



TKN/KS/16-5778

First Semester B. Sc. Examination

COMPUTER SCIENCE

Paper - I

(Programming in C)

Time : Three Hours]

[Max. Marks : 50

- N. B. : (1) All questions are compulsory and carry equal marks.
(2) Illustrate your answer with suitable diagrams wherever necessary.

EITHER

1. (a) What is algorithm ? Explain any four characteristics of algorithm. 5
(b) Draw a flow chart to find all possible roots of a quadratic equation.
 $ax^2+bx+c=0$ 5

OR

- (c) Explain iteration programming structure giving suitable example. 5
(d) Write an algorithm to display sum of digits of given number.
(123 $\rightarrow$ 1+2+3=6) 5

EITHER

2. (a) Explain different primary data types in c. 5
(b) List rules for variable naming. Differentiate between while and do-while statement. 5

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Contd.



OR

(c) Write a program to print Fibonacci series.
ie. 1 1 2 3 5 ----- 5

(d) Give syntax and purpose of following function.

(i) POW ()

(ii) Sqrt ()

Write a program to interchange the values of two integers. 5

EITHER

3. (a) Write a program to find transpose of matrix. 5

(b) Write a program to illustrate function with argument and no return value. 5

OR

(c) Explain different components of function with suitable example. 5

(d) Write a program to find largest number in a given array of N element. 5

EITHER

4. (a) Explain structure declaration initialization and accessing structure member with suitable example. 5

(b) Explain command line arguments. 5



OR

- (c) Explain fprintf () and fscanf () with example. 5
- (d) Define pointer. Explain pointer arithmetic. 5
5. (a) Explain Advantages of flowchart. $2\frac{1}{2}$
- (b) Write purpose and syntax of if-else construct. $2\frac{1}{2}$
- (c) Write a program in 'C' to search an element in one dimensional array using linear search method. $2\frac{1}{2}$
- (d) Differentiate between structure and union. $2\frac{1}{2}$