B.Tech I Year (R09) Supplementary Examinations December/January 2014/2015 **PROGRAMMING IN C AND DATA STRUCTURES**

(Common to all branches)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions All questions carry equal marks

- 1 (a) Explain three categories of statements for algorithm development.
 - (b) What is a flow chart? How the flow chart is different from an algorithm?
- 2 What is an operator? Explain different operators in C.
- 3 (a) Write a program to find the sum of all elements of odd index in the array.
 - (b) Distinguish between the following:(i) Actual and formal arguments.(ii) Global and local variables.
- 4 (a) What is pointer to a pointer? What is a void pointer? Explain with example.
 - (b) Write a program to add two matrices using pointers.
- 5 (a) What is slack byte? Explain with example.
 - (b) Which can be used for the better memory utilization for storing the data? Give the general syntax for it.
- 6 Explain about:
 - (a) Sequential file.
 - (b) Random access file.
 - (c) fseek.
- 7 (a) Explain the various operations on stack.
 - (b) Write a program to implement stack using arrays.
- 8 (a) Write a program to demonstrate binary search using arrays.
 - (b) Differentiate binary and linear search techniques.
