

LOYOLA ACADEMY DEGREE & P.G. COLLEGE, ALWAL, SECUNDERABAD-10
(An Autonomous and Re- Accredited with Grade 'A' by NAAC)

II YEAR – I SEMESTER, MCA Examinations, July, 2013

Subject : Design & Analysis of Algorithms
Sub. Code : MCA 11303
Date : 10-07-2013

Duration : 3 hrs.
Max. Marks : 100

Note: Answer any ONE from each unit. All Questions carry equal marks: [5 x 20 = 100 M]

UNIT – I

1. [a] Write an algorithm to delete an element from a Binary Search Tree.
[b] Explain the characteristics of an algorithm.

[OR]

2. [a] Explain Stack and Queue. Discuss their time complexity.
[b] Explain different operations on sets.

UNIT – II

3. [a] Write an algorithm for selection Sort and explain with an example.
[b] Write an algorithm for Binary Search with an example.

[OR]

4. [a] Write an algorithm for Quick Sort, Find its complexity.
[b] Explain Optimal Merge Patterns.

UNIT – III

5. [a] Explain All-Pairs shortest path problem with an algorithm.
[b] What are the techniques for Binary Trees?

[OR]

6. [a] Explain DFS.
[b] Explain Multistage Graphs.

UNIT – IV

7. [a] Write Back tracking algorithm form-coloring problem.
[b] Explain Hamiltonian cycles.

[OR]

8. [a] Explain 8 – Queens Problem.
[b] Explain travelling sales man problem with example.

UNIT – V

9. [a] Explain node cover decision problem.
[b] Explain NP-Hard and NP-Complete.

[OR]

10. Write and explain Cook's theorem.

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II YEAR – I SEMESTER, MCA Examinations, July, 2013

Subject : Software Engineering
Sub. Code : MCA 11301
Date : 10-07-2013

Duration : 3 hrs.
Max. Marks : 100

Note: Answer any ONE from each unit. All Questions carry equal marks. [5 x 20 = 100 M]

UNIT – I

1. [a] Write short notes on cost, schedule and quality of software.
[b] Explain about the Software Engineering Challenges.

[OR]

2. [a] Explain about Project Management Process.
[b] Discuss about Incremental and Spiral models.

UNIT – II

3. [a] What is the need for SRS.
[b] Explain the characteristics and components of an SRS.

[OR]

4. [a] Write short notes on various approaches for analysis.
[b] What are the architecture styles for C and C view.

UNIT – III

5. [a] Discuss about project schedule and staffing.
[b] Explain the role of object oriented design in planning a software project.

[OR]

6. [a] Discuss in detail Risk Engineering.
[b] Discuss about module level concepts.

UNIT – IV

7. [a] Define the terms Error, Fault and Failure.
[b] Write short notes on levels of testing.

[OR]

8. [a] Explain about test cases and test plans.
[b] Explain white box and black box testing.

UNIT – V

9. [a] Explain business process re-engineering and software reengineering.
[b] Discuss about software maintenance.

[OR]

10. [a] Explain SPI framework and trends.
[b] Define the key process areas used in CMM.

II YEAR – I SEMESTER, MCA Examinations, July, 2013

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Sub. Code : MCA 11301
Date : 10-07-2013

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II YEAR – I SEMESTER, MCA Examinations, July, 2013

Subject : Data Base Management System

Sub. Code : MCA 11302

Date : 10-07-2013

Duration : 3 hrs.
Max. Marks : 100

Note: Answer any ONE from each unit. All Questions carry equal marks: [5 X 20 = 100 M]

UNIT – I

1. [a] Define Entity, Entity Instance, give different types of entities with neat diagrams. [10 M]
[b] Explain degree of relationships. [10 M]

[OR]

