

B

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**M.Sc. (Applied Chemistry) (Semester-IV)  
EXAMINATION, 2016**

Nineteenth Paper

**CHEMICAL ANALYSIS**

Time allowed : Three hours

Maximum marks : 40

Part-A (Compulsory) {Marks : 8}

*Answer all eight questions (20 words each). Each question carries equal marks.*

Part-B (Compulsory) {Marks : 8}

*Answer all four questions (50 words each). Each question carries equal marks.*

Part-C {Marks : 24}

*Answer any three questions (100 words each), selecting one from each unit. Each question carries equal marks.*

1. What do you mean by crude protein ?
2. Define fire point of fuel.
3. Define acid value of a lubricant.
4. Write down the examples of solid, liquid and gaseous fossil fuels (one for each).
5. Give two boiler problem.
6. Differentiate between octane and cetane number.
7. What do you mean by fastness property of a dye ?
8. Write some common adulterants in spices.

Part-B (Compulsory)

4×2

9. Write a method for determination of ash content in food.
10. What is calorific value and how it is determined ?

11. Give classification of lubricants.

<https://universitynews.in/>

12. Write short note on water as engineering material.

Part-C

Unit-I

13. Explain the pesticide analysis in food products. 8

14. How can TLC is used for identification of chlorinated pesticides in food products? 8

Unit-II

15. Write short notes on :

(i) Producer gas and water gas

(ii) Grading of coal 4+4

16. Explain ultimate and proximate analysis of coal. 8

Unit-III

17. Write short notes on :

(i) Treatment of water for steam generation

(ii) Testing the effect of light on dye 4+4

18. Explain properties, physico-chemical analysis and testing of lubricant with special reference to iodine value and saponification value. 8