

**PSG COLLEGE OF ARTS & SCIENCE**  
(AUTONOMOUS)

**BSc DEGREE EXAMINATION MAY 2024**  
(Second Semester)

Branch - **BIOCHEMISTRY**

**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	Which part of the light microscope controls the intensity of light entering the viewing area? (a) Coarse adjustment screw (b) Fine adjustment screw (c) Diaphragm (d) Condenser lens	K1	1
	2	Gram-positive bacteria retain the crystal violet-iodine complex due to the presence of _____. (a) A thick layer of peptidoglycan (b) Lipopolysaccharides (c) Teichoic acids (d) Outer membrane	K2	2
2	3	In prokaryotes, the hair-like outgrowths which attach to the surface of other bacterial cells are _____. (a) Flagella (b) Pili (c) Capsule (d) Plasmids	K1	2
	4	Yeast is an example of _____. (a) Bacteria (b) Virus (c) Fungi (d) Algae	K2	2
3	5	_____ are the commonly found normal microflora in a healthy human body (a) Bacteria (b) Fungi (c) Parasites (d) Viruses	K1	3
	6	Which of the following is not an air borne disease? (a) Tuberculosis (b) Cholera (c) Whooping cough (d) Pneumonia	K2	3
4	7	Damage and errors in DNA cause _____. (a) Mutation (b) DNA repair (c) Translation (d) Transcription	K1	3
	8	The viral genome is packaged into a structure made of _____. (a) protein (b) carbohydrate (c) fats (d) lipids	K2	3
5	9	An example for symbiotic nitrogen fixer is _____. (a) Azotobacter (b) Beijerinckia (c) Clostridium (d) Rhizobium	K1	4
	10	_____ is referred to as an upstream process. (a) Media formulation (b) Product recovery (c) Product purification (d) Cell lysis	K2	5

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.	State the principle and uses of electron microscope.	K1	1
	(OR)			
	11.b.	List out the types of media.		
2	12.a.	Enumerate about component parts of bacterial cell wall.	K3	2
	(OR)			
	12.b.	Describe the important characteristics of fungi.		
3	13.a.	Give an account on endotoxins.	K2	3
	(OR)			
	13.b.	Describe the aetiology and symptoms of Common cold.		
4	14.a.	Interpret the role of Replica plating in mutant selection.	K2	3
	(OR)			
	14.b.	Detail the cultivation of viruses.		
5	15.a.	Explain Carbon cycle.	K4	4
	(OR)			
	15.b.	Justify why Phosphorous cycle is considered as Biogeochemical cycle?		

**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	Outline the pure culture methods.	K1	1
2	17	Discuss on Actinomycetes and Cyanobacteria.	K2	2
3	18	Explain the aetiology, pathogenesis and symptoms of Typhoid.	K3	3
4	19	Summarize the life cycle of T4 bacteriophage.	K3	3
5	20	Demonstrate the use of microbes in Waste water treatment.	K4	4

Z-Z-Z

END