B.E. (Computer Technology) Third Semester (C.B.S.)

Program Logic Design in C Paper - II

P. Pages : 2 **TKN/KS/16/7321**

Time : Three Hours * 1 0 9 0 * 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.

1. a) Write a C program to find largest and smallest among all elements of 2-D array. **6**

b) What is the need of array? How do elements get stored in one dimensional array and two dimensional array of integers? Draw memory map for each of them. **7**

OR

2. a) Define a structure called cricket game that stores the following information :- **8**
Player-name
team-name
batting-average
Player-age.
Using 'cricket-game' declare an array 'player' with 100 elements and write a program to read information about all the 100 players and display a team-wise list containing names of players with their batting average and age.

b) What are the different string handling functions. **5**

3. a) Write a program to read the contents of file 'xyz.txt' and display it on the console. **6**

b) Explain the following functions with suitable example. **8**
i) fseek ( ) ii) fscanf ( )
iii) ftell ( ) iv) fprintf ( )

OR

4. a) Explain the difference between binary file and text file. **3**

b) Write a C program to create a text file 'student.txt. The file should contain records of students. Each record of student must have rollno, name and total marks. **8**

c) Write different file opening models. **3**

5. a) Write a program which shows the use of pointer operator. **4**

b) Write a program using pointer to reverse a string without using string handling function. **6**

c) Explain pointers within structure. **3**

OR

6. a) Explain the purpose of following functions: **8**

i) calloc ( ) ii) malloc ( )
iii) realloc ( ) iv) free ( )

b) Write a function which returns a pointer. Also, explain its significance. **5**

7. a) Write a program to draw the pentagon and fill it with different colors, every time a key is pressed. Program should terminate, when escape key is pressed. **8**

b) Explain in detail initgraph ( ). What are graphics drivers and modes? **6**

OR

8. a) Write a program to generate a line in different style. **6**

b) Explain the following. **8**

i) putimage ( ) ii) putpixel ( )
iii) moveto ( ) iv) arc ( )

9. a) Explain basic model of computation. **7**

b) Explain correctness and efficiency issues in programming. **6**

OR

10. a) Explain principle of mathematical induction with example. **7**

b) What is complexity? Explain time and space measures. **6**

11. a) What are the basics of imperative style programming. **7**

b) Explain in brief: **6**

i) Top-down design.
ii) Bottom-up design.

OR

12. a) What is object orient programming. Explain its different features. **8**

b) What is assertions and loop invariants. **5**

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