

MASTER OF COMPUTER APPLICATIONS (Revised)**(MCA)****Term-End Practical Examination****June, 2018****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) *Section A and Section B carry 25 marks each for the problem, and 5 marks for viva-voce. Section C carries 30 marks for the problem and 10 marks for viva-voce.*

SECTION A**(Object Oriented Analysis and Design)**

1. The purpose of online student information system is to connect several schools of studies and improve academic and administrative processes to help students achieve success. It also supports seamless integration with several prominent software systems using this system. All the schools within the university can be synchronized to view and perform functions such as admission, attendance, grades, time table, report card, library facility. College admissions can send automatic mails and SMS alerts to students, faculty and administration. They can also view performance of the students.

You are required to do the following tasks :

- (a) Draw the use case diagram. 7
- (b) Define all the classes and draw the class diagram. 8
- (c) Draw the sequence and collaboration diagrams. 10

SECTION B
(Software Engineering)

- 2. Perform the following activities for the problem description given in Q1 (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 the DFD. 8
 - (c) Draw an E-R diagram of the above problem (Q1), convert the E-R diagram into relational tables showing the integrity constraints and relationship between entities. 10

SECTION C

(Accountancy and Financial Management)

3. Post the following transactions of a software development company to prepare Journal, Ledger and Trial Balance :

30

March 2018	Transaction	Amount (INR)
5 th	Started the business with cash	3,00,000
10 th	Purchased S/W, computers and furniture on credit	3,50,000
15 th	Purchased books in cash	50,000
20 th	Advertisement cost (on credit)	1,00,000
22 nd	Sold application S/W	80,000
27 th	Paid salary	90,000
30 th	Paid rent	40,000