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**B—456—2019**

**FACULTY OF SCIENCE AND TECHNOLOGY**

**B.Sc. (First Year) (First Semester) EXAMINATION**

**MARCH/APRIL, 2019**

**COMPUTER SCIENCE**

(Problem Solving Using Computer)

(MCQ & Theory)

**(Tuesday, 30-4-2019)**

**Time : 10.00 a.m. to 12.00 noon**

*Time—2 Hours*

*Maximum Marks—40*

- N.B. :—* (i) Attempt *All* questions.  
(ii) Assume suitable data, if necessary.

**MCQ**

1. Solve *all* MCQ given below : 10

- (i) ALU stands for :  
(a) Algorithm Logical Unit  
(b) Arthmetic and Logical Unit  
(c) Algebraic and Logic Unit  
(d) None of the above  
(ii) ..... is an output unit.

- (a) Printer (b) Keyboard  
(c) CPU (d) None of these

P.T.O.

(iii) ..... is looping symbol.



(d) None of these

(iv) Graphical representation of an algorithm is known as :

(a) Program

(b) Algorithm

(c) Graph

(d) Flow chart

(v) In counting algorithm count is initialized as :

(a) 0

(b) 1

(c) 2

(d) None of these

(vi) Complete the following series :

0 1 1 2 3 ..... 8 13, .....

(a) 4

(b) 7

(c) 5

(d) 21

(vii) Factorial of 7 is :

(a) 5040

(b) 4050

(c) 4000

(d) 5400

(viii) In binary search Middle is calculated by :

(a)  $\text{Middle} := (n + 1) \text{ div } 2$

(b)  $\text{Middle} := (n - 1) \text{ div } 2$

(c)  $\text{Middle} := n \text{ div } 2$

(d) All of these

(ix) Top-Down design is also known as :

(a) Dynamic programming

(b) Problem definition phase

(c) Stepwise refinement

(d) None of these

- (x) ..... is a set of explicit and unambiguous instruction expressed in programming language.
- (a) Problem (b) Algorithm
- (c) Program (d) Flow chart

### Theory

2. (a) Draw and explain the block diagram of computer. 5
- (b) Write an algorithm for summation of set of number. 5
- Or*
- (c) Explain any *two* Input device. 5
- (d) Discuss analysis of an algorithm. 5
3. (a) Write an algorithm to display factorial of given number. 5
- (b) What is flow chart ? Explain the different symbol usual in flow chart. 5
- Or*
- (c) Write an algorithm to check the given number is prime or not. 5
- (d) Explain array reversal algorithm. 5
4. (a) Explain linear search with *one* example. 10
- Or*
- (b) What is Sorting ? Explain selection sort with an example. 10