



TAMIL NADU OPEN UNIVERSITY

Chennai - 15

School of Computer Science

ASSIGNMENT - 1

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-1, MATHEMATICAL STRUCTURES FOR COMPUTER SCIENCE
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 1) Show that $P \rightarrow (Q \rightarrow P) \Leftrightarrow \neg P \rightarrow (P \rightarrow Q)$.
- 2) 6 dice are thrown 729 times. How many times do you expect at least three dice to show a five or a six?
- 3) If $A = \{1, 2, 3, 4, 6\}$ and let R be the relation on A defined by “ x divides y ”, then find the relation R and the graph of the relation.
- 4) Give an example of a graph which is Eulerian but not Hamiltonian.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 1) Show that
 - a. $(x)(P(x) \rightarrow Q(x)) \Rightarrow (x)(P(x) \rightarrow (x)Q(x))$.
 - b. Using indirect method of proof, Prove that $P \rightarrow R, Q \rightarrow S, P \vee Q \Rightarrow S \vee R$.
- 2)
 - a. Prove that $a^n - b^n$ is divisible by $a - b$.
 - b. Using Prim's algorithm find the minimum spanning tree for the weighted graph G .
- 3) Show that the Language $\{a^n b^m \mid n, m \geq 1\}$ is generated by the regular grammar $G = \{\{S, A\}, \{a, b\}, \{S, P\}\}$, $P = \{S \rightarrow aS, S \rightarrow aA, A \rightarrow bA, A \rightarrow b\}$.



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School of Computer Science

ASSIGNMENT - 1

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-2, DATA STRUCTURES
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 1) What is Binary tree? Explain with an example.
- 2) Explain Leftist heaps in detail.
- 3) Which one is called as LIFO? What are the operations that can be performed on it?
- 4) What are the types of Graph? Explain representation of graph in detail.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 1) Explain the Linear and non-linear data structures in detail,
- 2) Give an detailed account on Fibonacci Heaps and Lazy-Binomial Heaps.
- 3) Explain the AVL Trees and Red-Black trees in detail.



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ASSIGNMENT - 1

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-3, COMPUTER GRAPHICS
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 1) Explain the Video display devices in detail.
- 2) Explain Sutherland- Hondman polygon clipping algorithm in detail.
- 3) Describe windows and view ports.
- 4) Explain 3D viewing pipeline.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 1) List out the Interactive input devices and explain.
- 2) Explain the Logical classification of input devices in detail.
- 3) Illustrate the three dimensional transformation in detail.



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ASSIGNMENT - 1

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-4 OBJECT ORIENTED ANALYSIS AND DESIGN
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 1) Discuss about objects and classes.
- 2) Discuss in detail about software development life cycles.
- 3) Explain about packages with an example.
- 4) What are the principles of modeling ?Explain.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 1) Explain about the basic structural modeling in detail,
- 2) Explain the Basic Behavioral Modeling-I in detail.
- 3) Illustrate Component diagrams and Deployment diagrams.



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ASSIGNMENT - 1

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-5, ADVANCED DATABASES
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 1) Explain the advantages and disadvantages of centralized and client server architecture.
- 2) Discuss the inter and intra Query parallelism.
- 3) Explain the object database standard.
- 4) Explain the overviews of temporal Database.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 1) Explain the I/O Parallelism and Inter and Intra Query Parallelism
- 2) Explain the concept of object databases.
- 3) Explain the Syntax and Semantics of Starburst, Oracle, DB2 in detail.



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ASSIGNMENT - 1

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-6 COMPUTER ARCHITECTURE
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 1) Explain the Parallel Computer structures in detail.
- 2) Describe the inter task dependency.
- 3) Explain the architectural classifications schemas.
- 4) Discuss the concept of sorting and searching.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 1) Explain the data parallel processing with specialization processor.
- 2) Discuss the internal forwarding and register tagging.
- 3) Explain the exchange and omega networks.



