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FNS 454

II Semester M.Sc. Degree (CBCS) Examination, September/October 2022
FOOD SCIENCE AND NUTRITION
Analytical Techniques in Food Science

Time : 3 Hours

Max. Marks : 70

1. Write short notes on **any five** of the following (**not** exceeding **2** pages **each**) :
(5×3=15)
 - a) NMR.
 - b) Radiation sources.
 - c) Phenol's compounds.
 - d) Enzymes.
 - e) Antibiotics.
 - f) Analysis of ash content.
 - g) Vitamins.
 - h) TLC.
2. Write explanatory notes on **any five** of the following (**not** exceeding **3** pages **each**).
(5×5=25)
 - a) Principle and working of Gel filtration chromatography.
 - b) Scintillation counter.
 - c) UV-Visible spectrophotometer.
 - d) Isolation of enzymes.
 - e) How is PCR condition optimized suitable for food analysis ?
 - f) Enlist the criteria for enzyme purification.
 - g) Analysis of anti nutritional factors.
 - h) Significance and quantitation of organic acids in food.
3. Answer **any three** of the following (**not** exceeding **5** pages **each**).
(3×10=30)
 - a) With suitable example, elaborate how immunological techniques be used in food technology.
 - b) Elaborate on the application of HPLC in food industry.
 - c) Discuss in detail about the estimation of secondary metabolites in food.
 - d) PCR is a powerful tool in food safety. Justify.
 - e) Give a detailed account of G M Counter. Add a note on its applications.