


Name:			
Enrolment No:			
<p style="text-align: center;">UPES End Semester Examination, May 2025</p> <p>Course: Food Additives and Ingredients Program: B.Tech Food Technology Course Code: HSFT4012 Instructions: All Questions are compulsory</p> <p style="text-align: right;">Semester: VIII Duration: 3 Hours Max. Marks: 100</p>			
SECTION A			
S. No.	Short answer questions/ MCQ/T&F (20Qx1.5M= 30 Marks)	Marks	CO
Q1	Enlist the functions of food preservatives.	1.5	CO2
Q2	Define enzymatic browning.	1.5	CO1
Q3	Enlist three examples of class I preservatives.	1.5	CO1
Q4	Chelating agents also stabilize fermented malt beverages by complexing with copper. a) True b) False	1.5	CO5
Q5	Lecithin is example of a) Stabilizer b) Emulsifier c) Phospholipid d) All of the above	1.5	CO1
Q6	Select the example/s of synthetic antioxidants. a) BHA b) BHT c) TBHQ d) All of the above	1.5	CO1
Q7	Define bulking agents.	1.5	CO2
Q8	Name two examples of invert sugar.	1.5	CO2
Q9	Bleaching of wheat flour is generally done using Benzyle peroxide. c) True d) False	1.5	CO2
Q10	Which of the following constitute the largest class of food additives? a) Flavour and Flavour enhancers b) Antioxidants c) Emulsifiers d) Colorants and pigments	1.5	CO1
Q11	Gelatin is effective as clarifying agent against a) Proteins b) Tannins	1.5	CO2

	c) Cellulose d) All of these		
Q12 is an additive used to retain the texture of canned fruits and vegetables. a) Improver b) Stabilizer c) Firming agent d) None of the above	1.5	CO2
Q13	Which of the following is used to sterilize spices? a) Heat b) Epoxides c) Radiation d) Antibiotics	1.5	CO2
Q14	Polyamides are used as clarifying agent. a) True b) False	1.5	CO5
Q15	The agents responsible for flavor is/are a) Esters b) Aldehydes c) Ketones d) All of the options	1.5	CO1
Q16	Define chelating agents. Give examples.	1.5	CO1
Q17	Leavening agents are divided into different groups. What are these?	1.5	CO5
Q18	What do you mean by acidulants?	1.5	CO1
Q19	The red colour of beet is due to the presence of pigment.	1.5	CO2
Q20	Sulfonamides are permitted in marine products. a) True b) False	1.5	CO5
SECTION B (4Qx5M=20 Marks)			
Q1	Describe the mechanism of action of antimicrobial preservatives and provide relevant examples.	5	CO5
Q2	Discuss about the various techniques used in color stabilization.	5	CO3
Q3	Enumerate the principle involved in the action of anti-browning agents.	5	CO1
Q4	Write a short note on harmful effects/side effects associated with various additives.	5	CO4
SECTION C (2Qx15M=30 Marks)			
Q1	a) Define food additives. Explain the classifications and applications of food additives in food industry. (10 marks) b) Discuss the different types of antioxidants along with examples. (5 marks)	15	CO1
Q2	a) Summarize the importance of supplementing nutrients. (5 marks) b) Describe the various extraction techniques used for the recovery of colors. (10 marks)	15	CO3

	SECTION- D (2Qx10M=20 Marks)		
Q1	Discuss the different types of sweeteners. Explain the properties and uses of saccharin in food products.	10	CO2
Q2	Explain the mechanism of action, types, and functions of emulsifiers.	10	CO5