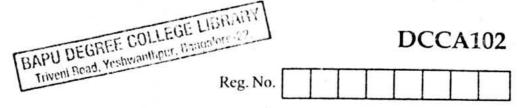
MILLIE



# I Semester B.C.A. Degree Examination, April - 2023

## **COMPUTER APPLICATIONS**

Problem Solving Techniques (NEP Scheme 2021-22 Onwards)

Paper: CA-C2T

Time: 21/2 Hours

Maximum Marks: 60

Instructions to Candidates:

Answer any Four questions from each part.

### PART-A

Answer any Four questions. Each question carries 2 marks.

 $(4 \times 2 = 8)$ 

- 1. Mention two methods for analysing the performance of an algorithm.
- 2. Define variable and constant. Give one example for each.
- 3. Define Array with an example.
- 4. Write an algorithm to find the square root of a number.
- 5. List any two differences between linear search and binary search algorithm.
- 6. What is two way merging. Explain with an example.

#### PART-B

Answer any Four questions. Each question carries 5 marks.

 $(4 \times 5 = 20)$ 

- 7. Define an algorithm. Mention any 4 characteristics of an algorithm.
- 8. Explain different forms of If statement with syntax and example.
- 9. What is a pointer? Explain with an example.
- 10. Write a program to find GCD of 2 integers.
- 11. Write an algorithm, to find maximum number in an array of n elements.
- 12. Write a program to search an element using linear search.

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### PART-C

Answer any Four questions. Each question carries 8 marks.

 $(4 \times 8 = 32)$ 

- 13. Explain various operators available in C.
- 14. Explain various forms of looping structures available in C.
- 15. Explain various operations performed on strings with example for each.
- 16. Write a program to find the multiplication of two matrices.
- 17. Explain insertion sort with example.
- 18. Write Bubble sort algorithm to sort the given set of elements. Trace the Bubble sort algorithm for the following elements, 28, 20,1,30, 8, 15, 05.

