



NP – 267

16C

I Semester B.A./B.Sc. Examination, February/March 2024

(NEP) (F+R)

**COMPUTER SCIENCE**  
**Problem Solving Techniques**

Time : 2½ Hours

Max. Marks : 60

**Instruction** : Answer *all* the Parts.

PART – A

I. Answer **any four** questions. **Each** question carries **two** marks. (4×2=8)

- 1) What is an Algorithm ?
- 2) What are local and global variable ?
- 3) What is sorting ? Mention different sorting methods.
- 4) Differentiate between formatted and unformatted input.
- 5) What is an array ? How is it initialized ?
- 6) Define Hash search.



PART – B

II. Answer **any four** questions. **Each** question carries **five** marks. (4×5=20)

- 7) Explain asymptotic notations.
- 8) Mention any 5 string library functions.
- 9) Explain if . . . else with an example.
- 10) Write a program to find the factorial of a number.
- 11) What is two Dimensional Array ? How will you input the elements in a two Dimensional Array ?
- 12) Write an algorithm to perform a binary search.

P.T.O.



## PART – C

III. Answer **any 4** questions. **Each** question carries **8** marks. (4×8=32)

- 13) a) Explain loop control structures in C with general syntax. 4  
b) What is the difference between break and continue statements ? 4
- 14) a) Write an algorithm to check whether a number is prime (or) not. 4  
b) Write the characteristics of algorithm. 4
- 15) a) Write an algorithm to generate the Fibonacci series. 4  
b) What is pointer ? How to initialize pointer arrays ? 4
- 16) a) Explain pseudorandom number generation. 4  
b) Write a C program to find GCD of 2 numbers. 4
- 17) a) Explain the algorithm to find the maximum element in a set. 4  
b) Sort the following array using insertion sort. 4

43	75	21	37	12
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- 18) a) Write an algorithm to sort the set of elements using selection sort. 4  
b) Explain keyword searching in text. 4
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