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RN-8193

B. E. - II (Sem. IV) (Computer) Examination

May / June - 2010

Object Oriented Analysis Design & UML

Time : 3 Hours]

[Total Marks : 100

Instructions :

(1)

नीचे दशांश देव निशानीवाणी विगतो उत्तरवडी पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="checkbox"/> B. E. 2 (Sem. 4) (Computer)	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="checkbox"/> Object Oriented Analysis Design & UML	<input type="text"/>
Subject Code No. : <input type="text"/> 8 <input type="text"/> 1 <input type="text"/> 9 <input type="text"/> 3	<input type="text"/>
Section No. (1, 2,.....): <input type="text"/> 1&2	<input type="text"/>
	Student's Signature

- (2) Use **separate** answer sheet for each section.
(3) Make assumption whenever required.
(4) Numbers on the right indicate marks.

SECTION - I

- 1 (a) Answer the following questions. Each question carries **one** mark : **10**
- (i) Define concurrent activity.
 - (ii) What is Object Oriented Themes?
 - (iii) What is Enumerations?
 - (iv) What is an event?
 - (v) Explain packages.
 - (vi) Explain Metadata.
 - (vii) What is Association End Names.
 - (viii) What is visibility in class diagrams?
 - (ix) What is multiple classification?
 - (x) Define Do-activities.
- (b) Draw the advanced state diagram of ATM system. **10**

- 2 (a) Explain Links and Associations in Class Model. 5
 (b) Explain three basic models. 5
 (c) Explain Reification with example. 5

- 3 (a) Draw the use Case Diagram of Online HR system. 8
 (b) What is guard condition?
 (c) Explain guidelines for activity models, sequence models and use case models. 5

OR

- 3 (a) Briefly explain OCL constructs for Traversing Class Models. 7
 (b) Draw the sequence diagram of Library Management Systems. 8

SECTION - II

- 4 (a) Attempt the following : (any six) 6
 (i) _____ system is an interactive system with tight time constraints on actions.
 (ii) _____ is the unplanned termination of a system.
 (iii) Define : library.
 (iv) State true or false: Many different abstractions of the same thing are possible.
 (v) Define : framework.
 (vi) State True or Falsse: A pattern is proven solution to a general problem.
 (vii) What do you mean by Maintenance phase of Software Development Stages?
 (viii) _____ analysis focuses on real-world things whose semantics the application captures.
 (b) What do you mean by Software Development Process in Object oriented concepts? Define in each of the phase of software development stages in brief. 8

OR

- (b) Explain layers and partitions while breaking system into subsystems. What is the difference between them? 8
 (c) Explain procedure driven control. 6

- 5 (a) The software component cataloguing software consists of a software component catalogue and various functions defined on this components catalogue. The Software component catalogue should hold details of the component which are potentially reusable. 7

The reusable components can be either designed or code. The design might have been constructed using different design notations such as UML, ERD, structured design etc. Similarly the code might have been written using different programming languages.

A cataloguer may enter a component in the catalogue, May delete components from the catalogue and may associate reuse information with the catalogue component in the form of a set of keywords.

A user of the catalogue may query the availability of the component using certain keywords to describe the component.

In order to help manage the component catalogue (i.e. periodically purge the unused components) the cataloguing software should maintain information such as how many times a component has been used and how many time components has come up in query but not used. Since the no of components usually tend to be very high it is desirable to be able to classify the different types of components hierarchally.

A user should be able to browse the components in each category.

- (i) Identify the classes for the above system.
- (ii) Describe the system boundary for this application in a few sentences
- (iii) Identify the actors for the application.

- (b) Attempt any **two** : 8

- (i) Explain different ways to assign operations to classes.
- (ii) Enlist any eight criteria to discard unnecessary and incorrect associations in domain class model.
- (iii) What do you mean by system conception? Which are the ways to find new system concepts?

- 6** (a) Consider ATM (Automated Teller Machine) network. **7**
Answer the following questions to elaborate the initial concept.
- (i) Who is the application for?
 - (ii) What problems will it solve?
 - (iii) Where will it be used?
 - (iv) How will it work?

OR

- (a) Enlist various kinds of global resources. How to handle them? **7**
- (b) Define the following : (any four) **8**
- (i) Refactoring
 - (ii) System Design
 - (iii) Domain Analysis
 - (iv) System Conception
 - (v) Reification