

Code: R7100106

R7

B.Tech I Year (R07) Supplementary Examinations, December 2012

C PROGRAMMING AND DATA STRUCTURES

(Common to CE, EEE, ECE, CSE, EIE, IT, E.Con.E, CSS, ECC and BT)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Name and describe the form basic data types in C.
(b) What is type conversion? Explain the rules for type conversion with examples.
(c) Describe conditional operators with example.
- 2 (a) Explain the form storage classes in 'C'.
(b) Write a 'C' program to swap two numbers using functions.
- 3 (a) What are multidimensional arrays? Explain how they are declared and initialized.
(b) Write a program to sort elements in an array using pointers.
- 4 (a) How is an array of structures initialized?
(b) Write a brief note on bit fields.
(c) How can an entire structure be passed to a function?
- 5 (a) What is a file? Describe the various types of files.
(b) Write a C program to copy the contents of one file to another.
- 6 (a) Write an algorithm for binary search and example.
(b) Illustrate the working of merge sort with an example.
- 7 (a) What is a data structure? Describe the hyper of data structures.
(b) Write a 'C' program to convert infix expression into postfix expression.
- 8 What is a graph? How is it represented in memory? Explain the two graph traversal techniques in detail.
