

# Question Paper

Exam Date & Time: 29-Nov-2023 (10:00 AM - 01:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal Academy of Higher Education, Manipal MPharm Theory End-Semester Examinations.

### Food Analysis [PCH-MPA104T - S2]

Marks: 75

Duration: 180 mins.

#### SECTION - A

Answer all the questions.

Answer the following (10 marks x 5 = 50 marks)

- 1) Discuss any one continues and discontinues solvent extraction methods used for determination of total lipid content of a food sample. (5)  
A)  
B) What are the different types of adulteration in edible oil and fats? Discuss the sodium azide test for synthetically made mustard oil and Halphen's test for detection of cotton seed oil. (5)
- 2) Write the principle and procedure involved in the microbiological assay of Vitamin B2. (5)  
A)  
B) Define Iodine value? Write the principle and procedure involved in the determination of Iodine value. (5)
- 3) Discuss the principle and procedure involved in the estimation of benzoates in beverages. Write the ferric chloride test and modified Mohler's test used for identification of benzoic acid in food. (5)  
A)  
B) What is rancidity? Discuss any two method used for measuring the current quality of fat or oil in regard to lipid oxidation. (5)
- 4) What is the importance of analysis of protein in food and food products? Discuss the different determination methods of overall Protein concentration in food. (10)
- 5) What are Milk and milk products? Explain their constituents. Explain the different tests for analyzing the fat and sugar content in ice -cream. (10)

#### SECTION - B

Answer all the questions.

Answer the following (5 marks x 5 = 25 marks)

- 6) What is FDA FSMA? Write a note on rules of FDA FSMA. (5)
- 7) Write the principle, reactions and procedure involved in the assay of vitamin-C in food samples by 2,6-dichloroindophenol titrimetric method. (5)
- 8) Explain the changes that come with the processing of carbohydrates in food. (5)
- 9) Write the components that need to be analyzed in fermented products. (5)
- 10) Explain the main stages of analytical procedures for determining pesticides in samples of fruit and vegetables. (5)

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