

# Question Paper

Exam Date & Time: 04-Dec-2017 (02:00 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

### MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES END SEMESTER THEORY EXAMINATIONS - NOVEMBER 2017

PROGRAM : MPHARM SEMESTER I

DATE : 04-12-2017

TIME : 2:00PM - 5:00PM

Food Analysis [PCH-MPA104T]

Marks: 50

Duration: 180 mins.

**Answer all the questions.**

**Answer the following (5 marks x 8 = 40 marks)**

- 1) Explain the method used for determination of, iodine value and saponification value of oils/fats and add a note on their significance. (5)
- 2) A. Write the principle and procedure involved in the bioassay of Vitamin D. (5)  
B. Discuss the methods used for the detection of any two natural colours in food.  
(3+2=5)
- 3) Classify the methods used for assay of vitamins. Write the principle and procedure involved in the microbiological assay of Vitamin B2. (5)
- 4) A. Discuss the methods involved in the extraction, qualitative and quantitative analysis of any two antioxidants present in oils or fats. (5)  
B. Write the molybdate test for detection of castor oil in other oils.  
(4+1=5)
- 5) Explain the method of determination of salt content in butter. (5)
- 6) Explain the methods of analysis of vinegar. (5)
- 7) Write the principle and procedure involved in the Biuret method. (5)  
What are the advantages and disadvantages?

- 8) Explain the method of determination of organophosphorus pesticide residues in food grains. (5)

**Answer the following with specific answers (2 marks x 5 = 10 marks)**

- 9) Write the ferric chloride test and modified Mohler's test used for identification of benzoic acid in food. (2)
- A)
- B) Discuss the method used for estimation of MSG in food. (2)
- C) How will you detect the presence of ammonium compounds in milk? (2)
- D) What is gelatinization and retrogradation of starch? Explain. (2)
- E) How will you determine total ash on dry basis in milk powder? (2)

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