Printed Pages: 02 **Sub Code:KCA-101**

Paper Id: 233273 **Roll No.** | | | | | | | | | | |

MCA
(SEM I) THEORY EXAMINATION 2022-23
FUNDAMENTAL OF COMPUTERS AND EMERGING TECHNOLOGIES

Time: 3 Hours ***Total Marks: 100***

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **2 x 10 = 20**

(a) Compare computer hardware and software with example.
(b) What is the function of output unit?
(c) Define the term operating system.
(d) Discuss the limitations of local area network.
(e) Write a short note on the concept of Internet of things.
(f) Explain the function of web browser in short.
(g) Briefly explain any two application areas of block chain.
(h) Differentiate between public and private cloud.
(i) State features of quantum computing.
(j) Define the term green computing.

SECTION B

2. Attempt any *three* of the following: **10x3=30**

(a) What do you mean by primary memory? Explain. Discuss its types.
(b) Discuss multiprogramming, multitasking and multiprocessing operating system.
(c) Describe basic services of Internet.
(d) Explain the concept of Software-as-a-service. Compare it with Platform-as-a-service.
(e) Discuss and compare concepts of augmented reality and virtual reality.

SECTION C

3. Attempt any *one* part of the following: **10x1=10**

(a) Define the term algorithm. Discuss its characteristics? Write an algorithm to find maximum of two numbers.
(b) Differentiate among assembler, compiler and interpreter.

4. Attempt any *one* part of the following: **10x1=10**

(a) Describe any four topologies with their respective advantages and limitations.
(b) Discuss the role of operating system in process management, file management, device management and memory management.

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5. Attempt any *one* part of the following: 10x1=10

(a) Explain historical development of Internet.
(b) Discuss IOT reference model with the help of a diagram.

6. Attempt any *one* part of the following: 10x1=10

(a) Discuss AWS. Describe any five services of AWS.
(b) What do you mean by the term cloud computing? What are its application areas? Explain.

7. Attempt any *one* part of the following: 10x1=10

(a) Discuss the need of brain-computer interface. Explain its features and limitations.
(b) Describe various components of a grid with diagram.

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