

BACHELOR OF SCIENCE (COMPUTER SCIENCE) (CBCS - 2018 COURSE)
F.Y.B.Sc.(Computer Science) Sem-I :SUMMER- 2022
SUBJECT : ELEMENTARY ALGORITHMICS

Day : Tuesday
Date : 19-07-2022

S-20077-2022

Time : 11:00 AM-02:00 PM
Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the **RIGHT** indicate **FULL** marks.
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Q.1 Answer Any **TWO** of the following. **(12)**

- a) Illustrate binary search algorithm with example.
- b) Draw and explain various flowchart symbols with suitable example.
- c) Write an algorithm and draw flowchart to calculate net salary of an employee.

Q.2 Answer Any **TWO** of the following. **(12)**

- a) Write a pseudo code for finding a given number is palindrome or not.
- b) Write an algorithm and flowchart for finding average of 'n' numbers.
- c) Define algorithm. Explain various characteristics, advantages and disadvantages of algorithm.

Q.3 Answer Any **TWO** of the following. **(12)**

- a) Write an algorithm and flowchart to find factorial of given number.
- b) Define recursion. Explain recursion with suitable example.
- c) Explain bubble sort algorithm with example.

Q.4 Answer Any **THREE** of the following. **(12)**

- a) Write a pseudo code for counting each vowel separately in the given string.
- b) Write an algorithm for finding Greatest Common Divisor of two numbers.
- c) Write a note on array.
- d) Explain merge sort algorithm.

Q.5 Answer Any **FOUR** of the following. **(12)**

- a) Draw a flowchart to check whether given number is positive or negative.
- b) Draw flowchart to find area of circle and triangle.
- c) Write an algorithm to print sum of numbers.
- d) Write types of logical operator.
- e) Explain the problem solving steps.
- f) Write an algorithm to calculate simple interest.
