

**MASTER OF COMPUTER APPLICATIONS (Revised)**  
**(MCA)**

**Term-End Practical Examination**

**December, 2015**

02399

**MCSL-036(P)/S3 : LAB COURSE (FOR OOAD, SOFTWARE ENGINEERING,  
ACCOUNTANCY AND FINANCIAL MANAGEMENT)**

*Time : 3 Hours*

*Maximum Marks : 100*

- Note :**
- (i) There are **three** sections in this paper.
  - (ii) Each section is for one hour duration including the viva-voce.
  - (iii) Attempt only that part(s) in which you are **not successful as yet**.
  - (iv) Answer **all** the questions in each section.
  - (v) The remaining marks are for viva-voce.
  - (vi) Viva-voce marks for Section A, B and C are 5, 5 and 10 respectively.

**SECTION A**

**(Object Oriented Analysis and Design)**

1. A library has on-line subscription of journals and e-books. Payments for subscription are done yearly in the month of March. Reminders have to be sent to the publishers if the subscribed journals and e-books are not available on-line. Requests have to be sent to different schools of studies for renewal of journals and e-books as well as new subscriptions. Records have to be maintained for the number of users for these subscriptions on a monthly basis. Perform the following tasks :

- (a) Draw the use case diagram. 5
- (b) Design all the classes and draw a class diagram. 10
- (b) Draw the sequence and collaboration diagram. 10

## **SECTION B**

### **(Software Engineering)**

- 2.** Perform the following activities for the problem description given in Q. No. 1 (Section A) :
- (a) Draw the DFDs at level 0 and level 1. 7
  - (b) Write pseudocodes for at least two processes defined at level 1 of DFD. 8
  - (c) Draw an E–R diagram, convert the E–R diagram into relational tables showing the integrity constraints. 10

## SECTION C

### (Accountancy and Financial Management)

3. Post the following transactions of a library to prepare the journal, ledger and trial balance.

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May 2015	Transaction	Amount (₹)
5th	Started the services with cash	5,00,000
10th	Deposited in the bank	1,00,000
15th	Subscribed e-journals on credit	1,50,000
17th	Subscribed e-books on credit	1,00,000
20th	Purchased furniture	1,50,000
25th	Purchased computers	80,000
27th	Paid electricity bill	10,000
28th	Paid newspaper bill	25,000
30th	Paid salary	1,00,000