



BRAINWARE UNIVERSITY

Term End Examination 2023

Programme – MCA-2020/MCA-2021

Course Name – Fundamental of Computers & Emerging Technologies

Course Code - MCA101

(Semester I)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

(i) Show the 2's complement of 101011110000 is

a) 011101110110

b) 010100001111

c) 010100010000

d) 1010101001010101

(ii) Show Octal representation for the hexadecimal code F3A1 is

a) 171641

b) 171692

c) 161741

d) 611714

(iii) Describ Octal number system

a) Positive number system with weights 0 to 9

b) Positive number system with weights 0 to 8

c) Positive number system with weights 1 to 8

d) Positive number system with weights 0 to 7

(iv) Predict the Physical or logical arrangement of network is _____

a) Topology

b) Routing

c) Networking

d) None of These

(v) Predict Data communication system within a building or campus is _____

a) LAN

b) WAN

c) MAN

d) TAN

(vi) Predict when a key can uniquely identify the whole row, it is known as

a) Primary Key

b) Super Key

c) Foreign Key

d) Candidate Key

(vii) Select which of the following is not a type of navigation system for a web site?

a) Global

b) National

c) Contextual

d) Regional

(viii) Conclude a list of protocols used by a system, one protocol per layer, is called

a) Protocol Architecture

b) Protocol Stack

c) Protocol Suite

d) Protocol Noise

(ix) Choose which one of the following is not a search engine?

- a) Bing
c) Yahoo
- (x) Predict the DNS database contains _____
a) name server records
c) hostname aliases
- (xi) Justify agents behaviour can be best described by
a) Perception sequence
c) Sensors and Actuators
- (xii) Justify Web Crawler is a/an
a) Intelligent goal-based agent
c) Simple reflex agent
- (xiii) To access the services of operating system, the interface is identify by the
a) System calls
c) Library
- (xiv) Select the single user single tasking os
a) LINUX
c) DOS
- (xv) Define Virtual memory
a) simple to implement
c) less efficient in utilization of memory
- b) Google
d) Windows
- b) hostname-to-address records
d) All of these
- b) Agent function
d) Environment in which agent is performing
- b) Problem-solving agent
d) Model based agent
- b) API
d) Assembly instructions
- b) WINDOWS
d) None
- b) used in all major commercial operating systems
d) useful when fast I/O devices are not available

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Explain AND,OR,NOT gate with proper explanation. (3)
3. Explain Router (3)
4. Explain the universal gate using truth table. (3)
5. Write a short note on Big data (3)
6. Distinguish between Primary memory and secondary memory (3)

OR

Distinguish between RAM and ROM (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Describe the OSI Reference Model. (5)
8. Justify the term Hardware and Software? (5)
9. Write a short note on Adder. (5)
10. What are different network topologies? (5)
11. Explain the various computer language. (5)
12. Draw a block Diagram of a Computer and describe its all parts. (5)

OR

Describe the Generation of Computer. (5)
