

THE AMERICAN COLLEGE, MADURAI

(An Autonomous Institution Affiliated to Madurai Kamaraj University) Re-accredited (2nd Cycle) by NAAC with Grade "A", CGPA – 3.46 on a 4-point scale

Backlog Arrear Examination, March 2021

Time: 3 Hrs

[7]

Answer any FIVE questions 5 x 15=75

- 1. Draw and explain Bomb calorimeter.
- 2. What is enzyme catalysis? Drive Michaelis Menton equation and write its applications.
- Discuss the instrumentation method, principle and applications of UV spectroscopy with neat diagram.
- 4. Describe the determination of optical activity of a compound with polarimeter.
- 5. Write a short note on (i) HSAB principle (ii) Arrhenius theory.
- 6. Derive Kirchoff's equation.
- 7. (a) What is finger print region? Give its significance.
 - (b) Write a note on various molecular IR vibrations. [8]