

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2025
(First Semester)

Branch - BOTANY

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	Who is known as the "Father of Microbiology"? a) Louis Pasteur b) Robert Koch c) Anton van Leeuwenhoek d) Joseph Lister	K1	CO1
	2	Which of the following environments is considered an extreme environment? a) Freshwater b) Soil c) Hot springs d) Air	K2	CO1
2	3	The Baltimore classification of viruses is based on a) Size of the virus b) Type of nucleic acid c) Host cell d) Symptoms caused	K1	CO2
	4	TMV infects which type of organism? a) Bacteria b) Plants c) Animals d) Fungi	K2	CO2
3	5	Gram staining differentiates bacteria based on a) Shape b) Cell wall composition c) Reproduction d) Capsule presence	K1	CO3
	6	Mesosomes in bacteria are associated with a) Photosynthesis b) Respiration c) DNA replication d) Spore formation	K2	CO3
4	7	The sexual spores of Mucor are known as a) Zoospores b) Sporangiospores c) Zygospores d) Conidiospores	K1	CO4
	8	Agaricus is commonly known as a) Bread mold b) Mushroom c) Yeast d) Smut	K2	CO4
5	9	Ustilago species commonly cause a) Rust disease b) Smut disease c) Wilt disease d) Leaf spot	K1	CO5
	10	The algal partner in lichens is called a) Mycobiont b) Phycobiont c) Basidiobiont d) Zoobiont	K2	CO5

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.	Write short notes on Louis Pasteur's contributions. (OR)	K1	CO1
	11.b.	Explain the distribution of microorganisms in soil.		
2	12.a.	Illustrate the structure of TMV. (OR)	K2	CO2
	12.b.	Explain the replication of bacteriophage.		

Cont...

3	13.a.	Write short notes on bacterial cell wall and capsule.	K2	CO2		
	(OR)					
	13.b.	Discuss the mode of nutrition in bacteria.				
4	14.a.	Give an account of the asexual and sexual reproduction in Mucor.	K3	CO3		
	(OR)					
	14.b.	Explain the classification of fungi by Alexopoulos (1962).				
5	15.a.	Write notes on the economic importance of fungi.	K4	CO5		
	(OR)					
	15.b.	Describe the structure and reproduction of lichens.				

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks

 $(3 \times 10 = 30)$

Module No.	Question No.	Question	K Level	CO
1	16	Explain the methods of sterilization and types of culture media used for microbial culture.	K1	CO1
2	17	Discuss the classification and transmission of plant viruses.	K2	CO2
3	18	Describe in detail the ultrastructure of a bacterial cell.	K2	CO3
4	19	Explain the life cycle and reproduction of Aspergillus.	K3	CO4
5	20	Describe the economic importance and Indian Knowledge System (IKS) uses of lichens.	K4	CO5

Z-Z-Z END