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Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-7 MOBILE COMPUTING
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 1) Explain the components of wireless environment.
- 2) Explain the SMS architecture in detail.
- 3) Give a detailed account on Medium Access Control.
- 4) Discuss about energy management.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 1) Multichannel and Multi modal user interfaces.
- 2) Explain AdHoc wireless network.
- 3) Describe in details Energy model.



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ASSIGNMENT - 1

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC- 8 DATA WAREHOUSING AND DATA MINING
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 1) With neat diagram, Explain Data Warehouse Architecture in detail.
- 2) Summarize Data Reduction.
- 3) Write decision tree induction algorithm.
- 4) What are the types of data in Cluster Analysis? Explain.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 1) Give a detailed account on OLAP queries & Tools.
- 2) Explain Data Discretization and Concept Hierarchy Generation in detail.
- 3) What are the Hierarchical methods? Explain any three in detail.



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ASSIGNMENT - 1

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-9, ANALYSIS OF ALGORITHMS
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 1) Explain the Performance Analysis of algorithm
- 2) Write the algorithm for Binary Search and also explain with example.
- 3) Discuss about All Pair Shortest Path algorithm with example.
- 4) Illustrate the 8-Queens Problem in detail.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 1) Explain the Merge Sort and Quick Sort algorithm in detail.
- 2) Give an detailed account on 0/1 Knapsack and Traveling Salesman Problem.
- 3) Discuss the NP-Hard and NP-Complex Problem in detail.



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Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-10, ADVANCED SOFTWARE ENGINEERING
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 1) Write about software requirement in detail.
- 2) Explain about User Interface Design in detail.
- 3) Illustrate Iterative Software Development.
- 4) Write a detail explanation on Agile Software Engineering.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 1) Explain the Architectural Design and Object-oriented Design in detail.
- 2) Illustrate Software Process Improvement and Software Economics.
- 3) Give a detail account on Critical Systems Specification and Formal Specification.



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ASSIGNMENT - 2

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-1, MATHEMATICAL STRUCTURES FOR COMPUTER SCIENCE
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

1. a. Construct the truth table for $P \wedge (P \vee \neg Q)$.
b. Show that $P \rightarrow (Q \rightarrow R) \Leftrightarrow (P \wedge Q) \rightarrow R$.
2. If we select any group of 1000 students on campus, show that atleast two of them must have same birthday.
3. For a binomial distribution with $n = 24$ and $p = \frac{1}{3}$, compute the mean and the variance.
4. If the sequence, then find the corresponding recurrence relation.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

1. a. Show that $R \wedge (P \vee Q)$ is a valid conclusion from the premises.
b. Prove that $(\forall x)(P(x) \vee Q(x)) \Rightarrow (\forall x)P(x) \vee (\exists x)Q(x)$.
- 2) a. Using mathematical induction prove that $a^n - b^n$ is divisible by $(a - b), \forall n \in \mathbb{N}$.
b. If $f, g, h : \mathbb{R} \rightarrow \mathbb{R}$ are defined by $f(x) = x^3 - 4x$, $g(x) = \frac{1}{x^2 + 1}$ and $h(x) = x^4$, find $\{(f \circ g) \circ h\}(x)$ and $\{f \circ (g \circ h)\}(x)$, and check if they are equal.
- 3) a. Show that maximum number of edges in a simple graph with ' n ' vertices is $\frac{n(n-1)}{2}$.
b. Prove that a connected graph is Euler graph if and only if each of its vertices is of even degree.



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ASSIGNMENT - 2

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-2, DATA STRUCTURES
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 5) What is Stack? Explain the operations of stack and Queue with an example.
- 6) Explain the Binary tree Traversal and Application in detail.
- 7) Discuss about Min/Max heaps.
- 8) Explain Binary Search Trees with example.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 4) Explain the Recursive and non recursive algorithm in detail.
- 5) Give an detailed account on Linked List and doubly linked list.
- 6) Explain the Multi-way Search Trees and B-Trees in detail.



