



NP – 115

17
I Semester B.A./B.Sc. Examination, May 2022
(NEP – 2021 – 22 and Onwards)
COMPUTER SCIENCE
Problem Solving Techniques

Time : 2½ Hours

Max. Marks : 60

Instruction : Answer **any four** questions from **each Part**.

PART – A

- I. Answer **any four** questions. **Each** question carries **two** marks. **(4×2=8)**
- 1) What are the factors affecting the analysis of algorithms ?
 - 2) What are command line arguments ?
 - 3) Differentiate between formatted and unformatted input.
 - 4) What is the difference between '&' and '*' operators in pointers ?
 - 5) Define sorting. Mention any two types of sorting.
 - 6) Define hash search.

PART – B

- II. Answer **any four** questions. **Each** question carries **five** marks. **(4×5=20)**
- 7) Explain the various qualitative aspects of a good algorithm.
 - 8) Explain if...else with an example.
 - 9) Write a C program to swap two integers using pointers.
 - 10) What is an array ? How will you input the elements in a two dimensional array ?
 - 11) Write an algorithm to find the gcd of two integers.
 - 12) Explain about keyword searching in a text.

P.T.O.



PART – C

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

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| 13) Explain the various asymptotic notations used to represent the running time of algorithm. | 8 |
| 14) Write a C program to read a number, reverse the number and check whether it is a palindrome or not. | 8 |
| 15) a) Explain switch statement with an example. | 4 |
| b) Differentiate between while and do...while loops. | 4 |
| 16) a) Write an algorithm to check whether a number is prime or not. | 4 |
| b) Write an algorithm to find the square root of a number. | 4 |
| 17) Explain selection sort and insertion sort. | 8 |
| 18) Explain binary search technique with an example. | 8 |
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