Subject Code: MC1311/R13

M C A - I Semester Regular/Supply Examinations, Dec/Jan – 2015-16
C PROGRAMMING AND DATA STRUCTURES

Time: 3 hours   Max Marks: 60

Answer any **FIVE** of the following
All questions carry equal marks.
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1. (a) Compare and contrast between if-else and switch –case statements
    (b) Write a program to compute roots of quadratic equation using switch-case statement.

2. (a) What are loops in C? Explain with aid of examples.
    (b) What is string? Explain about string manipulation functions.

3. (a) Explain various parameter passing mechanisms.
    (b) What is a pointer? Explain dynamic memory management.

4. Demonstrate how you use
    (a) Nested structures
    (b) Array of structures
    (c) Unions

5. (a) Write an algorithm for linear search.
    (b) Write an algorithm for merge sort.

6. (a) Explain about stacks and queues.
    (b) Explain infix to post fix conversion with an example.

7. (a) What is breadth first search? Explain.
    (b) Discuss about Dijkstra algorithm.

8. (a) Explainoperator's precedence and order of evaluation.
    (b) What is an array? What are different types of arrays and how they are represented?
    (c) Explainabout recursive functions.
    (d) What is file? What are different types of file operations?
    (e) What is graph? Explain graph terminology.
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