

Name:
Enrolment No:



UPES

End Semester Examination, May 2024

Course: Probiotics and Prebiotics

Semester : II

Program: M.Sc. Microbiology

Duration : 3 Hours

Course Code: HSMB7018P

Max. Marks : 100

Instructions: The Assessment consists of 4 sections.

- **Part A contains 20 questions of 1.5 marks each and all questions are compulsory.**
- **Part B consists of 4 questions of 5 marks each and all questions are compulsory.**
- **Part C consists of 2 questions of 15 marks each and all questions are compulsory.**
- **Part D consists of 2 questions of 10 marks each and all questions are compulsory.**

S. No.	Section A Short answer questions/ MCQ/T&F (20Qx1.5M= 30 Marks)	Marks	COs
Q 1	What are probiotics? a. Nutrients essential for digestion b. Harmful microorganisms in the gut c. Live microorganisms that provide health benefits d. Non-digestible fibres in the diet	1.5	CO1
Q 2	A substance containing both prebiotic and probiotic is called as ...? a. Prebiotic b. Symbiotic c. Probiotic d. Postbiotic	1.5	CO2
Q 3	Which of the following foods is a good source of probiotics? a. Apples b. Chicken breast c. Whole wheat bread d. Yogurt	1.5	CO1
Q 4	Prebiotics are best described as...? a. Foods that nourish beneficial gut bacteria b. Digestive enzymes c. Harmful bacteria in the gut d. Probiotic supplements	1.5	CO2
Q 5	What is the primary role of prebiotics in the gut? a. Killing harmful bacteria b. Nourishing beneficial gut bacteria c. Providing energy for the host d. Preventing nutrient absorption	1.5	CO2
Q 6	Which of the following is an example of the best probiotic strain? a. Chicory root b. Beetroot c. Lactobacillus acidophilus d. Lemons	1.5	CO4
Q 7	Consuming both probiotics and prebiotics together is sometimes referred to as....?	1.5	CO3

	<ul style="list-style-type: none"> a. Antibiotics b. Prebiotic supplementation c. Probiotic synergy d. Synbiotics 		
Q 8	<p>What is the essential source of prebiotics in a diet?</p> <ul style="list-style-type: none"> a. Animal products b. Fruits and vegetables c. Processed foods d. Sugary snacks 	1.5	CO3
Q 9	<p>Which of the following is a potential health benefit of probiotics and prebiotics?</p> <ul style="list-style-type: none"> a. Enhancing nutrient absorption b. Causing allergies c. Promoting gut dysbiosis d. Weakening the immune system 	1.5	CO1
Q 10	<p>How do probiotics predominantly function in the gut?</p> <ul style="list-style-type: none"> a. By breaking down complex carbohydrates b. By providing nourishment to beneficial bacteria c. By acting as enzymes for digestion d. By suppressing the immune system 	1.5	CO4
Q 11	<p>Which prebiotic compound is commonly found in foods like onions, and garlic?</p> <ul style="list-style-type: none"> a. Inulin b. Saccharin c. Sorbitol d. Xylitol 	1.5	CO2
Q 12	<p>Probiotics are often recommended to improve gastrointestinal conditions....?</p> <ul style="list-style-type: none"> a. Celiac disease b. Hypertension c. Lactose intolerance d. Migraines 	1.5	CO2
Q 13	<p>How may probiotics help regulate the immune response?</p> <ul style="list-style-type: none"> a. By increasing inflammation b. By suppressing immune cell activity c. By reducing inflammation d. By promoting allergies 	1.5	CO3
Q 14	<p>Name a part of the body where probiotics produce antimicrobial substances that inhibit the growth of harmful bacteria?</p> <ul style="list-style-type: none"> a. Gut b. Lungs c. Liver d. Skin 	1.5	CO2
Q 15	<p>In addition to probiotics, what other lifestyle factors are important for supporting immune health?</p> <ul style="list-style-type: none"> a. Isolation from all potential pathogens b. High doses of antibiotics c. Regular exercise, adequate sleep, and a balanced diet d. None 	1.5	CO1

Q 16 Is essential to link a strain to a specific health effect as well as to enable accurate surveillance and epidemiological studies? a. Cyst identity b. Dead cell identity c. Strain identity d. Stain identity	1.5	CO2
Q 17	Prebiotics are the nutrients that bacteria use as a fuel source, and these include dietary fibre and....?	1.5	CO2
Q 18	Probiotics are used as-----? a. For disease prevention b. For good health c. Antiviral activity d. All of the above	1.5	CO3
Q 19	The term probiotics comes from the Greek word “pro” and “ bios” meaning ----? a. For life b. First life c. First observed d. None of the above	1.5	CO4
Q 20	Probiotics are harmless ----- to promote the health of other organisms?	1.5	CO1
Section B (4Qx5M=20 Marks)			
Q 1	Justify whether probiotics are only useful for gut health issue or not?	5	CO2
Q 2	Why is taking prebiotics more important than taking probiotics?	5	CO1
Q 3	What is fiber? and why is it important for health?	5	CO3
Q 4	How and in what way do the different composites formed in the intestine go to the brain?	5	CO4
Section C (2Qx15M=30 Marks)			
Q 1	Are natural probiotics in food better than probiotic supplements? Should we take them preventively? Can microbes influence food choices and appetite? Do low dose antibiotics in food affect human health?	15	CO1
Q 2	What does the gut microbiota do? Is the effect of pesticides in food on the gut microbiome? Is organic food better for the gut microbiota? Should all new drugs and food chemicals be tested on the gut microbiota?	15	CO2
Section D (2Qx10M=20 Marks)			
Q 1	Describe the important steps in the probiotics manufacturing process in the laboratory? Which step is crucial and influence the viability and applicability of probiotic species?	10	CO3
Q 2	What are the beneficial effects of probiotics on human health? Do probiotics have any side effects on humans?	10	CO4