

**B.E. (Information Technology) Third Semester (CBS)**  
**Programming Logic & Design Using C**

P. Pages : 2

Time : Three Hours



AHK/KW/19/2092

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. Due credit will be given to neatness and adequate dimensions.
  9. Assume suitable data whenever necessary.
  10. Illustrate your answers whenever necessary with the help of neat sketches.
  11. Use of non programmable calculator is permitted.

1. a) What is Algorithm and flowchart? Explain various symbols used in flowchart. 7
- b) Write a program in 'C' for displaying number of days in a month using switch statement. 6

**OR**

2. a) Explain different types of 'C' Tokens used in 'C' language and also explain different section involved in basic structure of any C program. 7
- b) Discuss the difference between the following with suitable example. 6
- i) for and while loop
- ii) Break and continue statement
3. a) What do you mean by array? Why array are used? How array elements are accessed? 6
- b) What is recursion? Write a 'C' program using recursion to find the factorial of given number. 7

**OR**

4. a) Explain storage classes in 'C' with suitable examples. 8
- b) Write a 'C' program to implement bubble sort for a given set of 5 array elements. 5
5. a) Explain structure and union with the help of suitable example. 7
- b) Explain standard string functions. 6
- i) Strcmp ( )
- ii) Strlwr ( )
- iii) Strrev ( )

**OR**

6. a) A blood bank stores the information about the donors as follows : Name, address, Age, Weight, Gender, blood group and contact no. Write a 'C' program using structure for accepting records of 20 donors and display the details of donors with age less than 30 and blood group equals to 'O' in the list of 20 donors. 7

b) Write the different preprocessor directives used in 'C'. Explain any one. 3

c) Write short note on command line argument. 3

7. a) Write down the purpose of following function 7

- i) fseek ( )                      ii) fopen ( )
- iii) rewind ( )                      iv) fprintf ( )

b) Write a 'C' program to count the number of characters and number of lines from input file. 7

OR

8. a) Write a program to merge two files and get the contents into a new file. 7

b) Explain the following : 7

- i) Bitwise operator
- ii) Modes of file
- iii) Typedef

9. a) Explain various functions used for dynamic memory allocation in 'C'. 7

b) Write a program to generate concentric circles from the centre of screen and fill them with different colors. 7

OR

10. a) Explain following graphics functions 10

- i) Initgraph ( )
- ii) Outtext xy ( )
- iii) Polygon ( )
- iv) Putimage ( )
- v) Imagesize ( )

b) What is difference between static & dynamic memory allocation? 4

11. a) Explain in detail with examples of elementary TSR's. 7

b) Write and explain different ROM – BIOS function. 6

OR

12. a) Explain the concept of terminate and stay resident. 7

b) Explain different types of pointers. 6

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