

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

Day : Wednesday

Time : 10:00 AM-01:00 PM

Date : 21-12-2022

W-20077-2022

Max. Marks : 60

.....

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the **RIGHT** indicate **FULL** marks.
-

Q.1 Answer Any **TWO** of the following. **(12)**

- a) Explain merge sort algorithm with suitable example.
- b) Define recursion. Explain an algorithm to find Fibonacci series using recursion concept.
- c) What is a flowchart? Explain various symbols used in flowchart with suitable example.

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

- a) Write a pseudo code to calculate net salary of employee.
- b) Write an algorithm and draw flowchart to find sum of given five numbers using an array.
- c) Draw flowchart and algorithm to find area of circle and triangle.

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

- a) Write an algorithm and draw flowchart to find sum of first five even numbers.
- b) Explain characteristics of an algorithm.
- c) Describe program development life cycle.

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

- a) Write an algorithm to find minimum number between three numbers.
- b) Explain Linear search algorithm with example.
- c) Write pseudo code to check whether given number is Armstrong or not.
- d) Draw a flowchart for finding sum of 10 numbers.

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

- a) Write an algorithm to finding whether the person is eligible for voting.
- b) Draw a flowchart to print 1 to 10 numbers.
- c) What is problem? Explain problem solving steps in detail.
- d) Draw a flowchart to calculate square and cube of given number.
- e) Write an algorithm to finding LCM of two numbers.
- f) Write note on quick sort.
