

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Pharm - SEMESTER-V- (NEW SYLLABUS) EXAMINATION – SUMMER-2015

Subject code: 2250002

Date: 30/04/2015

Subject Name: Pharmaceutical Microbiology & Biotechnology-I

Time: 2.30 pm to 5.30 pm

Total Marks: 80

Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1	(a)	Discuss the Scope of Microbiology	06
	(b)	Define the terms: Bioburden, Sterilization, D- value, Incineration, MIC.	05
	(c)	Discuss the following Staining methods in brief:	05
		1. Gram Staining 2. Spore staining	
Q.2	(a)	Describe biological indicators for monitoring sterilization processes	06
	(b)	Enumerate the factors affecting disinfection. Discuss any two.	05
	(c)	Write short note on fungi.	05
Q.3	(a)	Classify the methods of sterilization. Discuss Hot air oven with its applications.	06
	(b)	Explain the Growth Promotion test.	05
	(c)	Write a brief note on protein synthesis.	05
Q.4	(a)	Discuss methods for evaluation of disinfectants.	06
	(b)	Write note on Scanning Electron Microscopy.	05
	(c)	Give the nutritional requirements for microorganisms.	05
Q.5	(a)	Differentiate following:	06
		1) Gram -ve and Gram +ve Bacteria. 2) Spores and capsules	
	(b)	Write detail note on spirochetes.	05
	(c)	Why test for sterility is carried out? What is the importance of Control test in the test for sterility?	05
Q. 6	(a)	Draw a labeled diagram of bacterial cell. Explain flagella.	06
	(b)	Write down ideal requirements of disinfectant. Write mode of action of Phenol.	05
	(c)	Enumerate various techniques of immobilization of enzymes and explain any one.	05
Q. 7	(a)	Explain: Total count & Viable count.	06
	(b)	Differentiate: DNA & RNA.	05
	(c)	Give the difference between prokaryotic cell and eukaryotic cell.	05
