M 065/005

Enrolment Number										

Total No. of printed pages = 02

Monsoon, 2023

MCA Semester Examinations

Bridge Course (Theory)

Course Code: MCA001T

Full Marks – 60 **Time –2 $^{1}/_{2}$ hours**

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Part A

1. **Choose the most appropriate option from the following MCQs** 10×1=10

(a) **Which of the following is a volatile memory in a computer system?**
a. Hard Disk Drive (HDD)
b. Random Access Memory (RAM)
c. Read-Only Memory (ROM)
d. Solid State Drive

(b) **What is the primary function of the Control Unit in a CPU?**
a. Perform arithmetic operations
b. Manage input and output devices
c. Execute instructions and control the operation of the CPU
d. Store data temporarily

(c) **What is the purpose of the system bus in a computer system?**
a. Transfer data between the CPU and memory
b. Execute arithmetic operations
c. Manage input devices
d. Control the execution of programs

(d) **Which memory type is non-volatile and is used to store firmware and system BIOS?** a. RAM
b. Cache Memory
c. ROM (Read-Only Memory)
d. Virtual Memory

(e) **What is the term for a step-by-step procedure or formula for solving a problem?**
a. Algorithm
b. Variable
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(f) **Which symbol is used to represent a decision or branching point in a flowchart?**
a. Oval
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(j) **Which topology connects all devices to a single central hub or switch?**
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Part B
(Answer any four questions) 4×5=20

2. What is the purpose of the CPU (Central Processing Unit) in a computer system? Describe its primary functions.
3. Discuss the role of the input-output (I/O) system in a computer and the various techniques for I/O interfacing.
4. For a given value, *Limit*, what is the smallest positive integer *Number* for which the sum: *Sum* = 1 + 2 + ... + *Number* is greater than *Limit*. What is the value for this *Sum*? Write a algorithm and a flowchart for the problem.
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8. (a) What is a network switch, and how does it differ from a hub? Define a router and its role in computer networks.
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Part D
(Short Notes)
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11. (a) Ethernet
    (b) Master Boot Record
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a. Transfer data between the CPU and memory
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a. A network that covers a wide geographic area
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(j) **Which topology connects all devices to a single central hub or switch?**
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Part B
(Answer any four questions) 4×5=20

2. What is the purpose of the CPU (Central Processing Unit) in a computer system? Describe its primary functions.
3. Discuss the role of the input-output (I/O) system in a computer and the various techniques for I/O interfacing.
4. For a given value, *Limit*, what is the smallest positive integer *Number* for which the sum: *Sum* = 1 + 2 + ... + *Number* is greater than *Limit*. What is the value for this *Sum*? Write a algorithm and a flowchart for the problem.
5. What are the conditional statements in C? Give examples of each.
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Part C
(Answer any two questions) 2×10=20

8. (a) What is a network switch, and how does it differ from a hub? Define a router and its role in computer networks.
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Part D
(Short Notes)
(Write any two) 2×5=10

11. (a) Ethernet
    (b) Master Boot Record
    (c) Multitasking vs multi-programming.
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M 065/005

Enrolment Number										

Total No. of printed pages = 02

Monsoon, 2023

MCA Semester Examinations

Bridge Course (Theory)

Course Code: MCA001T

Full Marks – 60 **Time –2 $^{1}/_{2}$ hours**

The figure in the margin indicates full marks for the questions.

Part A

1. **Choose the most appropriate option from the following MCQs** 10×1=10

(a) **Which of the following is a volatile memory in a computer system?**
a. Hard Disk Drive (HDD)
b. Random Access Memory (RAM)
c. Read-Only Memory (ROM)
d. Solid State Drive

(b) **What is the primary function of the Control Unit in a CPU?**
a. Perform arithmetic operations
b. Manage input and output devices
c. Execute instructions and control the operation of the CPU
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