

B.Tech I Year (R13) Supplementary Examinations December 2017

PROGRAMMING IN C & DATA STRUCTURES

(Common to CE, ME, EEE, ECE, EIE & IT)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) What are the steps involved in software development life cycle?
 - (b) What is a computer and describe its characteristics?
 - (c) Explain identifiers in C language.
 - (d) Explain nested if and switch statement syntax.
 - (e) What are the different command line parameters?
 - (f) List out the advantages and disadvantages of singly linked list.
 - (g) What are the different types of data structures?
 - (h) What are the main objectives of functions?
 - (i) Explain fundamentals of pointers.
 - (j) What is the difference between structure and union?

PART – B
(Answer all five units, 5 X 10 = 50 Marks)**UNIT – I**

- 2 Explain the working of assignment operator, unary and ternary operator with example.

OR

- 3 How algorithm is different from flowchart? Write an algorithm and draw flowchart for finding greatest among three given numbers.

UNIT – II

- 4 (a) What do you mean by functions? Give the structure of the functions and explain about the arguments and their return values.
(b) Write a C program that uses a function to sort an array of integers.

OR

- 5 Explain different types of error diagnostics and debugging techniques.

UNIT – III

- 6 Write about different types of storage classes with appropriate syntax and examples.

OR

- 7 Explain about file handling functions. Write the syntax for opening a file with various modes and closing a file with an example.

UNIT – IV

- 8 (a) Explain the process of declaring and initializing pointers. Give an example.
(b) Write a C program that uses a pointer as a function argument.

OR

- 9 (a) Define structure and write the general format for declaring and accessing members.
(b) Write a program to store and print name, address, roll no using structures.

UNIT – V

- 10 What is a stack? Explain two different representations of a stack. List the operations performed on a stack and write functions for implementing these operations.

OR

- 11 (a) Write the algorithm for evaluation of postfix expression.
(b) Evaluate the following postfix expression:

752 + * 415 -/-
