

LOYOLA ACADEMY DEGREE & P.G. COLLEGE
(An Autonomous and Accredited with 'A' Grade by NAAC)

MID – I (II-SEMESTER) EXAMINATIONS-2013

Class : NMCA

Subject: Data Warehousing & Data Mining

Date : 24-06-13 (Morning)

Sub. Code : MCA11401

Duration Time : 2 hrs.

Max. Marks : 28

Answer any FOUR of the following questions:

[4 x 7 = 28 M]

1. Explain ETL process.
2. Explain Star Schema.
3. Define fact table and dimension table. Write the characteristics of fact table and dimension table.
4. What is Data Mart? What are the two approaches to build a Data Mart? Write any three differences between Data Mart and Data warehouse
5. Explain Snowflake Schema with an example.
6. Define Data warehouse. Explain information flow mechanism.

Time : 2 hrs

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MID – I (II-SEMESTER) EXAMINATIONS-2013

Class : AMCA
Subject: Computer Networks
Date : 24-06-13 (Afternoon)

Sub. Code : MCA11402
Duration Time : 2 hrs.
Max. Marks : 28

Answer any FOUR of the following questions:

[4 x 7 = 28 M]

1. Explain UDP.
2. Explain TCP header and connection establishment.
3. Explain TCP congestion control.
4. Explain DNS.
5. Explain WWW
6. What are the different classes in IP-addressing? What is subnetting.

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MID – I (II-SEMESTER) EXAMINATIONS-2013

Class : NMCA
Subject: Web Programming
Date : 25-06-13 (Afternoon)

Sub. Code : MCA11404
Duration Time : 2 hrs.
Max. Marks : 28

Answer any FOUR of the following questions:

[4 x 7 = 28 M]

1. [a] List out string manipulating functions of VB script.
[b] Write a pgm to implement some of these functions.
2. [a] List out different datatypes supported by VB script.
[b] Write a pgm to find maximum of 3 numbers using VB script.
3. [a] Write about web server and its functions.
[b] Write any one of the web server in detail.
4. Write about filters available in DHTML and write a program to implement any one of the filter.
5. [a] What is object referencing? Explain it with an example.
[b] Write a pgm to print 'collection all'.
6. [a] Why error handling is important? Give a situation where we need error handling.
[b] Write a pgm to implement ON-CLICK and ON-LOAD events.

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MID – II (II-SEMESTER) EXAMINATIONS-2013

Class : NMCA

Subject: Distributed System

Date : 25-06-13 (Morning)

Sub. Code : MCA11406

Duration Time : 2 hrs.

Max. Marks : 28

Answer any FOUR of the following questions:

[$4 \times 7 = 28$ M]

1. Explain in detail about CORBA architecture and its services.
2. Explain in detail about DCOM architecture and its services.
3. List out the differences between CORBA, DCOM and GLOBE.
4. What do you mean by distributed scheduling? Explain in detail about load distributed algorithms.
5. What are the components related to distributed shared memory?
Explain in detail about Sender-initiated and Receiver-initiated algorithms.

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LOYOLA ACADEMY DEGREE & PG COLLEGE, OLD ALWAL
(An Autonomous and Re-accredited with 'A' Grade by NAAC)
MCA I/II Sem. Regular Examination, Aug/Sept 2013

Subject : DATA STRUCTURES USING C++
Sub. Code : MCA10204

Exam Time : 3 hrs
Max. Marks : 100

Note : Answer the following Questions.

5 X 20 = 100 Marks

UNIT - I

1. (a) Compare Array based representations with Linked list representations. – **8 M**
(b) How Circular linked lists are different from ordered linked list. Explain – **12 M**

2. Write a C++ program to represent double linked list showing its all operations. – **20 M**

3. (a) Explain about the applications of Queue. – **10 M**
(b) Explain about operations of Stack through array and linked list representations. – **10M**

4. (a) How sparse matrix is different from normal matrix and also explain its applications. – **10 M**
(b) Write a C++ program to represent Queue and its operations through pointers. – **10 M**

