

TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT

Full Marks: 40

Office of the Dean

Time: 2 hrs.

March - April 2018

BIM / Seventh Semester / IT 227: Object Oriented Analysis and Design

Candidates are required to answer all the questions in their own words as far as practicable.

Group "A"

1. Brief Answer Questions:

[10 × 1 = 10]

- i. What does actor represent in use case diagram?
- ii. What is layered architecture?
- iii. Define 100% rule.
- iv. What is abstract class?
- v. When "includes" is used in use case diagram?
- vi. What is use of activity diagram?
- vii. List three kinds of actor.
- viii. What is domain model?
- ix. What is meant by low coupling?
- x. What is component diagram?

Group "B"

Exercise Problems:

[5 × 4 = 20]

2. Write class in Java (or any other OOP) with attributes name and address and functions to get and set those attributes such that one and only one instance of that class can be created.
3. Write simple program to explain adapter pattern.
4. Explain how sequence diagram can be converted to program (code).
5. People watch movies. People have name, gender, address and movies are described by movie_name, duration and genre. Make a class diagram for this scenario.
6. Write program to explain factory pattern.

Group "C"

Comprehensive Questions:

[2 × 5 = 10]

7. Why design patterns have been developed? Provide an example to illustrate how responsibilities of creating object of class "B" is assigned to class "A". Here assume any real world classes for A and B.
8. Why unified process (UP) for software development suggested when there is already traditional system development method? What are the things done in inception phase?

