

Exam Date & Time: 07-Dec-2018 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

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

Specialization – Pharmaceutical Analysis

Date : 07-12-2018

Food Analysis [PCH-MPA104T]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

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

- 1)
 - a) Write the principle and procedure involved in the microbiological assay of folic acid (5)
 - b) Discuss the principle and procedure involved in any two non-solvent wet extraction method for milk fat determination (5)

(10)
- 2)
 - a) Explain the method used for determination of iodine value, saponification value of oils/fats. Add a note on their significance. (6)
 - b) Discuss the principle and method involved in the determination of Hexanal and TBARS for assessing lipid oxidation of given fat or oil. (4)

(10)
- 3)
 - a) Write the principle and procedure involved in the assay of vitamin-C in fruit juice with chemical reactions. (5)
 - b) What are the reasons for adding colour additives in food products? How food colours are classified and add note on determination of synthetic food colours (5)

(10)
- 4) Explain the methods of determination of methanol, higher alcohol and total aldehyde in spirits (10)
- 5) Enlist the various methods of analysis of proteins. Explain the principle and procedure involved in Kjeldahl method and Ninhydrin method. (10)

SECTION - B

Answer all the questions.

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

- 6) Write the methods used for detection and estimation any one preservative used in food products (5)
- 7) Explain the following (5)
 - i) Caramelisation ii) Millard Reaction iii) Gelatinization iv) Retrogradation
- 8) Explain the method of determination of total solids in the ice cream and total ash on (5)

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dry basis in milk powder

- 9) Explain the method of determination of salt content in Butter (5)
- 10) What are pests? Discuss the effect of pests on various food. Explain the pesticide cycle (5)

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