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Programme Code No : 246
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Course Code & Name : MSC-3, COMPUTER GRAPHICS
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 5) Discuss about the working principles of CRT.
- 6) Discuss about two dimensional composite transformations .
- 7) What is clipping? Explain any three types of clipping.
- 8) Write short note on the following
 - a. Write a note on inquiry functions.
 - b. Explain 3D viewing pipeline.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 4) Discuss about Bresenham's algorithm and Midpoint circle algorithm in detail.
- 5) Illustrate Interactive input methods and Physical input devices.
- 6) Explain Parallel Projection and Perspective Projection in detail.



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Course Code & Name : MSC-4 OBJECT ORIENTED ANALYSIS AND DESIGN
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 5) Discuss about Importance of modeling and principles of modeling.
- 6) Discuss the Importance of modeling.
- 7) Briefly discuss about advanced structural modeling.
- 8) Illustrate processes and Threads.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 4) Explain the following
 - a. Use cases
 - b. Use case Diagrams
- 5) Explain principles of modeling and object oriented modeling in detail.
- 6) Illustrate Events and signals and state machines.



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Course Code & Name : MSC-5, ADVANCED DATABASES
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 5) Explain the Distributed Query Processing in detail
- 6) Discuss Complex Objects.
- 7) Give a Syntax and Semantics of Datalog Languages.
- 8) Explain the Effect of Mobility on Data Management.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 4) Explain the XML Schema and XML Query Languages
- 5) Discuss the following concept
 - a. Information Retrieval
 - b. Data Warehousing
- 6) Explain the Syntax Spatial Access Methods and Spatial DB Implementation.



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Course Code & Name : MSC-6 COMPUTER ARCHITECTURE
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 5) Explain the architectural classifications schemas.
- 6) Discuss the instructional level parallel process.
- 7) Explain the hazard detection and resolutions.
- 8) Describe the masking and data recovery.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 4) Explain the Pipelining of Processing Elements and Delays in Pipeline Execution in detail
- 5) Discuss the following.
 - a. Hazard Detection and Resolution
 - b. Job sequencing and Collision prevention
- 6) Explain the following.
 - a. SIMD Array processors
 - b. Cube interconnection network



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Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 5) Discuss the Design considerations for mobile computing.
- 6) Explain the Synchronization protocol in detail.
- 7) Give a detailed account on Satellite Systems.
- 8) Discuss about Transport Layer Protocol.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 4) Discuss the following
 - a. wireless internet.
 - b. Mobile TCP
- 5) Explain the following in detail
 - a. Voice technology
 - b. Personal digital assistant.
- 6) Explain the Architecture and Design of wireless sensor network



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Course Code & Name : MSC- 8 DATA WAREHOUSING AND DATA MINING
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 5) What is Constraint Based Association Mining? Explain with example.
- 6) Discuss the OLAP Operations in detail.
- 7) Illustrate KDD process.
- 8) Give a detailed account on Data Mining Functionalities.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 4) Give a detailed account on the following
 - a. Bayesian Classification
 - b. Rule Based Classification
- 5) Explain the Types of Data in Cluster Analysis and Partitioning Methods.
- 6) Discuss Various Kinds of Association Rules and Constraint- Based Association Mining.



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Course Code & Name : MSC-9, ANALYSIS OF ALGORITHMS
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 5) Discuss the Randomized Algorithms.
- 6) Explain the Divide and Conquer method in detail.
- 7) Discuss the Multistage Graphs in detail.
- 8) Illustrate the Traveling Salesperson Problem in detail.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 4) Explain the following in detail.
 - a. Scheduling Identical Processors.
 - b. Implementing Parallel Assignment Instructions.
- 5) Give an detailed account on Hamiltonian Cycles and Graph Coloring.
- 6) Discuss the following in detail.
 - a. Minimum Cost Spanning Tree.
 - b. Single Source Shortest Path.



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ASSIGNMENT - 2

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Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 5) Describe about critical system models.
- 6) Discuss in detail about application architecture.
- 7) Write a detailed note on critical system development.
- 8) Discuss in detail about risk management.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 4) Explain the following
 - a. RE Processes
 - b. Systems Models.
- 5) Illustrate Software Reuse and CBSE.
- 6) Explain the following concepts
 - a. Software Quality
 - b. Risk management.



