Name: **Enrolment No:**	

UPES

End Semester Examination, December 2023

Course: Food and Nutraceuticals — **Semester: III**

Program: Int. (B.Sc.+M.Sc.(N&D) — **Duration: 3 Hours**

Course Code: HSCC2008 — **Max. Marks: 100**

Instructions: Read each question carefully and answer

S. No.	Section A MCQs (20Qx1.5M= 30 Marks)	Marks	COs
Q1	What does QA and QC stand for? a) Quality assurance and Queuing control b) Quality adjustment and Quality completion c) Quality assurance and Quality control d) Quality adjustment and Queuing control	1.5	CO1
Q2	These act as fertilizer for the bacterial community residing in the colon. a) Probiotics b) Prebiotics c) Amino acids d) Short-chain fatty acids	1.5	CO1
Q3	Which of the following contains maximum lycopene content? a) Tomato paste b) Fresh tomatoes c) Tomato sauce d) Tomato juice	1.5	CO1
Q4	The following is an example of water-soluble fibre: a) Oats b) Whole grain cereals c) Whole wheat products d) Brown rice	1.5	CO1
Q5	The major metabolite identified as 3-Hydroxyphenylpropionic acid is present in the following nutraceuticals: a) Grape seed proanthocyanidin extract b) Tea c) Oats d) Soyabean	1.5	CO1

Q6	Which of the following is the property of antioxidants? a) Scavenge free radicals. b) Provide energy. c) Promote growth. d) Promote digestion.	1.5	CO2
Q7	Probiotics are: a) Synthetic nutraceuticals b) Vitamin supplements c) Helpful bacteria d) Digestive enzymes	1.5	CO2
Q8	Which of the following is Polyunsaturated fatty acids (PUFA)? a) Omega-3-fatty acid b) Myristic acid c) Palmitic acid d) All above	1.5	CO2
Q9	Health benefits of Dietary fibre: a) Reduce blood cholesterol levels. b) Preventing and treating constipation. c) Control blood sugar level. d) All above.	1.5	CO2
Q10	The essential fatty acids include: a) Stearic acid and oleic acid b) Palmitic acid and linolenic acid c) Linoleic acid and linolenic acid d) Oleic acid and linoleic acid	1.5	CO2
Q11	_____ containing food supplies Nitrogen in our body. a) Vitamin-A b) Proteins c) Carbohydrates d) Fats	1.5	CO3
Q12	The therapeutic activity of garlic is due to the presence of the chemical constituent _____ a) Lignin b) Bilobilin c) Catechin d) Allicin	1.5	CO5
Q13	Spirulina used as a nutraceutical is: a) Blue-green algae b) Red Algae c) Green algae d) None of the above	1.5	CO3

Q14	Ascorbic acid is an example of a Nutraceutical substance grouped by the following food source: a) Plants b) Animals c) Microbial d) Mineral	1.5	CO3
Q15	The pungency of ginger is due to: a) Gingerol b) Zingeberene c) Gingerene d) All above	1.5	CO5
Q16	Omega-3 fatty acids are naturally high in salmon. Therefore, salmon can be classified as this type of food. a) Fortified food b) Functional Food c) Dietary supplement d) Nutraceutical	1.5	CO4
Q17	Carotenoids are not responsible for the following hue in plants: a) Yellow b) Orange c) Pink d) Red	1.5	CO4
Q18	Which one of the following is not part of the usual definition for a functional food? a) It is consumed as part of a normal food pattern. b) It is not a pill, a capsule or any form of dietary supplement. c) It has physiological benefits and/or reduces the risk of chronic disease beyond basic nutritional requirements. d) None of the above.	1.5	CO3
Q19	Diets high in fibre have been proposed to protect against colorectal cancer by one of the following mechanisms: a) Antioxidant effect, which quenches free radicals. b) Increased repair of damaged DNA. c) Increased induction of detoxifying enzymes. d) More rapid removal of potential carcinogens.	1.5	CO4
Q20	Melatonin is the primary hormone secreted by which gland is present in our body? a) Pineal gland b) Adrenal gland c) Thyroid gland d) Pituitary gland	1.5	CO5

Section B **(4Qx5M=20 Marks)**			
Q 1	What are the characteristics of effective probiotics?	5	CO4
Q 2	Explain the mechanism of action of probiotics.	5	CO5
Q 3	Write down different methods to enhance active components in food.	5	CO3
Q 4	Enlist five foods having functional properties, their bioactive compounds, and their therapeutic effects. Describe in detail.	5	CO1
Section C **(2Qx15M=30 Marks)**			
Q 1	Rakesh is suffering from knee pain due to osteoarthritis. Which supplement does he require to make his condition better? Describe why it is useful, its properties and different types. **(5 marks)** He also has weak muscles in the hips, shoulders, upper arms, legs, neck and jaw muscles. What does he require to take and describe its therapeutic properties? **(10 marks)**	15	CO5
Q 2	Describe the functional properties of rice, wheat and oats with therapeutic effects. **(5 marks)** Define functional food. How vegetables can be functional foods? Describe with examples. **(3 + 7 marks)**	15	CO4
Section D **(2Qx10M=20 Marks)**			
Q 1	Define nutraceuticals. Describe the classification of nutraceuticals. **(3 + 7 marks)**	10	CO2
Q 2	What do you mean by dietary supplements? Mention five such examples with their advantages. **(3 + 7 marks)**	10	CO3