

Reg. No.: .....



Name: .....

**University of Kerala**

U9286

Second Semester FYUGP Degree Examination, April 2025

Multi-Disciplinary course

**CHEMISTRY**

**UK2MDCHE101 - FOOD CHEMISTRY**

Academic Level: 100-199

**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 the term "adulterant" and provide examples.                      | RE | 3  |
| 2      | Give an example for smart packaging material                            | RE | 5  |
| 3      | Recall what is meant by drying process in making milk powder?           | UN | 4  |
| 4      | Name one example of a macro nutrient in food                            | UN | 1  |
| 5      | Write an example of natural food colour                                 | UN | 2  |
| 6      | Name any two environmentally friendly materials used in food packaging. | UN | 5  |

**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      | How can a diet rich in fiber (a type of carbohydrate) improve over all health?            | UN | 1  |
| 8      | Identify the role of bile in the digestion and absorption of fats in the small intestine. | UN | 2  |
| 9      | Identify the major components of milk                                                     | AP | 4  |
| 10     | Explain the process of smoking food                                                       | AP | 5  |

**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)<br>A food manufacturer wants to label their product based on the type of carbohydrate present. How can he do this?<br>OR<br>B) Interpret the role of fat-soluble vitamins in human health, discussing their functions, sources and deficiency diseases.                                             | AP | 1, 1 |
| 12     | A) Compare various aspects of traditional and modern methods for food processing. OR<br>B)<br>Analyse the potential health and environmental consequences if food processing and packaging materials such as plastics, preservatives and chemicals are not properly selected, handled and disposed of. | AN | 5, 5 |

| Qn No. | Question                                                                                                                                                                                                                                                                                                                                                                     | CL | CO   |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------|
|        |                                                                                                                                                                                                                                                                                                                                                                              |    |      |
| 13     | <p>A)</p> <p>Determine the common adulterants in different foods and their health effects</p> <p>OR</p> <p>B)</p> <p>Judge how the digestion and absorption of Carbohydrates, Proteins and Fats takes place in our body?</p>                                                                                                                                                 | EV | 2, 3 |
| 14     | <p>A) Explore the various processes involved in transforming milk into dairy products, with a special focus on the drying process of milk powder and the chemistry behind the creaming process. OR</p> <p>B) Suppose you are a food safety expert. How would you describe the roles of FSSAI, PFA, and AGMARK in ensuring the quality and safety of the food we consume?</p> | CR | 4, 4 |