



SF - 8182

B. E. II (Sem. IV) (Comp.) Examination

May / June - 2011

Object Oriented Analysis Design and UML

Time : 3 Hours]

[Total Marks : 100

Instructions :

(1)

नीचे दशांशवैक निशानीवाणी विगतो उत्तरवडी पर अवश्य लभवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="B. E. 2 (SEM. 4) (COMP.)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="OBJECT ORIENTED ANALYSIS DESIGN AND UML"/>	<input type="text"/>
Subject Code No. : <input type="text" value="8"/> <input type="text" value="1"/> <input type="text" value="8"/> <input type="text" value="2"/>	<input type="text"/>
Section No. (1, 2,.....): <input type="text" value="1&amp;2"/>	
Student's Signature	

- (2) Use separate answer sheet for each section.
- (3) Give example (s) if necessary.
- (4) Numbers on the right indicate marks.

SECTION - I

- |   |   |    |
|---|---|----|
| 1 | (a) Answer the following :  | 10 |
|   | (1) _____ approach of development life cycle dictates the development stages in a rigid linear sequence with no backtracking. | 1  |
|   | (2) What do you mean by data dictionary ?   | 1  |
|   | (3) List out different stages of software development process.  | 2  |
|   | (4) Differentiate association and aggregation.  | 2  |
|   | (5) _____ deals with the genesis of an application.   | 1  |
|   | (6) Define term : reification.  | 2  |
|   | (7) "During analysis the focus is on what needs to be done, independent of how it is done." True / False.                     | 1  |

- (b) Maintain a small database, with limited entries of various 'categories of books. On home page of site put up links so that user can login. Once login, he can make some' order, cancel previous order with checking that order can be cancelled if cancellation date is not more than 7 days from the order data :  
Also there should be some functionality which will allow user to search for some books by author, category, publication company etc. 8
- (a) Identify the classes for the above system.  
(b) Describe the system boundry for this application in a few sentences.  
(c) Identify the actors for the application.
- 2** (a) Consider online auction system which allows to bid for the items displayed for auctioning online. Elaborate the following high level questions and explain your answers. 8
- (a) Who is the application for ?  
(b) Who are the stake holders ?  
(c) Identify three featured that should be included and three features that should be omitted.  
What are two of the largest risks ?
- (b) Write short note on the ways the inheritance can be added : 6
- (a) Bottom up generalization  
(b) Top down specialization.
- OR**
- 2** (a) Give an example for each of the following associations : 8
- (a) Association end names  
(b) Qualified association  
(c) Aggregation  
(d) Derived association
- (b) What are the probable questions one has to answer to justify the good system concept ? 6
- 3** Answer any **three** of the following : 18
- (1) Write short note on designing algorithm.  
(2) What are the different criteria to discard the unnecessary and incorrect classes ?  
(3) Enlist various kinds of global resources. How to handle them ?  
(4) Write short on following architectural styles.  
(a) Batch transformation  
(b) Continuous transformation

## SECTION - II

- 4 (a) Attempt the following : (any seven) 7
- (1) State True or False :  
many different abstractions of the same thing are possible.
  - (2) Define Multiplicity.
  - (3) \_\_\_\_\_ is a constraint on the cardinality of a set.
  - (4) Define transition in state diagram.
  - (5) State True or False :  
A bag is a collection of elements with duplicates allowed.
  - (6) What is the purpose of activity diagram ?
  - (7) What do you mean by enumerations ?
  - (8) Explain do - activity within a state.
- (b) Draw the sequence diagram for online enrollment of a student for particular course. 8
- (c) Explain aggregation versus composition with example. 5
- OR**
- (c) What do you mean by a model ? Explain various purposes of modeling. 5
- 5 (a) What do you mean by object - orientation ? 8  
Explain the concept of classes, objects, inheritance and polymorphism with example.
- (b) Prepare a class diagram for a graphical document editor that support grouping. Assume that a document consists of several sheets. Each sheet contains drawing objects, including text, geometrical objects and groups. A group is simply a set of drawing objects, possibly including other groups. A group must also contain at least two drawing objects. A drawing object can be a direct member of at most one group. Geometrical objects include circles, ellipses, rectangles, line and squares. 7
- 6 Attempt any **three** : 15
- (1) Explain reification with example.
  - (2) Explain different kind of events in state modeling.
  - (3) Draw the use case diagram for a vending machine which delivers a beverage after a customer selects and pays for it.
  - (4) Explain swimlanes in activity diagram with example.