2. Explain 1NF, 2NF and 3NF.

UNIT – II

3. Explain Set Union, Set difference and Cartesian product. [10 M]
[OR]

4. Discuss about aggregate functions in SQL.

UNIT – III

5. Explain Insert and Delete operations in B⁺ Trees. [10 M]
[OR]

6. Explain Static Hashing.

UNIT – IV

7. Explain Lock based Concurrency Control. [10 M]
[OR]

8. Explain 2PL.

UNIT – V

9. Explain log with neat diagram. [10 M]
[OR]

10. Explain Mandatory Access Control.

Subject : Web Programming	Exam Time : 3 hrs
Sub. Code : MCA11404	Max. Marks : 100
Answer the following questions	
1. a) Give nested unordered list. b) Explain inline style sheet with example	15M 5M
2. a) Explain form elements. b) Explain how to create user style sheet.	12M 8M
3. a) Explain ONEROR event b) Explain object referencing	12M 8M
4. Explain TDC binding to table tag.	20M
5. a) Explain I/O in Java script b) Give the methods of Math Class.	10M 10M
6. Write a Java Script program for linear search using Arrays.	20M
7. a) Explain variant sub types in VB script. b) Explain PWS.	12M 8M
8. Give string functions in VB script.	20M
9. a) Explain session tracking. b) Explain DTDs in XML.	10M 10M
10. Explain string processing in XML.	20M

21/1/13

LOYOLA ACADEMY DEGREE & PG COLLEGE, OLD ALWAL
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MCA Examination, January 2013

Subject : Design & Analysis of Algorithm
Sub. Code : MCA11303

Exam Time : 3 hrs
Max. Marks : 100

Answer the following questions

5 x 20M = 100M

UNIT-I

1. a) Define Algorithm. Write an algorithm to insert and delete an element in a Queue.
b) Explain different operations on sets.

(OR)

2. Explain the following.
a) Stacks b) Trees c) Priority Queues d) Graphs

UNIT-II

3. a) Write an algorithm for Merge sort and explain with example.
b) Write an algorithm for Knapsack problem using greedy method.

(OR)

4. a) Write an algorithm for Quick-sort, find its complexity and explain with example.
b) Explain Minimum – Cost Spanning Trees.

UNIT-III

5. Explain the following.
a) Multi stage graphs b) All-pairs shortest paths c) DFS

(OR)

6. a) Explain the Travelling Sales person problem.
b) Explain Connected Components and Spanning Trees.

UNIT-IV

7. a) Explain 8-Queens problem.
b) Explain Hamiltonian cycles.

(OR)

8. a) Explain Graph Coloring.
b) Explain Branch-Bound method.

UNIT-V

9. Explain NP-Hard and NP-Complete.

(OR)

10. Explain Cook's theorem.

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MCA Examination, January 2013

Subject : Software Engineering
Sub. Code : MCA11301

Exam Time : 3 hrs
Max. Marks : 100

Answer the following questions

5 x 20M = 100M

UNIT-I

1. a) Explain the software quality attributes in detail.
b) Discuss the problem domain "Software is Expensive".

(OR)

2. a) Explain about project management process.
b) Explain waterfall model and spiral model.

UNIT-II

3. a) Write the functional specification with use cases in requirement analysis.
b) Explain the characteristics and components of an SRS.

(OR)

4. a) Describe the role of Software Architecture.
b) Discuss about components and connectors.

UNIT-III

5. a) Explain about coupling and cohesion.
b) Explain about COCOMO model.

(OR)

6. a) Explain about object oriented design?
b) Explain about Quality and Risk Management plan.

UNIT-IV

7. a) Explain unit testing and Code Inspection.
b) Explain programming principles and guidelines.

(OR)

8. Discuss about black box testing and white box testing with an example.

UNIT-V

9. a) Explain software reengineering and forward engineering.
b) Explain SPI return on investment and SPI trends.

(OR)

10. a) Explain various software maintenance activities.
b) Explain various CMM levels.

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18/1/13

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MCA Examination, January 2013

Subject : DBMS
Sub. Code : MCA11302

Exam Time : 3 hrs
Max. Marks : 100

Answer the following questions

5 x 20M = 100M

UNIT-I

1. a) Give advantages of DBMS.
b) Define Database, Metadata, Referential Integrity.
(OR)
2. What are views, give the queries to create, destroy and alter views with examples.

UNIT-II

3. Explain select, project and rename operators?
(OR)
4. a) Explain Nested queries with an example.
b) Give the examples of equi join and non-equi join.

UNIT-III

5. Explain ISAM.
(OR)
6. Explain Extendible Hashing.

UNIT-IV

7. a) Explain ACID properties of Transactions.
b) What are schedules, give an example.
(OR)
8. Explain lock management in handling deadlocks.

UNIT-V

9. Explain phases in ARIES Crash recovery.
(OR)
10. Explain mandatory access control.

16/1/13

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