UNIT - III

5. Explain about both recursive and non-recursive Binary Tree traversals – **20 M**

6. (a) Explain about AVL trees and its operations. – **10 M**
(b) Explain about B-Trees and its operations. – **10 M**

UNIT - IV

7. (a) Draw a table of complexity analysis of sorting algorithms. – **10 M**
(b) How binary search is different from sequential search. Explain. – **10 M**

8. Write the algorithm of Heap sort. Sort the following numbers in ascending order and show how it sorts these numbers.
(8,7,6,5,4,3,2,1) – **20 M**

UNIT - V

9. (a) Explain about the applications of Graphs. – **10 M**
(b) Compare depth-first with - breadth-first traversals. – **10 M**

(OR)

10. Explain about Shortest path and minimal spacing tree. Write the algorithm of them. – **20 M**

LOYOLA ACADEMY DEGREE & PG COLLEGE, OLD ALWAL
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MCA Examination, Aug/Sept 2013

Subject : PRINCIPLES OF OBJECT ORIENTED PROGRAMMING **Exam Time: 3 hrs**
Sub. Code : MCA10202 **Max. Marks : 100**

Note : Answer all Questions. Each question carry equal marks **5 X 20 = 100 Marks**

1. Explain the concept of Control Statements with examples? (20 Marks)

OR

2. Explain the concept of Inheritance with a program? **(20 Marks)**

UNIT - II

3. (a) Explain the concept of Multithreaded Programming? (20 Marks)

5

4. (a) Explain all the details about Reading and Writing files? (10 Marks)
(b) Explain the concept of String Handling? (10 Marks)

UNIT - III

5. Explain the concept of collections Interfaces with Program? (20 Marks)

OR

6. Explain the concept of String Tokenizer with an example? . (20 Marks)

UNIT - IV

7. Explain the concept of Serialization. Describe the Interfaces and classes that support Serialization? (20 Marks)

OR

8. Explain in detail the Files concept with good example? (20 Marks)

UNIT - V

9. What is an Applet? Explain the Applet Architecture? Write an Applet Program(Any)? (20 Marks)

OR

10. Explain (a) Event Handling (b) Event Listener Interface (20 Marks)

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MCA I/II Sem. Regular Examination, Aug/Sept 2013

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LOYOLA ACADEMY DEGREE & PG COLLEGE, OLD ALWAL
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MCA Examination, Aug/Sept 2013

Subject : MANAGEMENT INFORMATION SYSTEM
Sub. Code : MCA10203

Exam Time : 3 hrs
Max. Marks : 100

Note : Answer the following Questions.

5 X 20 = 100 Marks

UNIT – I

1. (a) What are the five competitive forces that Information Technology can address at firm level. - 10 Marks
(b) Explain how IT Applications can improve a Business process.
10 Marks
2. (a) What is Re engineering? What are the principles of Re engineering?.
(b) Explain the Systems Environment?.
- 10 marks.
- 10 marks.

UNIT – II

3. Explain Strategical Information System in all the four business functions of Finance, Marketing, Production and Human resource .
- 20 Marks
4. Explain the Operational HRIS.
-20 marks.

UNIT – III

5. Explain three Business System Planning Methods.
- 20 marks.
6. (a) Explain the Tangible and Intangible benefits of Information System.
(b) Explain about alternative approaches for application development.
- 10 Marks.
- 10 Marks.

UNIT – IV

7. (a) Explain the features of DSS.
- 10 Marks
(b) Differentiate between DSS and ESS
- 10 Marks
8. (a) Explain the models for GDSS.
- 10 Marks
(b) Write notes on Decision Support Development Life Cycle.
- 10 Marks

UNIT – V

9. (a) List four types of Categories of Controls.
- 10 Marks
(b) What is a firewall and how does it protect an Organization .
- 10 Marks
- OR
10. (a)Differentiate between centralized, de Centralized and distributed data processing.
- 10 Marks
(b) Write notes on Ethical Issues in Information Systems.
- 10 Marks

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

Subject : Elements of Information Technology
Sub. Code : MCA10104

Exam Time : 3 hrs
Max. Marks : 100

Answer the following questions. Each question carries equal marks. $5 \times 20M = 100M$

