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BF—372—2016

FACULTY OF SCIENCE

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

NOVEMBER/DECEMBER, 2016

(Old Course)

COMPUTER SCIENCE

Paper II

(Fundamental of Computer Programming)

(MCQ + Theory)

(Saturday, 3-12-2016)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—10+30=40

N.B. :— (i) All questions are compulsory.

(ii) Assume suitable data, if necessary.

MCQ

10

1. Select the *correct* answer for the following.

(1) An Algorithm consists of set of and unambiguous finite steps.

- (A) Ambiguous (B) Explicit
(C) Implicit (D) None of these

(2) Set of instruction is called as

- (A) Algorithm (B) Program
(C) Flowchart (D) Data

(3) Preliminary investigation may be thought of as phase

- (A) Problem definition (B) Analysis
(C) Design (D) Implementation

P.T.O.

- (4) Efficiency considerations for an algorithm are inherently tied in with the design and analysis of algorithm
- (A) Data (B) Flowchart
(C) Problem deficits (D) Implementation
- (5) numbers are extensively used in many simulation studies.
- (A) Binary (B) Prime
(C) Random (D) Digital
- (6) numbers play a role in fast methods for information retrieval that employ hashing algorithms.
- (A) Fractional (B) Binary
(C) Prime (D) Random
- (7) Arranging data in a manner is
- (A) Shuffling (B) Sorting
(C) Merging (D) None of these
- (8) Binary search technique use strategy.
- (A) Top down (B) Bottom up
(C) Merging (D) Divide and conquer
- (9) In sorting technique, at each stage in the ordering process, the next smallest value must be found and placed in order.
- (A) Merge (B) Bubble
(C) Insertion (D) Selection
- (10) To reverse array of 'n' elements exchanges are required.
- (A) $n/2$ (B) $n/4$
(C) $n/6$ (D) $n/1$

Theory

2. Explain in detail problem solving aspects. 10
- Or*
- (a) Write an algorithm to generate the Fibonacci series. 5
- (b) Write an algorithm to find smallest element from an array. 5
3. Discuss in detail Binary and Linear search. 10
- Or*
- (a) Write an algorithm for GCD of two numbers. 5
- (b) Explain in brief algorithm for left and right justification of text. 5
4. Write short notes on (any two) : 10
- (a) Flowchart
- (b) Selection sort technique
- (c) Arrays
- (d) Program verification.