

MSc DEGREE EXAMINATION MAY 2026

(Second Semester)

Branch - **ZOOLOGY****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 microscope is commonly used to view living, unstained microorganisms? (i) Compound microscope (ii) Phase-contrast microscope (iii) electron microscope (iv) Fluorescence microscope	K1	CO1
	2	Extra-chromosomal, circular, double-stranded self-replicating DNA in bacteria is called (i) Nucleoid (ii) Mesosome (iii) Plasmid (iv) Capsule	K2	CO1
2	3	Which one of the following compound is added to milk to produce better-flavored buttermilk ? (i) Sodium Citrate (ii) Glucose (iii) Acetic Acid (iv) Sodium acetate	K1	CO2
	4	What is the main factor responsible for the spoilage of fresh poultry and fish? (i) Proper cooking (ii) Freezing (iii) Inappropriate storage temperature and time (iv) Vacuum packing	K2	CO2
3	5	The following diseases is primarily spread through air is (i) Tuberculosis (ii) Pneumonia (iii) Diphtheria (iv) All of these	K1	CO3
	6	Which of the following sexually transmitted diseases has a bacterial origin? (i) Syphilis (ii) Hepatitis B (iii) Trichomonas Vaginitis (iv) Scabies	K2	CO3
4	7	Which type of fermentation is responsible for the souring of milk and yoghurt production? (i) Oxidative fermentation (ii) Citric acid fermentation (iii) Alcoholic fermentation (iv) Lactic acid fermentation	K1	CO4
	8	Which scientist is credited with the discovery of streptomycin? (i) Louis Pasteur (ii) Alexander Fleming (iii) Selman Waksman (iv) Robert Koch	K2	CO4
5	9	The first commercially produced bioinsecticide was: (i) Sporeine (ii) Nimbecidine (iii) Dipel (iv) Thuricide	K1	CO5
	10	What is the primary purpose of screening in water treatment? (i) Removing large suspended solids (ii) Removing algae (iii) Reducing dissolved oxygen (iv) Adding chlorine	K2	CO5

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.	Organize the morphology of microbial cell.	K3	CO3
		(OR)		
	11.b.	Interpret the structural organization of a bacterial chromosome.		
2	12.a.	Examine the different sources of microbial contamination of milk on a dairy farm and suggest methods to reduce them.	K4	CO4
		(OR)		
	12.b.	What are the primary sources of microbial contamination during poultry processing ?		
3	13.a.	Elaborate the etiology, transmission, and clinical symptoms of Rabies.	K5	CO4
		(OR)		
	13.b.	Discuss the pathogenesis, clinical manifestation and laboratory diagnosis of Neisseria gonorrhoeae.		
4	14.a.	Formulate the two - stage fermentation process involved in the industrial production of vinegar.	K4	CO4
		(OR)		
	14.b.	Examine the industrial fermentation process of Streptomycin.		
5	15.a.	Outline the economic and ecological benefits of bio-fertilizers.	K4	CO4
		(OR)		
	15.b.	Examine the enzymes used in waste water treatment.		

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	Draw and label the diagram of a generalized prokaryotic bacterial cell and describing the functions of each component of its.	K4	CO3
2	17	Diagnose the primary sources of microbial contamination in fish and shellfish during harvesting and processing.	K4	CO3
3	18	Outline the common diagnostic methods used to detect any three bacterial diseases.	K5	CO4
4	19	Explain the production and applications of microbial enzymes.	K4	CO4
5	20	Elaborate the three main stages of municipal wastewater treatment.	K6	CO5

Z-Z-Z

END