

**2019**

Full Marks - 40

Time - 3 hours

The questions are of equal value

Answer *all* questions

1. a) What is structured programming ?  
b) Write a C program to find the largest among two numbers using conditional operator.  
c) What are the limitations of array ?  
d) Give an example of structure inside another structure.
  
2. a) What is an Operating System ? Explain the different types of operating system.

OR

- b) What is the difference between a flow chart and an algorithm ? Draw a flow chart to find the largest among three numbers and convert it to the algorithm.
  
3. a) Explain different types of operators used in C with suitable example.

OR

[ 2 ]

- b) Write the syntax of while and do while loop. Write a program to print the multiplication table displayed in following form.

$$2 * 1 = 2$$

$$2 * 2 = 4$$

.....

4. a) What do you mean by Array ? Explain with suitable diagram that, how the array variables are stored in memory ? Write a program in C to add two 2 dimensional matrices.

OR

- b) Explain about different parameter passing mechanisms in function with suitable example.
5. a) Explain the different file operations that can be performed on files. How to read from and write to a file ? Explain with examples.

OR

- b) Write a function that compares two given dates. To store a date use a structure that contains 3 members namely day, month and year. If the dates are equal the function should return 0, otherwise it should return 1.