

Roll No. ....

**12048**

**MBA 2 Year 3rd Sem. (CBCS)**

**Examination – December, 2017**

**OBJECT ORIENTED ANALYSIS & DESIGN**

**Paper : 16IMG23GT1**

*Time : Three Hours ]*

*[ Maximum Marks : 50*

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Section A is *compulsory*. Attempt *one* question from each unit in Section B. All questions carry equal marks.

**SECTION – A**

1. (a) What is the relationship between abstraction, information hiding and encapsulation ?
- (b) "Multiple inheritance is a boon" - Comment and justify.
- (c) Differentiate between activity diagrams, flow charts and state transition diagrams.

12048-1150-(P-3)(Q-9)(17)

P. T. O.

(d) Is there any difference between the following object relationships "Football Team and its player" and "General ledger and its account" ? If so how do they differ ?

(e) Why do we need to classify objects ? Why is it a difficult process ?

### SECTION - B

#### UNIT - I

2. What are the unique advantages of an object-oriented programming paradigm ?

3. (a) What is data hiding ? What are the different mechanisms for protecting data from the external users of a class's objects ?

(b) Bring out the differences between auto and static storage class data members. Can static, member functions of a class access all types of members of a class. Give reasons. What are the access rules for accessing static members ?

(c) Why object-oriented programming approach is the preferred form of programming over other approaches.

#### UNIT - II

4. Describe the mechanism of Object-oriented Approach. Specify the analysis process. How does class modeling and use-case modeling help ?

5. Distinguish between object-oriented systems analysis and systems design. Which of the two requires more creative talents of the system developer ?

#### UNIT - III

6. What is operator overloading ? List the operators that cannot be overloaded. Why it is necessary to overload an operator ? Define operator function and describe the syntax of an operator function.

7. Define Function ? What are friend functions and friend classes ? Write a normal function which adds objects of the complex number class. Declare this normal function as friend of complex class.

#### UNIT - IV

8. (a) What are the different forms of inheritance supported by C++ ? Explain them with an example.

(b) What is a class hierarchy ? Explain how inheritance helps in building class hierarchies.

9. (a) Describe different methods of realizing polymorphism in C++.

(b) Justify the need for virtual functions in C++.

(c) Why C++ supports type compatibles pointers unlike C ?