GUJARAT TECHNOLOGICAL UNIVERSITY BPHARM - SEMESTER- V • EXAMINATION - WINTER 2012

	•	code: 250002 Date: 11-01-2013	
Tiı	ne: 1 struc	Name: Pharmaceutical Microbiology-I 0:30 am – 01:30 pm Total Marks: 80 tions:)
	2. M	ttempt any five questions. Take suitable assumptions wherever necessary. Igures to the right indicate full marks.	
Q.1	(a) (b) (c)	Draw a labeled diagram of bacterial cell. Explain flagella. Classify microorganism on the basis of morphologically. Discuss the spirochetes. Write a note on Electron microscope.	06 05 05
Q.2	(a)	Discuss the importance of staining in microbiology. Classify different staining techniques.	06
	(b)	Discuss the scope of microbiology in Pharmaceutical industry. Classify the methods of isolation of microbes. Discuss roll tube method.	05 05
Q.3		Differentiate following: a) Gram negative and Gram positive microbes. b) Spores and capsules c) Viruses and bacteria d) RWC and CMC 	16
Q.4	(a)	Define disinfection. Classify the factors influencing disinfectant and discuss any two.	06
	(b) (c)	Discuss the nutritional requirement of microbes. Describe cultivation of aerobic microbes.	05 05
Q.5	(a) (b) (c)	Explain the principle underlying the microbiological assay of antibiotics. How do you carried out the microbiological assay of Vitamin B_{12} as per IP. What is sterility test? Give the importance of control test in the sterility testing of Pharmaceuticals.	06 05 05
Q. 6	(a) (b) (c)	Classify the methods of sterilization. Discuss Hot air oven with its applications. Discuss the Ethylene oxide gas sterilization. Discuss the saturated steam as a sterilizing agent.	06 05 05
Q. 7	(a) (b) (c)	Write a note on following: Growth phase of microorganisms Total counts Validation of bacterial filters	06 05 05