

B. Voc. (Food Processing and Preservation)
Third Semester
FPP-304: Food Analysis: Tools and Techniques

Time allowed: 3 Hours

Max. Marks: 40

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.

x-x-x

I. Answer the following:-

- a) What are qualitative methods used to isolate pathogenic microorganisms?
- b) Give importance of moisture in food items.
- c) Mention two important differences between Paper and thin layer chromatography.
- d) What is bright field and dark field microscopy?
- e) Explain principle of electrophoresis.
- f) Give principle of centrifugation.
- g) Mention the use of gas chromatography in food analysis.
- h) What is ELISA? (8x1)

UNIT - I

II. Explain the analytical methods for estimation of moisture and ash content in foods. (8)

III. Write short note on following:-

- a) Colour measurement in different food types and their nutritional importance
- b) Direct methods of microbial enumeration (4,4)

UNIT - II

IV. Discuss principle and various applications of gel filtration chromatography. (8)

- V. a) Differentiate between scanning electron microscope and transmission electron microscope.
- b) Discuss the applications of ion exchange chromatography (4,4)

UNIT -III

VI. Discuss in detail the applications of radiation in food analysis. (8)

P.T.O.

(2)

- VII. Explain the role in centrifugation in detection of food constituents and contaminants packaged foods (8)

UNIT - IV

- VIII. Write short note on:-

- a) HPLC
- b) Atomic absorption spectroscopy (4,4)

- IX. Explain the working principle of the following techniques:-

- a) GC-MS
- b) RT-PCR (4,4)

x-x-x