

R09**Code: 9A05101**

B.Tech I Year (R09) Supplementary Examinations June 2016

PROGRAMMING IN C & DATA STRUCTURES

(Common to all branches)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

- 1 (a) What is a flow chart? Explain with example.
(b) Draw the flow charts for two alternative decisions and multiple alternative decisions.
- 2 (a) Write the syntax for conditional operator in C? Write program which illustrates the conditional operator.
(b) What are arithmetic operators in C? Explain with examples.
- 3 Write a C program to find the average marks obtained by the students whose average is more than class average.
- 4 (a) Explain the purpose of malloc () with an example.
(b) Explain the purpose of calloc () with an example.
(c) What is the difference between malloc () and calloc ()?
- 5 (a) Write a program in C to declare a pointer as a structure member and displaying the contents of the structure.
(b) How to pass the member of a structure to a function as an argument? Give an example.
- 6 (a) List the applications of command line arguments.
(b) Write a program that detects an error when read operation is done after the end of file is reached.
- 7 (a) Write a program to count the total nodes of the Singly linked list.
(b) Explain the procedure to insert a node at a given position in a singly linked list.
- 8 (a) Discuss the algorithm of quick sort with an example. Give its time complexity.
(b) What is called as external sorting technique? Discuss merge sort algorithmic technique with an example.
