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

Paper-M3AC-13-CC-11

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 (400 words each), selecting one question from each unit. Each question carries equal marks.

1. ✓ What is crude protein ?
2. ✓ What test is done for the check of adulteration of silver foil ?

3. Define cetane number ?

4. Give constitution of water gas.

5. What is flash point ?

6. Define iodine value of a lubricant.

7. What is the difference between flash point and ignition temperature ?

8. Define crude fibre.

Part-B (Compulsory)

9. What are fossil fuels ? Classify them.

10. What are carbohydrates ? Why are they essential in our food ?

11. Write the principle for gas chromatographic analysis of organophosphate analysis.

12. Classify lubricants and define saponification value.

Part-C

Unit-I

13. How chlorinated pesticides are analysed in food products using thin layer chromatography? Describe.

Or

14. What is adulterated food? Discuss the methods used for the check of adulteration in mustard seeds, tea leaves, and milk. <https://www.mdsuonline.com>

Unit-II

15. What are the methods used for analysis of coal and how grading of coal is done?

Or

16. What is calorific value of fuel and how it can be determined by solid and liquid fuel using Bomb calorimeter?

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17. Discuss the effect of light and washing agents on fastness properties of a reactive dyed cotton fabric.

Or

18. What is boiler feed water? Discuss the treatment of boiler feed water.