PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2025
(Second Semester)

Branch – **FOODS AND NUTRITION**

MAJOR ELECTIVE COURSE – I FOOD BIOTECHNOLOGY

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 cell has DNA? a) Cytoplasm b) Ribosomes c) Nucleus d) Mitochondria	K1	CO1
	2	Show who discovered the double helix structure of DNA? a) James Watson and Francis crick b) Rosalind franklin c) Gregor Mendel d) Fredrick sanger	K2	CO1
2	3	What is one argument against the patenting of genetically modified seeds? a) Encourages innovation b) Promotes sustainability c) Limits farmer access and biodiversity d) Increases market competitions	K1	CO2
	4	Select which ethical issues relates to the accessibility of biotechnology benefits to all communities? a) Economic Equity b) Environmental sustainability c) Technology of advancement d) Cultural preservation	K2	CO2
3	5	Spell what is the primary purpose of using bacteria in the production of fermented fish products? a) To improve texture b) To enhance flavor and preserve the product c) To increase the nutritive value d) To change the colour	K1	CO3
	6	Site the type of fermentation used in the production of fish sauce. a) Lactic acid fermentation b) Alcoholic Fermentation c) Alkaline fermentation d) Acetic acid fermentation	K2	CO3
4	7	Choose the microorganisms that are primarily responsible for the fermentation of coffee beans. a) Yeast and moulds b) Lactic acid bacteria c) E.Coli and salmonella d) Clostridium species	K1	CO4
	8	Trace the duration of wet processing method of coffee. a) 1-3 hours b) 12-48 hours c) 2-7 days d) 1-2 weeks	K2	CO4
5	9	Relate which gas is most commonly associated with ripening of fruits during storage? a) Carbon dioxide b) Oxygen c) Ethylene d) Nitrogen	K1	CO5
	10	Write which post-harvest treatment is commonly used to delay the ripening of banana? a) Application of ethylene b) Calcium carbide c) Cold storage d) Heat treatment	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.	Sketch the basic function of DNA.	K3	CO1
		(OR)		
	11.b.	Determine the principles of transcription.	K3	CO1
2	12.a.	Prepare short notes on legal frame work of production of GMO.	K3	CO2
		(OR)		
	12.b.	Compute a short essay on plants cell as biopharmaceuticals.	K3	CO2
3	13.a.	Focus the preparation method of wine.	K4	CO3
		(OR)		
	13.b.	Illustrate short passage on the role of bacteria in dairy products.	K4	CO3
4	14.a.	Examine the concept of prebiotic foods.	K4	CO4
		(OR)		
	14.b.	Comment on mushroom cultivation method.	K4	CO4
5	15.a.	Conclude about applications of plant cell and tissue culture.	K5	CO5
		(OR)		
	15.b.	Evaluate the role of engineering in organic farming.	K5	CO5

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	Analyse the DNA sequencing by sangers methods.	K4	CO1
2	17	Simplify the ethical issues of food biotechnology.	K4	CO2
3	18	Infer on manufacturing process of bread with the help of yeast as a medium.	K4	CO3
4	19	Evaluate the commercial production of bacteriocins.	K5	CO4
5	20	Assess the role of nutrigenomics in food biotechnology.	K5	CO5

Z-Z-Z END