1. a) Explain different generations of computers?
b) Explain application and system software.
(OR)
2. a) Explain the features of object oriented programming.
b) Explain the DOS different internal and external commands with syntax and an example of each.
3. Draw the block diagram of a computer and explain the functions of each component in it.
(OR)
4. Explain the following
a) Soft copy b) Hard copy c) Hard disk d) Magnetic tape
5. a) Write short notes on internet and WWW.
b) Explain communication channels.
(OR)
6. a) Explain Video conferencing.
b) Explain different online services.
7. a) Explain file Management.
b) Explain the types of database and features of DBMS.
(OR)
8. a) Explain word processing and spread sheet.
b) Write short notes on HTML.
9. a) Explain different phases of system development life cycle with a neat diagram.
b) Explain threats to computers and communication systems.
(OR)
10. a) What are the departments, tasks and levels of managers in an organization.
b) Write short notes on MIS.

11-1-103

LOYOLA ACADEMY DEGREE & PG COLLEGE, OLD ALWAL

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MCA (II semester) Examination, January 2013

Supple

Subject : Data Structures using C++
Sub. Code : MCA 10204

Exam Time : 3 hrs
Max. Marks : 100

Answer the following questions

5 x 20M = 100M

UNIT - I

1. Explain the operations on linked list with example.
2. Write a C++ program to implement Circular linked list.

UNIT-II

3. Discuss the stack operations with example.
4. Discuss the linked representation of queues.

UNIT-III

5. Explain B-Trees.
6. Explain AVL Trees and its operation.

UNIT-IV

7. Discuss about Hashing in detail.
8. Write an algorithm to implement Quick sort. Give its time complexity.

UNIT - V

9. Explain about graph Traversal techniques with examples.
10. Explain the method of finding shortest path with algorithm.

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MCA I/II Sem. Regular Examination, Aug/Sept 2013

Subject : COMPUTER ARCHITECTURE
Sub. Code : MCA10205

Exam Time : 3 hrs
Max. Marks : 100

Note : Answer the following Questions. Each carries equal marks.

5 X 20 = 100 Marks

UNIT - I

1. (a) Distinguish between combinational and sequential circuits.
(b) Explain the mechanism of error detection.

(OR)

2. (a) Simplify the Boolean function
 $F(A,B,C,D)=\sum(0,1,2,5,8,9,10)$ using four variable map.(use K-map).
(b) Draw the block diagram of a 16 to 1 multiplexer and explain its operation.

UNIT - II

3. (a) Explain and draw the block diagram of control unit of basic computer.
(b) Construct a common bus system for four Registers.

(OR)

4. (a) Explain the applications of logic micro operations.
(b) Explain the various instruction formats with example.

UNIT - III

5. Define an assembler. Explain about first pass and second pass of assembler using flow charts.

(OR)

6. What is meant by address sequencing? Draw and explain about Micro program sequence for a control unit.

UNIT - IV

7. (a) Write short notes on Stack organization.
(b) What is meant by parallel processing? Discuss about pipeline processing.

(OR)

8. (a) How to perform the multiplication of two floating point numbers.
(b) Explain the various addressing models.

UNIT - V

9. Explain about working of DMA Controller using a neat diagram.

(OR)

10. (a) Compare the performance of Cache memory and a main memory like disk memory.
(b) Explain the features of serial communication.

LOYOLA ACADEMY DEGREE & PG COLLEGE, OLD ALWAL

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MCA Examination, Aug/Sept 2013

Subject : ACCOUNTING & FINANCIAL MANAGEMENT
Sub. Code : MCA10 201

Exam Time: 3 hrs
Max. Marks : 100

Note : Answer all questions. Each question carry equal marks

5 X 20 = 100 Marks

- 1 (A) i) Explain the concept Accounting cycle **(5 marks)**
 ii) Define financial accounting. Explain the concepts and conventions of financial accounting. **(7+8=15 marks.)**

(OR)

From the following Trial balance of Mr. X, prepare final accounts for the year ending 31 December 2012.

