



Tamil Nadu Open University
School of Computer Science
Chennai – 15
HOME / SPOT ASSIGNMENT

Programme Code No : 271
Programme Name : Master of Computer Applications Course
Code & Name : MCA – 01 & Computer Fundamentals
Batch :CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks: 30(Average of Total No. of Assignments)

ASSIGNMENT – 1

Max: 30 marks

Answer any one of the question not exceeding 1000 words

1. Brief about generation of computers
2. List and explain various logic and shift operations.
3. Explain the uses of direct and indirect addressing modes.



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Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 2

Max: 30 marks

Answer any one of the question not exceeding 1000 words

1. Discuss the various data representation in computer.
2. With a neat sketch, explain the function of ALU organization.
3. Discuss the components of micro computer with a neat sketch.



**Tamil Nadu Open University
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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name: MCA – 02 & Introduction to Software
Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 15 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max: 30 marks

Answer any one of the question not exceeding 1000 words

1. Write note on deadlock avoidance.
2. What is Vi screen editor? Explain its uses.
3. Outline the responsibilities of system administration.



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Programme Code No : 271
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Course Code & Name: MCA – 02 & Introduction to Software
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No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 15 (Average of Total No. of Assignments)

ASSIGNMENT – 2

Max: 30 marks

Answer any one of the question not exceeding 1000 words

1. Explain the various CPU scheduling algorithms.
2. Explain the syntax of various text manipulation commands.
3. Explain the phases of software life cycle with a neat sketch.



**Tamil Nadu Open University
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Programme Code No : 271
Programme Name : Master of Computer Applications Course
Code & Name : MCA – 03 & Data Structure through “C”
Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks: 30 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max: 30 marks

Answer any one of the question not exceeding 1000 words,

1. List any four Input and Output functions in C.
2. Explain call by value and call by reference.
3. What are the two types of traversals in a graph?



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Programme Name : Master of Computer Applications Course
Code & Name : MCA – 03 & Data Structure through “C”
Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 2

Max: 30 marks

Answer any one of the question not exceeding 1000 words

1. Write about function definition and declaration.
2. Write short notes on text files and binary files.
3. Explain AVL trees and B-Tree.



**Tamil Nadu Open University
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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name: MCA – 04 & Elements of System
Analysis and Design)
Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks: 30 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max: 30 marks

Answer any one of the question not exceeding 1000 words

1. Explain the types of code.
2. Describe the benefits of knowledge based system.
3. Explain the components of multimedia



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Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 2

Max: 30 marks

Answer any one of the question not exceeding 1000 words

1. Explain the types of feasibility.
2. Discuss the procedure for data base design.
3. Discuss the techniques for building management information system.



**Tamil Nadu Open University
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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name: MCA – 05 & Introduction to Data Base
Management Systems
Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max: 30 marks

Answer any one of the question not exceeding 1000 words

1. Describe the three views of data.
2. Compare sequential and index sequential file organization.
3. Describe the properties of normalization.



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Management Systems
Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 2

Max: 30 marks

Answer any one of the question not exceeding 1000 words

1. Draw and E-R model for Library management system.
2. Explain about evaluation of DBMS.
3. Describe the structure of distributed databases



**Tamil Nadu Open University
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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name: MCA – 06 & Introduction to Computer Organisation
Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max: 30 marks

Answer any one of the question not exceeding 1000 words

1. List any five digital logic gates with its truth table and graphic symbol.
2. List out any five memory devices and explain briefly.
3. Discuss in detail about interrupts with necessary diagram



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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name: MCA – 06 & Introduction to Computer
Organisation
Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 2

Max: 30 marks

Answer any one of the question not exceeding 1000 words

1. Describe the Read only memories.
2. What is mapping process? Explain the types of mapping.
3. Describe in detail about the components of a CPU.



