

Paper Id:

214101

Roll No:

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MCA
(SEM I) THEORY EXAMINATION 2019-20
COMPUTER CONCEPTS & PRINCIPLES OF PROGRAMMING

Time: 3 Hours**Total Marks: 70****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief. 2 x 7 = 14**

- a. What do you mean by system software and application software? Give some examples of it.
- b. Explain the working of Linker.
- c. Differentiate between RAM and ROM
- d. How keywords are different from identifiers?
- e. How runtime binding is different from compile time binding?
- f. What do you mean by the term lexical items?
- g. Define an Array.

SECTION B**2. Attempt any three of the following: 7 x 3 = 21**

- a. Illustrate the concept of cache memory and its use.
- b. What are the symbols used in a flow chart? Draw a flow chart to find sum of N natural numbers.
- c. Define algorithm. Write an algorithm to search a number in a given array of numbers.
- d. For a 16 bit machine an integer array is declared of size 10. The base address of the array is 1000. With a neat diagram describe how the memory will be allocated?
- e. Write notes on: (i) iOS, (ii) IoT

SECTION C**3. Attempt any one part of the following: 7 x 1 = 7**

- (a) Draw the block diagram of a computer and discuss its functional units.
- (b) Discuss the attributes of a good language

4. Attempt any one part of the following: 7 x 1 = 7

- (a) What do you mean by cloud computing? Discuss the various service models used in cloud computing.
- (b) Differentiate between static RAM and dynamic RAM.

5. Attempt any one part of the following: 7 x 1 = 7

- (a) What do you mean by recursion? Write a recursive function to find factorial of a number.
- (b) Outline the naming rules taken into consideration for naming in a language.

6. Attempt any one part of the following: 7 x 1 = 7

- (a) Discuss the syntactic elements of a language.
- (b) Assess how storage class of a variable change the behavior of the variable.

7. Attempt any one part of the following: 7 x 1 = 7

- (a) With a neat diagram draw memory hierarchy and explain.
- (b) Illustrate encapsulation & inheritance by considering real life example.