the function, usage & characteristics of wetting agents and suspending agents in suspensions.	07
Q.5	(a)	Discuss in detail the following quality control parameters for suspensions: (a). Sedimentation, (b). particle size, (c). assay, (d). content uniformity, (e). stability and (f). preservative efficacy.	07
	(b)	What are the different topical dosage forms available. Explain the differences between each dosage form.	07
Q.5	(a)	OR Give an account of different types of Ointment bases.	07
	(b)	(i).Differentiate between flocculated & deflocculated suspensions.(ii).Define following (1). Elixir, (2).Suppositories, (3). Ointments & (4).Syrup.	03 04