C. ABDUL HAKEEM COLLEGE (AUTONOMOUS), MELVISHARAM - 632 509. SEMESTER EXAMINATIONS, NOVEMBER - 2018

B.Sc., CHEMISTRY SEMESTER III U15MCH301 – GENERAL CHEMISTRY - III

Time: Three Hours Maximum: 75 Marks

SECTION - A $(10 \times 2 = 20 \text{ Marks})$

Answer **ALL** Questions.

- Define common ion effect.
- 2. State the spot test for Aluminium and Nickel.
- 3. Define Catenation.
- 4. What do you mean by anomalous behavior of oxygen?
- 5. State Huckel's rule.
- 6. Give the effect of leaving group on SN¹ reaction.
- 7. Define ortho/para ratio.
- 8. What do you mean by elimination reaction?
- Define efficiency
- 10. Mention the need for second law of thermodynamics.

SECTION - B (5 X 5 = 25 Marks)

Answer ALL Questions.

11. a) Explain the application of solubility product in qualitative analysis

(Or

b) Discuss the use of Alizarin and DMG as spot test reagents

- 12. a) Discuss the chemistry of chlorides of phosphorous.
- b) Discuss the methods of manufacture of any one oxy acids of nitrogen.

(Or.)

13. a) Write down the mechanism of nitration of benzene.

Q.

- b) Explain the modern theory of aromaticity
- 14. a) Explain Hoffmann elimination reaction with specific example.

(Or.)

- b) Discuss the effect of orientation.
- 15. a) Enumerate and explain the various statements of second law of thermodynamics.

(Or

b) Discuss about Randomness and entropy

SECTION - C $(3 \times 10 = 30 \text{ Marks})$

Answer ANY THREE Questions

- Discuss the use of sodium carbonate extract in qualitative analysis.
- 17. Give a brief account of comparative study of V group elements
- 18. Discuss the mechanism of SN¹ and SN²reactions
- Discuss the mechanism of elimination reaction with suitable examples.
- 20. Entropy the change for a) reversible and b) Irreversible process.

R18627 R18627