

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2026
(Sixth Semester)

Branch - NUTRITION, FOOD SERVICE MANAGEMENT & DIETETICS

FUNCTIONAL FOODS & NUTRACEUTICALS

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 food is the richest source of omega-3 fatty acids? (i) Coconut (ii) Flax seed (iii) Olives (iv) Groundnut	K1	CO1
	2	What is the full form of FOSHU? (i) Food of Safe Human Use (ii) Foods for Specified Health Uses (iii) Federal Organization for Safe Health Use (iv) Food of Scientific Health Utility	K2	CO1
2	3	The term "synbiotic" refers to: (i) Two different types of prebiotic fibers (ii) A probiotic and a prebiotic acting synergistically (iii) Antibiotics and probiotics (iv) Probiotics and postbiotic metabolites	K1	CO2
	4	Which form of starch is considered a prebiotic because it escapes digestion in the small intestine? (i) Simple glucose starch (ii) Gelatinized starch (iii) Resistant starch (iv) Hydrolyzed starch	K2	CO2
3	5	The pigment present in beetroot belongs to which of the following groups? (i) Flavonols (ii) Flavones (iii) Xanthones (iv) Anthocyanines	K1	CO3
	6	Which anti-nutritional factor is responsible for causing agglutination of red blood cells (RBCs)? (i) Gossypol (ii) Hemagglutinins (iii) Thiaminase (iv) Goitrogens	K2	CO3
4	7	Name the enzyme inhibitor present in raw soybeans interferes with the activity of trypsin? (i) Amylase inhibitor (ii) Lipase inhibitor (iii) Protease inhibitor (iv) Pectinase inhibitor	K1	CO4
	8	Rosmarinic acid is highly valued in the food industry as a: (i) Natural yellow pigment (ii) Natural antioxidant and preservative (iii) Thickening agent (iv) Emulsifier	K2	CO4
5	9	Which regulatory authority in India is primarily responsible for regulating functional foods and nutraceuticals? (i) ICMR (ii) CDSCO (iii) FSSAI (iv) ISI	K1	CO5
	10	Ethical marketing of nutraceuticals requires: (i) Exaggerated claims (ii) Transparent scientific evidence (iii) Emotional appeal only (iv) Celebrity branding only	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.	Write a short note on the history and development of functional foods.	K2	CO1
		(OR)		
	11.b.	Describe the health benefits of omega-3 and omega-6 fatty acids.		
2	12.a.	Write a brief note on Lactobacillus and Bifidobacterium.	K2	CO2
		(OR)		
	12.b.	Discuss the concept of synbiotics and their health benefits.		
3	13.a.	Enumerate the applications of lycopene in processed foods.	K3	CO3
		(OR)		
	13.b.	Summarize the nutritional significance of isoflavones in human health.		
4	14.a.	Outline the physiological significance of protease inhibitors in foods.	K3	CO4
		(OR)		
	14.b.	Discuss the therapeutic significance of gingerol and eugenol in traditional medicine		
5	15.a.	Explain the key significance of ICMR guidelines for probiotic products.	K3	CO5
		(OR)		
	15.b.	Examine the international regulatory aspects of functional food in India		

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	Explain the importance of dietary supplements in daily diet.	K2	CO1
2	17	Describe the health functions of probiotics in the human gut.	K2	CO2
3	18	Discuss strategies to reduce the effect of anti-nutritional factors during food processing.	K3	CO3
4	19	Discover the nutritional importance of fenugreek in health and disease prevention.	K4	CO4
5	20	Formulate a consumer awareness program highlighting safe use of functional foods and nutraceuticals.	K6	CO5

Z-Z-Z END