

R09

Code No: 51006

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech I Year Examinations, October/November - 2020

COMPUTER PROGRAMMING AND DATA STRUCTURES

(Common to CE, EEE, ME, ECE, CSE, EIE, IT, AE, BT, AME, MIE)

Time: 2 hours

Max. Marks: 75

**Answer any five questions
All questions carry equal marks**

- 1.a) What are the different steps followed in the program development?
- b) Draw a flow chart to read ten integer values and print the sum of the prime numbers in the input. [7+8]
2. Explain the various types of operators available in C with example and write preceding of operators. [15]
- 3.a) What is recursion? Write a C program that reads a positive integer N, compute the factorial of that number using recursion.
- b) What are Storage classes? Explain different types of Storage Classes. [7+8]
- 4.a) What is pointer? What is pointer to pointer? Explain with suitable example.
- b) Explain pointer to structure in detail. [7+8]
- 5.a) Explain array of structure with example.
- b) Explain Nested structure with example. [7+8]
- 6.a) Write a C program for finding the number of words in the given text file. Assume that the words are separated by blanks or tabs.
- b) Write a C program to merge the contents of two given files. [7+8]
7. Write a C program for insertion sort and explain with an example. [15]
8. Explain infix to post fix conversion with an example. And write a C program to convert an infix expression to postfix expression. [15]

---ooOoo---