

F.Y. B. SC. (Computer Science) SEM – I (CBCS 2018 COURSE) :

WINTER - 2018

SUBJECT: 3) ELEMENTARY ALGORITHMICS

Day: Thursday
Date: 25/10/2018

W-2018-0893

Time: 11.00 AM TO 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) Define algorithm. Explain features, advantages and disadvantages of an algorithm.
- b) Describe the bubble sort algorithm with an example.
- c) Explain Linear search algorithm with an example.

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

- a) Write an algorithm and draw flowchart to calculate net salary of an employee.
- b) Write a Pseudo code to find GCD (Greatest Common Divisor) of two numbers.
- c) Describe recursion algorithm with proper example.

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

- a) Write a Pseudo code for counting each vowel separately in the given string.
- b) Draw a flowchart and write an algorithm to check whether given number is palindrome or not.
- c) Write an algorithm and draw flowchart to find sum of first five even numbers.

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

- a) Draw a flowchart to find average of 'n' numbers using an array.
- b) Explain selection sort algorithm with proper example.
- c) Write an algorithm to find maximum number between three numbers.
- d) What is a program? Explain structure of procedure oriented languages.

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

- a) Write a Pseudo code to find area of triangle and rectangle.
- b) Draw a flowchart to find grade of student depending on percentage.
- c) Write an algorithm to find reverse of given number.
- d) Define flowchart? Write the advantages and disadvantages of flowchart.
- e) Write an algorithm and flowchart to swap two numbers.
- f) Draw a flowchart to find factorial of a number.