

**April 2018**

Time – Three hours  
(Maximum Marks: 75)

[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory.  
Answer any FOUR questions from the remaining in each PART – A  
and PART – B

(2) Answer division (a) or division (b) of each question in PART – C.

(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and  
10 marks in PART – C.]

PART – A

1. Define algorithm.
2. List the data type qualifiers available in C.
3. Differentiate *while* and *do..while* statements.
4. List any two mathematical functions available in C
5. What is union? Give an example.
6. Define file and list file operations.
7. List the functions used in dynamic memory allocation.
8. How a pointer variable is defined and declared?

PART – B

9. Draw the flow chart to calculate area of a rectangle.
10. Explain conditional operator with an example.
11. How to declare and initialise a 2-D array?
12. Explain the syntax of *setcolor()*.
13. Explain file inclusion directive with an example.
14. Explain the syntax of *calloc()* function with an example.
15. Explain *fprint()* with an example.
16. How pointer to a structure variable is declared? Explain.

PART – C

17. (a) Discuss the execution process of a 'C' program with a flow chart.  
(Or)  
(b) Explain the evaluation of an arithmetic expression with an example.
18. (a) Write a 'C' program to print months of a year using *switch...case* expression. (if input=1, output=JANUARY, if input=2, output=FEBRURAY,...)  
(Or)  
(b) Write a 'C' program to add two 2x2 matrices.
19. (a) Explain the character oriented functions available in 'C'.  
(Or)  
(b) Explain the two types of function call:  
(i) Call by value (ii) Call by reference.
20. (a) Write a 'C' program,  
(i) To display the contents of an array using pointer.  
(ii) To add the contents of an array using pointer.  
(Or)  
(b) Write short notes on:  
(i) Static memory allocation.  
(ii) Dynamic memory allocation.
21. (a) Discuss the input and output functions on files.  
(Or)  
(b) Write a 'C' program to subtract two numbers using command line arguments.

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