Particulars	Amount (Rs)	Particulars	Amount (Rs)
Pant and machinery	1,00,000	Sales	3,50,000
Goodwill	50,000	Purchase returns	12,000
Patents	25,000	Discount received	8,000
Purchases	2,50,000	Commission	12,000
Sales returns	5,000	Sundry creditors	20,000
Discount	4,000	Bank overdraft	30,000
Wages	15,000	Capital	1,00,000
Insurance	8,000	Bills payable	20,000
Sundry debtors	25,000		
Bad debts	3,000		
Direct Expenses	3,000		
Office Salaries	26,000		
Furniture	30,000		
Rent	2,000		
Audit fee	6,000		
Total	5,52,000	Total	5,52,000

Adjustments:

1. Closing stock on 31-12-2012 was Rs. 90,000/-
2. Depreciate plant and machinery @ 10% and furniture @ 15%.
3. Make a provision of 5% on sundry debtors for doubt full

(20 marks)

UNIT -II

2. A) What do you mean by financial statement analysis? Explain the Techniques of analysing the financial statements.

(OR)

2 B) Following is the Balance sheet of Mr X as on 31st December 2012.

Liabilities	Amount (Rs)	Assets	Amount (Rs)
Paid up share capital	15,00,000	Fixed assets	16,50,000
Reserves and surplus	6,00,000	Stock in trade	9,10,000
Debentures (Long term)	5,00,000	Bad debts	12,40,000
Bank over draft	2,00,000	Investments (short term)	1,60,000
Sundry creditors	12,00,000	Cash	40,000
Total	40,00,000	Total	40,00,000

Annual sales Rs.74,40,000/- Gross profit Rs. 7,44,000/-

Bank over draft is to be paid in one year.

You are required to calculate the following ratios for the year

- A) Current ratio B) Quick ratio C) Debt – Equity ratio D) Debtors turnover ratio E)
Stock turnover ratio F) Gross profit ratio

(20 Marks)

Unit- III

- 3 A) Define working capital. Explain the determinants of working capital. **(4+16 Marks)**

(OR)

- 3 B) From the following information prepare I) Schedule of changes in working capital ii) funds flow statement.

(20 Marks)

Balance sheets as on 31-March- 2010 and 31-March- 2011

LIABILITIES	AMOUNT		Assets	Amount	
	2010	2011		2010	2011
Share capital	300000	350000	Fixed assets (Net)	500000	600000
Debentures	400000	300000	Investments	30000	80000
Profit and loss a/c	200000	300000	Current assets	440000	425000
Current liabilities	80000	160000	Discount on issue of debentures	10000	5000
Total	980000	11,10,000		980000	11,10,000

Additional information:

1. A machine with Book value of 40,000/- was sold for 25,000/-
2. Depreciation charged during the year on fixed assets Rs. 60,000/-

Unit -IV

4 A) A business needs a new machine and has to make the choice between machine X and machine Y. The initial cost of purchase and the net cash flow over a 5 years period to the business have been estimated for each machine as follows:

	Machine X	Machine Y
Initial cost of Purchase	Rs. 20,000	Rs. 28,000
Cash inflows:		
End of 1 year	8,000	10,000
End of 2 year	12,000	12,000
End of 3 year	9,000	12,000
End of 4 year	7,000	9,000
End of 5 year	6,000	9,000

You are required to evaluate the two machines by using:

- 1) Pay back period method 2) Net present value method 3) Profitability Index
(6+8+6=20 marks)

(OR)

4 B) Define Cost of Capital. Explain the methods of valuation of Equity shares of a limited company.

(6+14=20 marks)

Unit -V

5 A) Define Variable costing. Explain the main characteristics of variable costing and how it differ from absorption costing.

(5+7+8 Marks)

(OR)

5 B) A firm is producing a consumer product whose cost data is as follows:

Variable cost per units 6 Rs per unit Selling price 10 Rs. Per unit

The firm is incurring a fixed cost of Rs 60,000 per year.

You are required to calculate:

- a) P/V ratio b) Break even point in Units c) Sales required to earn a profit of Rs30,000/- d) Profit/loss when sales is Rs.2,00,000/-

(20 Marks)