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ASSIGNMENT - 3

Programme Code No	: 246
Programme Name	: M.Sc - Computer Science
Course Code & Name	: MSC-1, MATHEMATICAL STRUCTURES FOR COMPUTER SCIENCE
Batch	: AY 2018-19
No.of Assignment	: One Assignment for Each 2 Credits
Maximum Marks	: 100
Weightage	: 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- (a) Construct the truth table for following statement formula $(P \rightarrow Q) \wedge (Q \rightarrow R) \wedge (P \rightarrow R)$.
(b) Show that $\neg(P \wedge Q) \rightarrow (\neg P \vee (\neg P \vee Q)) \Leftrightarrow (\neg P \vee Q)$.
- How many different bit strings are there of length seven?
- Four coins are tossed simultaneously. What is the probability of getting (a) 2 heads (b) atleast 2 heads?
- Give an example of a graph which a Hamiltonian but not Eulerian.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- a. Using rule CP, derive $P \rightarrow (Q \rightarrow S)$ from $P \rightarrow (Q \rightarrow R), Q \rightarrow (R \rightarrow S)$.
b. Show that $(x)(P(x) \vee Q(x)) \Rightarrow (x)P(x) \vee (\exists x)Q(x)$ by using indirect method.
- a. Find the number of integers between 1 and 250 both inclusive that are not divisible by any of the integers 2, 3, 5 and 7.
b. If $f, g, h: R \rightarrow R$ are defined by $f(x) = x^3 - 4x$, $g(x) = \frac{1}{x^2 + 1}$ and $h(x) = x^4$, find $\{(f \circ g) \circ h\}(x)$ and $\{f \circ (g \circ h)\}(x)$, and check if they are equal.
- a. Prove that a simple graph with ' n ' vertices must be connected if it has more than $\frac{(n-1)(n-2)}{2}$ edges.
b. Show that the Language $\{a^n b^m / n, m \geq 1\}$ is generated by the regular grammar $G = \{S, A, \{a, b\}, S, P\}$, $P = \{S \rightarrow aS, S \rightarrow aA, A \rightarrow bA, A \rightarrow b\}$.



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School of Computer Science

ASSIGNMENT - 3

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-2, DATA STRUCTURES
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 9) Explain types of data structure.
- 10) Summarise Graph Traversals.
- 11) Explain the skew heaps.
- 12) What is a k-d trees? Explain.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 7) a. Describe the performance analysis of an algorithm.
b. Explain the circular list in detail.
- 8) a. Explain lazy binomial heaps.
b. Explain MX-Quad trees and R-trees.
- 9) Explain the following
 - a. TV Trees
 - b. Tabular method



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Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 9) Discuss various Hard Copy devices.
- 10) Explain any four input devices.
- 11) Explain line attributes.
- 12) Explain parallel projection.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 7) a. Discuss any five output devices.
b. Illustrate Depth buffer method.
- 8) a. Explain the various 3D transformation concepts in detail.
b. List and explain area fill attributes.
- 9) a. Describe visible surface detection algorithm.
b. Explain the graphics software.



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Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 9) Explain about UML.
- 10) What is the purpose of use case diagrams? Explain.
- 3) State the uses of user interface design.
- 4) Discuss in detail about software development life cycles.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 7) Explain the following
 - a. Briefly discuss about advanced structural modelling.
 - b. Use case Diagrams
- 8)
 - a. What is purpose of deployment diagrams? Explain basic element of diagrams through an example.
 - b. Describe about Object Modeling in detail.
- 9)
 - a. Explain in detail about state chart diagrams with examples.
 - b. Describe about unified library application.



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Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 9) Discuss about the server system architecture.
- 10) Explain the concurrency control concept.
- 11) Explain the relational feature in SQL/ORACLE.
- 12) Explain the mobile transaction models.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 7) a) Describe the distributed database concept.
b) Discuss the design principles of active rule.
- 8) a) Discuss the purpose of ODMG model and ODL.
b) Describe about the spatial access methods.
- 9) a) Write the importance and working procedure of transaction commit protocol.
b) Explain about the cloud storage architecture.



