



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 : 1st Year Arrear Learners
No. of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 25 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max : 25 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.

ASSIGNMENT – 2

Max : 25 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.



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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name : MCA – 02 & Introduction to Software
Batch : AY 2021-22(1st Year)
No. of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 15 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max : 15 marks

Answer any one of the question not exceeding 1000 words

1. Develop an algorithm to find the biggest number among the given three numbers.
2. Highlight the features of UNIX operating system.
3. Describe the role of software engineer in software organization.

ASSIGNMENT - 2

Max : 15 marks

Answer any one of the question not exceeding 1000 words

1. Describe the functions of linker and loader.
2. Discuss the structure of UNIX operating system.
3. Explain the various operators and expression evaluation in shell programming.



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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name : MCA – 03 & Data Structure through “C”
Batch : 1st Year Arrear Learners
No. of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 25 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. What are the primitive data types in C?
2. Compare and contrast linked list and queue.
3. Explain the types of file organizations in C.

ASSIGNMENT - 2

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. Write short notes on control structures in C.
2. Explain passing pointers and arrays to function with suitable examples.
3. Explain the queue operations.



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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 : 1st Year Arrear Learners
No. of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 25 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. Describe the characteristics of a system.
2. What is modularization? Explain.
3. Explain the attributes of a good analyst.

ASSIGNMENT - 2

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. With a neat sketch, explain the function of system development life cycle.
2. Describe the design process of structured system design.
3. Explain benchmark testing and software selection criteria.



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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name : MCA – 05 & Introduction to Database
Management Systems
Batch : AY 2021-22(1st Year Arrear Learners)
No. of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 25 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max : 25 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.

ASSIGNMENT - 2

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. Explain the functions of Network model with an example.
2. Discuss the multi key file organization.
3. Elaborate on types of normal forms.



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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name : MCA – 06 & Introduction to Computer Organisation
Batch : AY 2021-22(1st Year)ArrearLearners
No. of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 25 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. Write short notes on binary fixed-point representation.
2. Draw the block diagram of memory and associated registers and explain.
3. Draw the block diagram of four-bit full adder.

ASSIGNMENT - 2

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. Describe binary, octal and hexadecimal representation with suitable examples.
2. Explain in detail about the DMA with block diagram.
3. Write in detail about micro instruction formats.



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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name : MCA – 07 & Introduction to Software
Engineering
Batch : 1st Year Arrear Learners
No.of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 25 (Average of Total No. of
Assignments)

ASSIGNMENT – 1

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. Define software engineering. List its tasks and explain.
2. Describe the objectives of project planning. the line drawing algorithms.
3. Explain how to define task set for the software project.

ASSIGNMENT - 2

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. With a neat sketch, explain the function of Rapid Application Development (RAD) process model.
2. Write about risk projection and risk mitigation.
3. Outline the activities involved in software configuration management.



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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name : MCA – 08 & Computer Oriented Numerical
Methods
Batch : AY 2021-22(1st Year)
No.of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 25 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. Solve the system of equations $2x + y = 3$ and $7x - 3y = 4$ by using Gauss elimination method.
2. Find a second degree polynomial which best fit the data (1, 4), (2, 5) and (4, 13) by using Lagrange's interpolation Formula.
3. Fit a Straight line to the data given below by using the method of least squares.

| | | | | | |
|---|---|-----|-----|-----|-----|
| x | 0 | 1 | 2 | 3 | 4 |
| y | 1 | 0.8 | 3.3 | 4.5 | 6.3 |

ASSIGNMENT - 2

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. Find a root which lies between 1 and 2 of $x^3 + 2x^2 + 10x - 20 = 0$ by using Regula-falsi method.
2. Solve the system of equations $10x - 5y - 2z = 3$; $4x - 10y + 3z = -3$ and $x + 6y + 10z = -3$ by using Gauss Seidel iterative method.
3. From the following table of half - yearly premium for policies maturing at different ages estimate the premium for policies maturing at age $x = 63$ by using Newton's backward interpolation formula.

| | | | | | |
|---------|--------|-------|-------|-------|----|
| Age x | 45 | 50 | 55 | 60 | 65 |
| Premium | 114.84 | 96.16 | 83.32 | 74.48 | |



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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 : 1st Year Arrear Learners
No. of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 25 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. Write a note on storage classes and its types.
2. Explain character array and multi-dimensional character array.
3. Explain UML and context diagrams.

ASSIGNMENT - 2

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. Explain type conversion and type casting with examples.
2. Explain the following operators with example
 - (a) Scope Resolution
 - (b) Conditional
 - (c) Member
 - (d) New and delete.
3. Write about array declaration, initialization and addressing.



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Programme Code No : 271
Programme Name : Master of Computer Applications
Course Code & Name : MCA – 10 & Theory of Computer Science
Batch : 1st Year Arrear Learners
No. of Assignments : One Assignment for Each 2 Credits
Maximum CIA marks : 25 (Average of Total No. of Assignments)

ASSIGNMENT – 1

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. Let $U = \{1, 2, 3, \dots, 10\}$, $A = \{1, 2, 3, 4, 5\}$ and $B = \{2, 4, 6, 8\}$. Then find (a) $A \cup B$ (b) $A \cap B$ (c) $A - B$ (d) $B - A$ (e) A'
2. Construct the truth table for $\sim (p \wedge q) \leftrightarrow (\sim p \vee \sim q)$. Is it a tautology
3. Define the terms (a) Regular Graph (b) Complete Graph (c) Degree of a vertex (d) path (e) Connected graph.

ASSIGNMENT - 2

Max : 25 marks

Answer any one of the question not exceeding 1000 words

1. Let Z be the set of all integers. Define a relation R on Z by aRb if and only if $a-b$ is divisible by 3. Prove that R is an equivalence relation.
2. Find the PDNF and PCNF of $(\sim P \rightarrow R) \wedge Q \leftrightarrow P$ by using truth table.
3. Define a Finite state automata. Explain in detail about its functioning.