**Tamil Nadu Open University
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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name: MCA – 07 & Introduction to Software
Engineering
Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max: 30 marks

Answer any one of the questions not exceeding 1000 words

1. Compare product and process and explain in detail.
2. Highlight the importance of formal technical Reviews.
3. Elaborate on test case design and art of debugging.



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Course Code & Name: MCA – 07 & Introduction to Software
Engineering
Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 2

Max: 30 marks

Answer any one of the questions not exceeding 1000 words

1. Discuss the various project decomposition techniques.
2. Explain the ways of project scheduling and tracking
3. Explain the concept of software prototyping and information flow



Tamil Nadu Open University
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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name: MCA – 08 & Computer Oriented Numerical
Methods
Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max: 30 marks

Answer any one of the questions not exceeding 1000 words

1. Write the algorithm for solving a given equation by using bisection method.

2. Find the smallest positive root of the equation $2x^2 - 3x - 6 = 0$ by using Newton– Raphson method.

3. Illustrate Gauss elimination method. Taking three equations in three unknowns.



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Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 2

Max: 30 marks

Answer any one of the questions not exceeding 1000 words

1. Using the Gauss – Jordan method solve the system of equations. $10x + y$

$$+ z = 12 \quad 2x + 10y + z = 13 \quad x + y + 5z = 7.$$

2. Using Newton's divided difference formula find the polynomial to the

given data $x \quad -1 \quad 0 \quad 1 \quad 3 \quad y = f(x) \quad 2 \quad 1 \quad 0 \quad -1$

3. Use Runge-Kutta method to find y at $x = 0.1$ given

$$dy / dx = y - x, \quad y(0) = 2.$$



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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name: MCA – 09 & C++ and Object-Oriented
Programming
Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max: 30 marks

Answer any one of the questions not exceeding 1000 words

1. Write the operator precedence rules in C++.
2. Define recursive function with an example. Brief how it works.
3. Explain about exception handling in C++.



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Programming
Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 2

Max: 30 marks

Answer any one of the questions not exceeding 1000 words

1. Describe with a diagram of Stream buffer class hierarchy.
2. Write short notes on looping control structures.
3. Explain call by value parameters and call by reference parameters with suitable examples



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Programme Code No : 271
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Course Code & Name: MCA – 10 & Theory of Computer Science
Batch : CY-2023(1st Year - Non-Semester)
No. Of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max: 30 marks

Answer any one of the questions not exceeding 1000 words

1. Let $f : \mathbb{R} \rightarrow \mathbb{R}$ defined by $f(x) = x^2$ and $g : \mathbb{R} \rightarrow \mathbb{R}$ defined by $g(x) = 2x + 3$. Find $f \circ g$ and $g \circ f$. Are they equal?

2. Establish that $(\forall x)(P(x) \rightarrow Q(x)) \vee (\forall x)(Q(x) \rightarrow R(x)) \Rightarrow (\forall x)(P(x) \rightarrow R(x))$

3. Find the language generated by the context free grammar $G = (N, T, P, S)$

where $N = \{S\}$, $T = \{a, b\}$, $P = \{S \rightarrow aSb, S \rightarrow ab\}$



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Batch : CY-2023(1st Year - Non-Semester)
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Maximum CIA marks : 30 (Average of Total No. of Assignments)

ASSIGNMENT – 2

Max: 30 marks

Answer any one of the questions not exceeding 1000 words

1. Let $f : \mathbb{R} \rightarrow \mathbb{R}$ defined by $f(x) = 5x+3$. Check whether (a) f is 1-1 (b) f is onto.
(c) Find f^{-1} if it exists.
2. Prove that the conclusion $R \vee S$ follows logically from the premises $C \vee D$,
 $(C \vee D) \rightarrow \sim H$, $\sim H \rightarrow (A \wedge \sim B)$ and $(A \wedge \sim B) \rightarrow (R \vee S)$.
3. Explain the process of constructing a Finite state automata by using a regular grammar.