

B.E. (Information Technology) Third Semester (C.B.S.)
Programming Logic & Design Using C Paper - II

P. Pages : 2

Time : Three Hours



TKN/KS/16/7331

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Assume suitable data whenever necessary.
 9. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What is Algorithm and flow chart? Explain various symbols used in flowchart. Also write algorithm and draw flowchart for checking whether the entered number is prime or not. 8
- b) Discuss the difference between the following with suitable example. 6
- i) For and while loop.
 - ii) Break and continue statement.

OR

2. a) What are the various salient features of an algorithm. Also write an algorithm to find roots of quadratic equation considering all types of roots. 8
- b) Explain different types of 'C' Tokens used in 'C' language and also explain different sections involved in basic structure of any C program. 6
3. a) What is a function? What are the different types of functions? Write a C program using function to find the factorial of given number. 7
- b) Write a C program to Implement bubble sort for a given set of 5 array elements. Also show the various steps during sorting. 6

OR

4. a) What is recursion? Write a C program using recursion to find the factorial of given number. 8
- b) Write a C program to print sum of diagonal element of a inputted 3 x 3 matrix. 5
5. a) Write a program using C to copy contents of one string into another without using any standard library function. 5
- b) Declare a structure of an Employee and accept 10 elements from user having fields. Emp_id, Emp_name, Emp_dept, Emp_basic, Emp_gross. 8
- Find the gross salary of an individual employee using formula gross salary = HRA + DA. Where HRA is 20% of basic salary and DA is 90% of basic salary.

OR

6. a) Write a program to check whether entered string is palindrome or not without using standard Library functions. 5
- b) Differentiate between structure and union. 4
- c) With the help of example explain the concept of Union in 'C'. 4
7. a) Write a program to create two text files namely ABC. TXT and XYZ. TXT and merge the contents of these files into third file PQR. TXT. 8
- b) Explain the following file handling functions. 5
- i) fscanf () ii) fseek ()
- iii) fread () iv) fprintf ()
- v) fwrite ()

OR

8. a) Explain different file opening modes with example. 3
- b) Explain what are command line arguments and illustrate with any example. 5
- c) What are the bitwise operators available in 'C'? Explain in detail. 5
9. a) Explain the following graphics functions with correct syntax and example. 6
- i) initgraph () ii) arc ()
- iii) ellipse () iv) flood fill ()
- v) set text style () vi) set palette ()
- b) Explain malloc (), calloc (), realloc () with example. 7

OR

10. a) Write a program to generate concentric circles from the centre of screen and fill them with different colors. 8
- b) Write a short note on dynamic memory allocation. 5
11. a) Explain in detail elementary TSR's with example. 7
- b) Explain different types of pointers. 7

OR

12. a) Write short note on ROM-BIOS function. 7
- b) Explain NULL pointer in detail with suitable example. 7
