

**B.TECH. COMPUTER SCIENCE AND  
ENGINEERING (BTCSEVI)**

**Term-End Examination**

**December, 2012**

**BICSE-002 : OBJECT ORIENTED DESIGN AND  
PROGRAMMING**

*Time : 3 hours*

*Maximum Marks : 70*

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*Note : Attempt any seven questions. Assume suitable missing data, if any.*

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1. (a) What are the important features of a good design ? List five of them. 5  
(b) Explain how classes can be designed ? 5
  
2. (a) Define "Structure Chart". 5  
(b) "Data Dictionary is a part of Metadata". 5  
Justify the statement.
  
3. (a) Write benefits of the Object Model. 5  
(b) Differentiate between : (with the help of example) 5
  - (i) Association and Aggregation
  - (ii) DBMS and RDBMS

4. (a) Define the following terms : 5
- (i) Link
  - (ii) Integrity Constraints
  - (iii) Event
  - (iv) Abstract class
  - (v) Extensibility
- (b) Classify each of the relationships as either a class, an instance of a class, inheritance, aggregation, association relationship or none exist. 5
- (i) Student enrollment process
  - (ii) Semester performance of a student
  - (iii) Area - Circle, Triangle
  - (iv) ABC University
  - (v) Book - Copy
5. (a) How do you implement constraints ? Explain. 5
- (b) Write the policies for Detailed Design Dealing with temporal data. 5
6. (a) Draw the object model to describe online gaming system. 5
- (b) Using the concept of multiple inheritance, create a class that represents a kind of plant in a forest using C++. 5

7. (a) Compare the followings : 5  
(i) Strong versus Weak Typing  
(ii) Logical versus Physical Models  
(b) Write the characteristics of a Functional Model. 5
8. (a) Write the procedure to evaluate the quality of a Design Model. 5  
(b) Explain - ONN constructs. 5
9. (a) List five object oriented programming languages with their specific features. 5  
(b) Write Merits and De-merits (if any) of Dynamic Model. 5
10. Write short notes on *any two* of the following :  $5 \times 2 = 10$   
(a) Packages  
(b) Persistence  
(c) OMT Methodology
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