

Exam Date & Time: 14-Mar-2022 (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)
  - a) Explain Phenol - sulfuric acid method of analysis of Total carbohydrate content. (6 marks)
  - b) Discuss the importance of analysis of proteins. (4 marks) (10)
- 2)
  - a) Explain the method used for determination of, iodine value and saponification value of oils/fats and add a note on their significance (6 marks)
  - b) Write the confirmatory test for any three stabilizing, thickening or gelling agents (4 marks) (10)
- 3)
  - a) Write the principle and procedure involved in the microbiological assay of Vitamin B2 (5 marks)
  - b) Write any two solvent extraction methods including general sample preparation used for determination of total lipid content of a food. (5 marks) (10)
- 4)
  - a) Write a note on BIS and Agmark. (4 marks)
  - b) Discuss the principle and procedure involved in the determination of monosodium glutamate and saccharine in food (6 marks) (10)
- 5)
  - a) What is fermentation? How will you analyse a given sample of wine? Explain in detail. (5 marks)
  - b) How will you prepare a sample of ice cream and determine the total solids and weight per unit volume? (5 marks) (10)

### SECTION - B

**Answer all the questions.**

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

- 6) How will you detect and quantify the following adulterants in milk? i) cane sugar ii) starch (5)
- 7) Explain caramelisation of sugars , Millard Reaction and gelatinization of starch. (5)
- 8) With a neat diagram explain the pesticide cycle. (5)
- 9) Write the methods used for detection of benzoic acid, sulphur dioxide and salicylic acid as preservative in food products. (5)
- 10) 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)

-----End-----