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GUJARAT TECHNOLOGICAL UNIVERSITYB. Pharm - SEMESTER-V - EXAMINATION - SUMMER 2017

Subject Code: 2250002 Date: 29/05/2017

Subject Name: Pharmaceutical Microbiology & Biotechnology I

Time: 10:30 AM to 01:30 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) (b)	Discuss the Scope of Microbiology Enumerate methods for evaluation of disinfectants. Describe Rideal-Walker	06 05
	(c)	test. Explain: D- value, F- value, Z- value, Q10- value, Inactivation factor	05
Q.2	(a) (b) (c)	Classify the microorganisms. Differentiate the bacteria and viruses. Discuss electron microscopy with its applications Describe biological indicators for monitoring sterilization processes	06 05 05
Q.3	(a) (b) (c)	Classify the staining techniques. Discuss gram staining method Discuss in Detail about genetic code and its properties Write a brief note on Spirochetes.	06 05 05
Q.4	(a) (b) (c)	Classify the disinfectants. Discuss the mechanism of action of any two. Differentiate between: (i) capsule and spore (ii) Selective and differential media Discuss factors affecting disinfection.	06 05 05
Q.5	(a) (b) (c)	Write a note on an autoclave. Draw a labeled diagram of bacterial cell. Explain flagella. Write a note on gaseous sterilization	06 05 05
Q. 6	(a) (b) (c)	Define total counts. Enlist methods for total count and discuss any one. Explain various techniques of immobilization Discuss the nutritional requirement of microbes.	06 05 05
Q.7	(a) (b) (c)	Explain salient features of enzyme immobilization. Describe the structure of DNA and the process of DNA replication Write short note on scope of biotechnology	06 05 05
