

1422

Univ. 501

2011

3011E245

M.Sc. Sem.-III Examination

Paper-Che-501

Industrial Analytical Chemistry

Candidate's Seat No. 437

Time : 3 Hours]

Instruction : (1) All questions are compulsory

[Max. Marks : 70

1 Answer any two of following :

- (a) Compare and discuss batch and continuous mode in automated analyzers. 14
- (b) Discuss the application of FLA in the determination of chloride and phosphate.
- (c) Describe the process of gradient flow injection analysis
- (d) State and explain the principle and importance of FLA

2 Answer any two of following :

- (a) Discuss methods to determine moisture in food samples. 14
- (b) Describe methods to determine water soluble vitamins.
- (c) How will you determine protein content of food samples.
- (d) Discuss any three methods for adulteration fats and oils.

3 State the category, properties and methods to analyze any two drugs.

- (a) Tamoxifen
- (b) Proguanil
- (c) Ciprofloxacin
- (d) Zidovudine.

4 Answer any two of following :

- (a) Describe methods to determine organochlorine pesticides. 14
- (b) What are fertilizers? Give their classification
- (c) Discuss the classification of soaps and detergents with suitable examples
- (d) Write a brief note on ill effects of fertilizers.

5 Answer in brief : (one mark each)

- (1) State the importance of bypass in FIA instrumentation. ✓
- (2) Give two examples of detergents. ✓
- (3) State two limitations of using air bubbles in segmented flow approach. ✓
- (4) What is the relation between molecular mass and saponification value? ✓
- (5) Give two points of difference between FIA and HPLC. ✓
- (6) What do you understand by feedback mechanism? ✓
- (7) State the principle of fluding (the polenski value of oil or fat. ✓
- (8) How can you achieve segmentation in a continuous flowing stream? ✓
- (9) What does a high value for iodine value indicate? ✓
- (10) Name two organophosphorous pesticides. ✓
- (11) Name two organizations which provide official methods for analysis of food samples. ✓
- (12) Distinguish between a drug and its formulation. ✓
- (13) Name the category to which these drugs (i) Ritonavir (ii) Metformin. ✓
- (14) State two important points which are mandatory for nutritional labeling. ✓