

Reg. No.:



Name:

University of Kerala

W6938

Third Semester FYUGP Degree Examination, November 2025

Discipline Specific Core Course

BIOCHEMISTRY

UK3DSCBCH204 - Functional foods and nutraceuticals

Academic Level: 200-299

2024 Admission

Time: 1 Hour 30 Minutes(90 Mins.)

Max. Marks: 42

**Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark
Each.Answer all questions**

Qn No.	Question	CL	CO
1	Define nutraceuticals.	RE	1
2	Name one health benefit of consuming prebiotic fiber.	RE	2
3	Indicate the dietary sources of phytoestrogens.	UN	2
4	Differentiate between omega-3 and omega-6 fatty acids.	UN	4
5	Explain why probiotics and prebiotics are often used together.	UN	1
6	What is the primary role of calcium in the body?	UN	3

Part B.8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Differentiate between dairy and non-dairy probiotic food source.	UN	2
8	Explain the concept of functional foods and how they differ from regular foods.	UN	1
9	Apply your understanding to explain how an imbalance between omega-3 and omega-6 fatty acids in the diet can influence inflammation and cardiovascular health.	AP	3
10	A supplement has both Lactobacillus and inulin. Name its category and explain one advantage.	AP	4

Part C. 28 Marks.Time:60 Minutes (Cognitive Level:Apply(AP)/Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer.7 marks each.Answer all 4 Questions choosing among options * within each question

Qn No.	Question	CL	CO
11	A) Apply your understanding of functional foods to design a daily diet plan for an individual with a high risk of cardiovascular disease. Justify your food choices with reference to their bioactive components and mechanisms of action. OR B) Demonstrate the role of different flavonoids(flavanols, flavanones, anthocyanins) in human health and disease prevention	AP	1, 3
12	A) Compare the physiological roles of EPA and DHA. OR B) Explain the dietary sources and health benefits of probiotics.	AN	3, 3
13	A) Create a table showing the differences in health benefits of soluble and insoluble fibers. OR B) Evaluate the advantages and limitations of nutraceuticals compared to conventional food supplements.	EV	5, 4
14	A) Create a table that incorporates the sources and health benefits of calcium, magnesium, potassium, and selenium OR B) Show how fatty acids can be applied in the diet of pregnant women to support foetal brain development.	CR	4, 3