



# THE AMERICAN COLLEGE, MADURAI

(An Autonomous Institution Affiliated to Madurai Kamaraj University)

Re-accredited (2<sup>nd</sup> Cycle) by NAAC with Grade "A", CGPA – 3.46 on a 4-point scale

## Backlog Arrear Examination, March 2021

CHE 2422

ORGANIC & INORGANIC CHEMISTRY-II

Marks: 75

Answer ANY FIVE questions

5 x 15 = 75

- (a) Give mechanism for the reaction of methyl bromide with aqueous NaOH to form methyl alcohol. (7)

(b) Explain the benzyne mechanism of aromatic nucleophilic substitution in chlorobenzene. (8)
- (a) How will you synthesize propanol from propene. (5)

(b) Discuss pinacol-pinacolone rearrangement (5)

(c) Explain the Williamson's synthesis (5)
- Discuss the following with mechanism.

  - Fries rearrangement (5)
  - Claisen rearrangement (5)
  - Reimer-Tiemann reaction (5)
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- (a) Discuss the liquid drop nuclear model. (10)

(b) Write the applications of radioactivity (5)
- (a) Draw and explain the structure of SF<sub>6</sub>. (5)

(b) Draw and explain the structures of XeOF<sub>2</sub> and XeF<sub>6</sub> (10)
- (a) Illustrate the oxidising action of fluorine and I<sub>2</sub>O<sub>5</sub>. (5)

(b) Why HF is not stored in glass bottles? (5)

(c) Draw the structure of ClO<sub>2</sub> and explain. (5)
- (a) Write the synthesis and applications of DDT and BHC (8)

(b) Explain interhalogens and pseudohalogens with examples. (7)