

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2025
(Second Semester)

Branch - APPLIED MICROBIOLOGY

ENVIRONMENTAL AND AGRICULTURAL 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 of the following comes under the category of positive association? a) neutralism b) parasitism c) commensalism d) ammensalism	K1	CO2
	2	What is the consequence of a change in the genetic diversity? a) results in loss of biological diversity b) leads to an increase in the population c) results in loss of human species only d) none of these	K2	CO2
2	3	Which one is more numerous in air? a) Bacteria b) Algae c) Fungi d) Viruses	K1	CO1
	4	Primary producers are found growing in which of the following layers of water? a) upper layer b) middle layer c) intermediate layer d) bottom layer	K2	CO1
3	5	Which of the following is the oldest and the most common method used to dump solid wastes? a) River b) Ocean c) Landfill d) None of the above	K1	CO4
	6	Corrosion involves _____ reactions. a) oxidation b) reduction c) both (a) and (b) d) none of these	K2	CO4
4	7	Who is the natural reservoir of phosphorous? a) Atmospheric gases b) Rocks c) Water d) Dead organisms	K1	CO3
	8	Which of the given is an example of a disease caused by a virus? a) Cankers b) Fire Bligh c) Spotted Wilt d) Leaf spot	K2	CO3
5	9	Which of the following is an aerobic nitrogen-fixing bacterium? a) Azotobacter b) Clostridium c) Rhodospirillum d) Rhodopseudomonas	K1	CO5
	10	What are biocontrol agents for controlling butterfly caterpillars? a) <i>Bacillus thuringiensis</i> b) <i>Lactobacillus</i> c) <i>Acetobacter aceti</i> d) <i>Treponema palladium</i>	K2	CO5

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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.	Apply your views on significance of Intestinal synergism.	K3	CO1
		(OR)		
	11.b.	Identify the impacts of Species diversity. Explain it with suitable example.		
2	12.a.	Choose suitable assessment method for checking air quality.	K3	CO2
		(OR)		
	12.b.	Construct an ideal example for explaining a fresh water microbial community.		
3	13.a.	Distinguish composting and pyrolysis with suitable explanation.	K4	CO4
		(OR)		
	13.b.	Categorize microbial interaction with xenobiotics. Add a note on its environmental impacts.		
4	14.a.	Give your simplified views on Phosphorous cycle.	K4	CO3
		(OR)		
	14.b.	Analyze the economic impacts of tobacco ring spot virus and mention its disease cycle.		
5	15.a.	Explain in brief account on mass cultivation of Azospirillum.	K5	CO5
		(OR)		
	15.b.	Prioritize the concept of integrated pest management and give one example in detail.		

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	Classify positive interactions with suitable examples.	K4	CO1
2	17	Examine any one secondary waste water treatment in detail.	K4	CO4
3	18	Infer your views on biological significance of textile biodegradation.	K4	CO3
4	19	Determine symbiotic nitrogen fixation in leguminous plants.	K5	CO2
5	20	Assess the biochemistry of bioethanol production and mention its various stages.	K5	CO5

Z-Z-Z

END