

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2026
(Fifth Semester)

Branch - MICROBIOLOGY

MAJOR ELECTIVE COURSE – I: PHARMACEUTICAL MICROBIOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	The main feature of prokaryotic organism is a. Absence of locomotion b. Absence of nuclear envelope c. Absence of nuclear material d. Absence of protein synthesis	K2	CO1
	2	How do bacteriophages differ from animal viruses? a. They specifically infect bacteria b. They can replicate outside a host cell c. They do not cause infection d. They have a simple structure without DNA or RNA	K2	CO1
2	3	Phagocytes are a. Monocytes b. Macrophages c. Basophils d. All of the above	K2	CO2
	4	The ability of a pathogen to spread in this host tissues after establishing the infection is known as a. Toxigenicity b. Invasiveness c. Adhesion d. None of these	K2	CO2
3	5	Amoxycillin is combined with clavulanic acid to inhibit a. Cell synthesis b. DNA gyrase c. β -lactamase enzymes d. Protein synthesis	K4	CO3
	6	Which of the following are inactive viral vaccines? a. Rabies b. Influenzae c. Russian spring summer encephalitis d. All of the above	K4	CO3
4	7	Staphylococcus aureus are characterized by a. Liquification of gelatin due to production of gelatinase b. Formation of acid in sucrose, dextrose c. Strains are catalase positive d. All of the above	K4	CO3
	8	Which staining method is used to identify <i>Mycobacterium tuberculosis</i> ? a. Acid-fast staining b. Capsule staining c. Endospore staining d. Grams staining	K4	CO3
5	9	A common cause of microbial spoilage in pharmaceuticals is a. Alcohol b. Dry heat c. UV radiation d. Water activity (aw)	K4	CO3
	10	Which HVAC component is most critical for removing particulates in a cleanroom? a. HEPA filter b. Pre-filter c. Exhaust fan d. Mixing chamber	K4	CO3

Cont...

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Define the fundamental features of microbiology.	K2	CO1
		(OR)		
	11.b.	Give a brief note on preservation techniques of microorganisms.		
2	12.a.	Briefly write about the avoidance of phagocytosis.	K2	CO2
		(OR)		
	12.b.	Write a note on invasive pathogens.		
3	13.a.	Write about emerging antibiotics for MRSA and other gram positive Cocci infections	K2	CO2
		(OR)		
	13.b.	Discuss about antiviral drugs		
4	14.a.	Write about Vancomycin-resistant Enterococci and <i>Clostridioides difficile</i>	K4	CO3
		(OR)		
	14.b.	Summarize the infection precautions		
5	15.a.	Define the sources and control of contamination	K4	CO3
		(OR)		
	15.b.	What are the factors determining the outcome of a medicament-borne infection?		

SECTION - C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Differentiate between prokaryotes and eukaryotes.	K2	CO1
2	17	Explain the routes of infection.	K2	CO2
3	18	Summarize the properties and uses of β -Lactam antibiotics.	K2	CO2
4	19	Discuss about the standard precautions and disinfection.	K4	CO3
5	20	Write about the preservation of medicines using antimicrobial agents.	K4	CO3

Z-Z-Z

END