

(Please write your Exam Roll No.)

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## END TERM EXAMINATION

FOURTH SEMESTER [MCA] JUNE – 2013

**Paper Code: MCA-208**

**Subject: Object Oriented Analysis & Design**

**Time: 3 Hours**

**Maximum Marks: 60**

**Note: Attempt any five question including Q.1 which is compulsory. Select one question from each unit.**

Q.1 Attempt the following. (2\*10)

- (a) What is the Object Modeling Techniques (OMT).
- (b) What is the role of Swim lanes & Guard condition in Activity diagram.
- (c) Explain the different among Bidirectional, Unidirectional & Reflexive Association.
- (d) Compare OOAD & SSAD
- (e) Explain the term OORASS & HOOD
- (f) Super state & composite state
- (g) Actor object, Boundary object, Controller object & Entity object in sequence diagram
- (h) State Matrix for object Oriented Testing
- (i) Generalization & Specialization
- (j) Explain the Port & Dependency in Component Diagram

### UNIT-I

Q2

- (a) What is Unified Process Model? Explain the iterations, outcomes & Workflow in unified Process Model with neat diagram. (5)
- (b) How does the Object oriented approach claim to improve the system development (5)

Q.3

(a) What is Object Oriented Paradigm for OOSE? How this model reduces the Risk and increase RE- usability. Explain. (5)

(b) What basic features a programming language needs to support in order to be called an object oriented language. (5)

## UNIT-II

Q.4

(a) The goal of Analysis model is to develop a model of what of the system will do? Draw a Analysis model for Banking System. (5)

(b) Draw Use case diagram for Online Point of Sale Inventory System (show the Extend, Include & Grouping Operations). (5)

Q.5

(a) Explain the system development model architecture for object oriented approach. (5)

(b) What is Analysis & Design Model? Draw Analysis Model for Payroll system and convert it into Design Model. (5)

## UNIT-III

Q.6

(a) Describe the activities of testing in Object Oriented system. Differentiate among State based and Category based partitioning testing techniques. (5)

(b) Draw the sequence diagram for the following case.

P C Jewels has specialized in online jewellery, selling wonderful ranges of Women's jewellery. A customer can register online so that he/she can placed the order & check the status of placed order. A customer can purchase any jewellery item online either by using his/her exiting account or as an anonymous user specifying shipping address & contract information. Customer

can only check the status of his/her order if he/she creates an account. The customer can pay online through credit card or debit and the order will be delivered on the shipping address within one week. (5)

Q.7

(a) What is Construction phase? Explain the procedure of converting analysis model into Construction Model. (5)

(b) Draw the Activity diagram for the following case:

MCA admission procedure is controlled by ABC university is as follows:

- (i) ABC University advertise the date of MCA entrance examination.
- (ii) Student has to apply for the entrance examination.
- (iii) Result are declared by the university.
- (iv) Student has to fill up the option form to select the college of his/her choice.
- (v) University displays the allotment list in the web site and intimate to all collages.
- (vi) Student should report the allotted collages and complete the admission procedure. (5)

#### UNIT-IV

Q.8

(a) What does an Activity diagram represent? What are the Transitions, Forks, Join, swim lanes and object in an activity diagram, explain with suitable diagram. (5)

(b) A publisher publish different books. An author can write different books but for the same publisher. A contract is signed between the publisher and the author. Reports such as number of books sold, number of complementary copied given, royalty amount to be paid to the author etc. are generated from the system. Draw a class Diagram & object Diagram for the above case. (5)

Q.9

(a) What are the different views that can be modelled Using UML? List the different UML diagram which can be used to capture each of the views of software. Explain any two of them. (5)

(b) Draw the State chart diagram for ATM transaction system. (5)