Reg. No. | | | | | | | | | |

**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.

———————