



# 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

PGC 5521/5501

ADVANCED ORGANIC CHEMISTRY-III

Max: 75mks

Time: 3hrs

Answer any FIVE questions only:

(5x15=75)

1. Explain the synthetic utility of the following reagents: a) Wacker's reagent b) DMSO c) Lemieux-Johnson reagent d) Ders-Martin reagent
2. a) What is hydrogenolysis? Explain it with two different examples  
b) Describe the reduction of Baker's yeast
3. By means of a correlation approach, explain cyclisation of 1,3,5-hexatriene under thermal and photochemical conditions
4. Discuss the scope and limitation of di- $\pi$ -methane rearrangement
5. Explain the synthetic applications of a) organozinc b) organo cadmium c) organo palladium reagents
6. Describe the following: a) Barton reaction b) aza-cope rearrangement c) fluxional tautomerism
7. With examples explain a) Norrish Type I b) Norrish Type II c) Baterno Buchi reaction

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