



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

BCH 2631

Metabolism

Max Marks: 75

Time: 3 Hrs.

PART A

I. Answer any Five questions each not exceeding 4 pages: (5 x 15 = 75)

1. Define cellular respiration. Explain the 4 complex of ETC with suitable structures.
2. Describe the reactions and energetics of Krebs's cycle.
3. Discuss the metabolism of glutamic acid and explain the 5 reactions of urea cycle.
4. What is Palmitic acid? Describe in detail the biosynthesis of fatty acids by the fatty acidsynthase complex.
5. Write the structure of purines. Explain in detail the DeNovo synthesis of purine nucleotides.
6. Define Glycolysis. Describe in detail the 10 steps involved in the breakdown of a glucose molecule to Pyruvate. Add a note on the total number of ATP produced in Glycolysis (stepwise).
7. What is Carnitine? Explain in detail the β – oxidation of long chain fatty acids in mitochondria. Add a note on the role of carnitine