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24-CH-44-A

**M.Sc. IV SEMESTER [MAIN/ATKT] EXAMINATION
JUNE - JULY 2024**

CHEMISTRY
Paper - IV
[Analytical Chemistry]

*[Max. Marks : 75]**[Time : 3:00 Hrs.]**[Min. Marks : 26]*

Note : Candidate should write his/her Roll Number at the prescribed space on the question paper.
Student should not write anything on question paper.
Attempt five questions. Each question carries an internal choice.
Each question carries **15 marks**.

Q. 1 Write detail note on Gravimetric Techniques.

OR

- a) Define the terms accuracy and precision with example.
- b) Describe determinate and indeterminate errors with example.

Q. 2 a) Describe the Hot plate method for determination of moisture in food sample.

- b) Write the test of protein and discuss the method to determine the percentage of protein in food products.

OR

Describe the experimental techniques to analyze organophosphates by HPLC in food products.

Q. 3 Discuss the following parameter for water analysis -

- i) Turbidity.
- ii) Hardness.
- iii) Acidity.

OR

- a) Discuss the Heavy Metal Pollution.
- b) Describe the Winkler method to determination of dissolved oxygen in water sample.

Q. 4 Explain the method of analysis of pH and total Nitrogen in Soil Sample.

P.T.O.

OR

- a) Discuss the ultimate and proximate analysis.
- b) Define calorific values of a fuel and differentiate net and gross calorific values.

Q. 5 a) Write short note on RIA (Radio Immuno Assay).

- b) How will you estimate blood glucose in blood sample and write clinical interpretation.

OR

- a) Write the classification of drugs.
- b) How will you scan a drug containing blood sample by Gas Chromatography.

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