Seat No.: _____   *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharmacy Sem- Vth Examination December 2010

Subject code: 250002
Subject Name: Pharmaceutical Microbiology- I
Date: 16 /12 /2010   **Time: 02.30 pm – 05.30 pm**

Instructions: **Total Marks: 80**
1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	(a)	Define pharmaceutical microbiology. Describe its scope in brief.	**06**
	(b)	Describe contribution of 'Louis Pasteur' in microbiology.	**05**
	(c)	Write note on bacterial flagella.	**05**
Q.2	(a)	Explain: Motility, Pathogenicity, Virulence	**06**
	(b)	Describe type of bacteria on the basis of : i) Nutritional requirement ii) Temperature requirement	**05**
	(c)	Classify staining techniques. Discuss gram staining.	**05**
Q.3	(a)	Enlist methods for isolation of bacteria. Discuss streak plate method.	**06**
	(b)	Write note on Scanning Electron Microscopy	**05**
	(c)	Describe factors affecting disinfection process in brief	**05**
Q.4	(a)	Enumerate methods for evaluation of disinfectants. Describe Rideal-Walker test.	**06**
	(b)	Explain: Thermal death point, Thermal death time, Iodophore, Bioburden, Bactericide	**05**
	(c)	Define 'sterilization'. Classify different methods for the same with mechanism of action.	**05**
Q.5	(a)	What is cold sterilization? Write note on fractional sterilization.	**06**
	(b)	Explain: D- value, F- value, Z- value, Q_{10}- value, Inactivation factor	**05**
	(c)	Describe biological indicators for monitoring sterilization processes	**05**
Q. 6	(a)	Enlist methods for sterility testing. Discuss direct inoculation method.	**06**
	(b)	Explain: Sterility, SAL, Incineration, MIC, Zone of inhibition	**05**
	(c)	Describe cup-plate method for microbiological assay	**05**
Q.7	(a)	Explain microbiological assay. Name microbes used in assay of: Amphotericin B, Erythromycin, Carbenicillin, Rifampicin, Tetracycline	**06**
	(b)	Discuss microbiological assay of cyanocobalamin	**05**
	(c)	Explain: Total count & Viable count. Describe photometric method for determining total count	**05**

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