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

Course Code: BIT 1406   **Time: 3 hours**

Course Title: Data Structures using C   **Max. Marks: 75**

Answer any five questions   **(5*15=75 marks)**

1. Define array and elucidate the various types of arrays with suitable example.

2. Expound the basic operations of a stack. Write a C program to implement the stack.

3. Discuss about the types of queues.

4. Explain the operations of doubly linked list with examples.

5. Elucidate the various types of binary trees. Discuss in detail about the Binary search algorithm with an example.

6. Describe sorting. Illustrate merge sort with suitable example.

7. Write the steps to convert the infix expression into postfix expression using stack and convert the following expression into postfix expression.

    A*B+C^D -E

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