

Q 16	Phenol co-efficient is a measure of _____.	1	CO2
Q 17	Elaborate ATCC.	1	CO4
Q 18	Integrity of high-efficiency particulate air (HEPA) filter is _____ % for _____ particle size.	1	CO4
Q 19	Phenolic detergents act by _____ and _____.	1	CO4
Q 20	Microbiological assay of antibiotics requires a total of _____ petri plates to accommodate _____ cylinders or cavities.	1	CO5
SECTION B (20 Marks) (2 Q x 10 M = 20 Marks)			
	Attempt any two questions from section B.	Marks	
Q 1	a) Define sterilization. b) Explain about moist heat sterilization procedure, main features of an autoclave, and important precautions that needs to be table during autoclaving.	2+8	CO2
Q 2	a) Discuss the basic principle and protocol followed for Gram's staining method. b) Mention the use of each reagent used in Gram's staining.	8+2	CO4
Q 3	Explain in detail about various factors affecting disinfectants.	10	CO5
SECTION-C (35 Marks) (7 Q x 5 M = 35 Marks)			
	Attempt any seven questions from section C.	Marks	
Q 1	Differentiate between the Gram-negative and Gram-positive bacterial cell wall.	5	CO1
Q 2	a) Draw the bacterial growth curve b) Explain various phases of a growth curve.	2+3	CO1
Q 3	Define culture media and explain the importance of different types of media used in microbial culture.	5	CO2
Q 4	Give clean room classification with special emphasis on air borne particulate matter as per British standards, GMP EU guidelines, and ISO standards.	5	CO2
Q 5	a) Explain various sources of contamination in a sterile formulation area b) Mention the approaches used to prevent the contamination in an aseptic area.	2.5+2.5	CO3
Q 6	How do viruses differ from bacteria in terms of structure, replication, and treatment options?	5	CO3
Q 7	Describe method A (membrane filtration method) for sterility testing of sterile pharmaceutical products.	5	CO4
Q 8	Describe spoilage. Enlist various causes of product spoilage.	2+3	CO5
Q 9	Explain cup-plate method used to determine microbiological assay of antibiotics.	5	CO5