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Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 9) Discuss the parallel processing applications in detail.
- 10) Explain the utilizing temporal parallelism.
- 11) Discuss the technique for prefix computations.
- 12) Discuss the FLYM classifications.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 7) a. Explain the comparisons of temporal and data parallel processing.
b. Describe the delay in pipeline executions and difficulties in pipeline.
- 8) a. Explain the vector processing requirements.
b. Discuss the SIMD interconnections Networks.
- 9) a. Explain the matrix operations.
b. State the uses of inter PE communication.



TAMIL NADU OPEN UNIVERSITY

Chennai - 15

School of Computer Science

ASSIGNMENT - 3

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-7 MOBILE COMPUTING
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 9) Explain about Context-aware applications.
- 10) Write briefly about Wireless Transmission.
- 11) Explain about MAC protocol.
- 12) Give explanation about Energy model.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 7) Discuss the following
 - a. Three-tier Architecture.
 - b. Mobile GUIs.
- 8) Explain the following in detail
 - a. Functionality of Telecommunication Systems.
 - b. Energy Management in mobile communication.
- 9)
 - a. Explain the Architecture and Design of WSN.
 - b. Synchronization and replication of Mobile Data.



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School of Computer Science

ASSIGNMENT - 3

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC- 8 DATA WAREHOUSING AND DATA MINING
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 9) What is the necessity of Data pre-processing? Explain in detail.
- 10) Write an algorithm for Classification by Decision Tree Induction.
- 11) List out the types of Data in Cluster Analysis.
- 12) What is Data Mining and Data warehouse?

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 7) a. Explain Data Integration and Transformation in detail.
b. Write short notes on Outlier Analysis.
- 8) a. Write procedure for Mining Frequent Itemsets without Candidate Generation.
b. With suitable example, explain Classification by Back Propagation in detail.
- 9) a. Explain Support Vector Machines in detail.
b. What are the steps involved in Knowledge Discovery from Databases?
Explain in detail.



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School of Computer Science

ASSIGNMENT - 3

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-9, ANALYSIS OF ALGORITHMS
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 9) Explain Even Faster Evaluation and Interpolation in detail.
- 10) Explain Optimal Binary Search Trees in detail.
- 11) Explain How Graph Coloring Problem can be solved.
- 12) Explain Flow Shop Scheduling in detail.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 1) Explain the following in detail.
 - a. Explain how Travelling Salesperson Problem can be solved by Branch and bound.
 - b. Explain the concept of Dynamic Programming in detail.
- 2)
 - a. With suitable example, explain the Greedy method in detail.
 - b. Write Control abstraction for Divide and Conquer method.
- 3) Discuss the following in detail.
 - a. Explain the concept of Branch and Bound method with suitable example.
 - b. Write merge sort algorithm.



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School of Computer Science

ASSIGNMENT - 3

Programme Code No : 246
Programme Name : M.Sc - Computer Science
Course Code & Name : MSC-10, ADVANCED SOFTWARE ENGINEERING
Batch : AY 2018-19
No.of Assignment : One Assignment for Each 2 Credits
Maximum Marks : 100
Weightage : 25%

Part – A (4 x 10 = 40 Marks)

Answer the following in 200 words each. Each question carries 10 marks

- 9) What are the important criteria for software Dependability? Explain.
- 10) Explain the features of distributed systems architecture.
- 11) What are the advantages of object-oriented design? Explain.
- 12) Describe the criteria for software reuse.

Part – B (2 x 30 = 60 Marks)

Answer **any two** of the questions given below in 1000 words each.

- 7) a. What needs to be considering in critical systems specification? Explain.
b. Explain the characteristics of software quality and software metrics.
- 8) Explain the following
 - a. Importance of user interface design.
 - b. Basic concept of real-time systems.
- 3) a. What is meant by iterative software development? Explain.
b. Discuss about the clean room software engineering.