SET - 1

MASTER OF COMPUTER APPLICATIONS (MCA)
(Revised)

Term-End Practical Examination   00098

June, 2014

MCSL-036 : LABORATORY COURSE (FOR OBJECT ORIENTED ANALYSIS AND DESIGN, SOFTWARE ENGINEERING AND ACCOUNTANCY AND FINANCIAL MANAGEMENT)

Time allowed : 3 hours   *Maximum Marks : 100*

Note :   *There are **three sections** in this paper. Each section is for **one hour** duration including viva-voce. Attempt only those section(s) in which you are **not** successful as yet. Please note that remaining marks are for **viva-voce** of the sections.*

SECTION-A
(OBJECT ORIENTED ANALYSIS AND DESIGN)

1.   An oganization wants to develop an Employee Management System (EMS). EMS will have profiles of all employees, details related to Salary, Deductions, Medical Claims, Leave records etc. Based on the privileges granted, an employee will be able to perform operations on the data related to other employees.

Make necessary assumptions, if any.

Perform the following activities for the description given above :

(a)   Draw a use case diagram.   5

(b)   Define all the classes and draw a class diagram.   10

(c)   Draw the sequence and collaboration diagram.   10

SECTION-B
(SOFTWARE ENGINEERING)

1.   Perform the following activities for the description given in Section-A (Question 1)

(a)   Draw the DFDs at level - 0 and level - 1.   7

(b)   Write Pseudo Code for atleast two processes defined in level - 1 DFD.   8

(c)   Draw an E-R diagram and convert ER diagram into relational tables showing the   10
      integrity constraints.

SECTION-C

(ACCOUNTANCY AND FINANCIAL MANAGEMENT)

1. Post the following transactions after creating a new company. Also, prepare the journal **30** ledger and trial balance for the company.

January 2014	Transactions	Amount (INR)
1st	Started business with Cash	100000
2nd	Deposit in the Bank	10000
6th	Purchased goods for Cash	20000
10th	Purchased goods from M/s Kapoor on Credit	20000
14th	Sold goods to M/s Bhushan for Cash	50000
16th	Paid Cash to M/s Kapoor	10000
18th	Paid Rent	20000
22nd	Paid Salary	30000

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MASTER OF COMPUTER APPLICATIONS (MCA)
(Revised)

Term-End Practical Examination 01055

June, 2014

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SECTION-A

(OBJECT ORIENTED ANALYSIS AND DESIGN)

1. A Bank would like to have a network of Automated Teller Machines (ATM) across the Country. An ATM should be able to provide the following information to the users :

    (a) Balance in the Account

    (b) Deposit Cash

    (c) Deposit Cheque

    (d) Withdraw Cash

    The distance between any two ATMs should be atleast 1 km.

    Make appropriate assumptions about the system, if necessary. Perform the following activities for the description given above :

    (a) Draw a use case diagram.   5

    (b) Define all the classes and draw a class diagram.   10

    (c) Draw the sequence and collaboration diagram.   10

SECTION-B

(SOFTWARE ENGINEERING)

1. Perform the following activities for the description given in "Section-A" (Question 1)

    (a) Draw the DFDs at level - 0 and level - 1.   **7**

    (b) Write Pseudo Code for atleast two processes defined in level - 1 DFD.   **8**

    (c) Draw an E-R diagram and convert E-R diagram into relational tables   **10**
        showing the integrity constraints.

SECTION-C

(ACCOUNTANCY AND FINANCIAL MANAGEMENT)

1. Post the following transaction for a new company. Also, prepare the   **30**
   journal ledger and trial balance.

March 2014	Transactions	Amount (INR)
1st	Started business with Cash	200000
5th	Purchased Computers on Credit	100000
8th	Purchased goods for Cash	50000
10th	Sold goods to M/s Rajesh on Credit	50000
12th	Sold goods to M/s Ravi on Cash	70000
13th	Received Cash from M/s Rajesh	30000
15th	Paid Salary	70000

MASTER OF COMPUTER APPLICATIONS (MCA)
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Term-End Practical Examination   00536

June, 2014

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SECTION-A

(OBJECT ORIENTED ANALYSIS AND DESIGN)

1.   A Library Management System (LMS) stores the details of all books, magazines and News papers in the library. It also keeps track of issue and return of books. It also consists of information about employees and students who borrow books from the library. It also keeps track of penalties that need to be collected for late return of books. Make appropriate assumptions about the system, if necessary.

Perform the following activities for the description given above :

(a)   Draw a use case diagram.   5

(b)   Define all the classes and draw a class diagram.   10

(c)   Draw the sequence and collaboration diagram.   10

SECTION-B

(SOFTWARE ENGINEERING)

1.   Perform the following activities for the description given in "Section-A" (Question 1)

(a)   Draw the DFDs at level - 0 and level - 1.   7

(b)   Write Pseudo Code for atleast two processes defined in level - 1 DFD.   8

(c)   Draw an E-R diagram and convert E-R diagram into relational tables showing   10
      the integrity constraints.

SECTION - C

(ACCOUNTANCY AND FINANCIAL MANAGEMENT)

1. Post the following transaction for a new company. Also, prepare the journal ledger and trial balance : **30**

April 2014	Transactions	Amount (INR)
1st	Started business with Cash	1000000
3rd	Deposited in the Bank	30000
5th	Purchased furniture for Cash	10000
6th	Purchased Computers on Credit from M/s ABC	300000
8th	Sold Computers to M/s XYZ for Cash	600000
15th	Paid to M/s ABC	300000
18th	Paid Rent	150000
25th	Paid Salary	150000

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