



Register Number:.....

MCA DEGREE EXAMINATIONS: NOV / DEC 2014

(Regulation 2009)

Fourth Semester.

MASTER OF COMPUTER APPLICATIONS

MCA516: Object Oriented Analysis and Design

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

1. State the limitations of structured approach in software development.
2. What is a pattern?
3. Distinguish include and extend relationship in use-case diagram.
4. What do you mean by cohesion? Give the types of cohesion.
5. What is client server computing?
6. List the rules to be followed for UI design.
7. What is path testing?
8. How software verification differs from software validation?
9. What is a test plan?
10. What is user satisfaction test?

PART B (5 x 16 = 80 Marks)

11. a) Follow the guidelines of Rumbaugh OMT, present the object model, dynamic model, and functional model for the Bank ATM system.

(OR)

- b) (i) Specify the processes mentioned by Booch Methodology for the efficient software development? (8)
- (ii) What is design pattern? How is design pattern used in the design discipline? (8)

12. a) How does the Unified Approach help in Object Oriented Software Development?

(OR)

b) Why dynamic diagram is used during design and implementation phases rather static? Demonstrate State chart, Activity diagram for library management system.

13. a) Draw the use-case and class diagram for the following narrative. Give appropriate explanation.

A patient record and scheduling system in a doctor's office is used by the receptionists, the nurses, and doctors. The receptionists use the system to enter the new patient information when first time patient visits the doctor. They also schedule all appointments. The nurses use the system to keep track of the results of each visit and to enter information about patient care, such as medications and diagnoses. The nurses can also access the information to print out patient reports or the history of patient visits. The doctors primarily use the system to view patient history. The doctors may enter some patient treatment information occasionally, but most frequently they let the nurses enter this information.

(OR)

b) (i) Write about the Common Class Pattern approach for identifying classes in Object Oriented Analysis. Identify the various classes for Inventory Control System with Common Class Pattern approach. (10)

(ii) Identify and define the different relationships that may exist among the classes of Inventory Control System. (6)

14. a) (i) Why Design Axioms and Corollaries are important in Object Oriented Design Process? Describe each corollary briefly. (10)

(ii) Illustrate the process of creating the access layer classes for the software under development. (6)

(OR)

b) (i) Illustrate the macro and micro processes of view layer design. (10)

(ii) State the guidelines to be followed for designing Forms and Data Entry Windows. (6)

15. a) A payroll system has a data entry subsystem that is used to enter timecard information for hourly employees. What kinds of controls would you implement to ensure that the data is correct and error free? What other controls would you include to ensure that the data entry clerk not inflate the hours on the timecard? Mention the guidelines to be followed for designing Application Windows. (10) (6)

(OR)

b) (i) Describe the different testing strategies to test the efficiency of the software (8)

(ii) How do you develop a custom form for a user satisfaction test? (8)
