M.C.A. DEGREE EXAMINATIONS: APRIL 2010

Fourth Semester

P07CA403: OBJECT ORIENTED ANALYSIS AND DESIGN

Time: Three Hours   **Maximum Marks: 100**

Answer ALL Questions:-

PART A (10 x 2 = 20 Marks)

1. Differentiate between static binding and dynamic binding.

2. Differentiate between software verification and software validation.

3. Define the terms: i) pattern and ii) framework

4. Give the advantages of modeling.

5. List the guidelines to be followed for defining attributes of classes in use cases.

6. What are the two major properties of a part –of relationship?

7. Define the terms: i) coupling and ii) cohesion

8. Define the terms: i) stored procedure and ii) referential integrity

9. What is meant by scenario based testing?

10. What is quality?

PART B (5 x 16 = 80 Marks)

11. a) (i) How do objects respond to messages?   (4)

    (ii) Explain about Encapsulation and Information hiding.   (6)

    (iii) Explain about associations and aggregations.   (6)

(OR)

    b) (i) Explain about meta classes.   (6)

    (ii) Explain about the software development process with an example.   (10)

12. a) (i) Explain the steps involved in Macro and Micro development processes according to BOOCH methodology.   (6)

    (ii) Explain the essential components of a pattern.   (6)

    (iii) Explain the three layered approach to software development.   (4)

(OR)

    b) (i) Give the primary goals in the design of UML.   (4)

    (ii) Explain the notations associated with designing an UML class diagram.   (8)

    (iii) Explain about UML extensibility.   (4)

13. a) (i) Explain the steps in OOA process. (4)

(ii) Explain the following terms with respect to Use-Case model. (8)

- Use case
- Actors
- Extends association
- Uses association

(iii) Explain the guidelines to be followed for developing effective documentation. (4)

(OR)

b) (i) List and explain the guidelines to be followed in selecting candidate classes from the relevant and fuzzy categories of classes in the problem domain. (6)

(ii) Explain the common class patterns used for identifying classes. (6)

(iii) List and explain the guidelines to be followed for identifying super-sub relationships in the application. (4)

14. a) (i) Explain the corollaries derived from the independence axiom and information axiom. (8)

(ii) Explain the three basic types of attributes. (4)

(iii) Explain the types of methods provided by a class. (4)

(OR)

b) (i) How do you design view layer classes? (8)

(ii) How do you design forms and data entry windows? (8)

15. a) (i) Explain the various testing strategies to test a system. (6)

(ii) Explain the guidelines to be followed for developing quality assurance test cases. (6)

(iii) Explain the guidelines to be followed for developing test plans. (4)

(OR)

b) (i) Explain about usability testing. (8)

(ii) Explain about user satisfaction test. (8)

****