

# POKHARA UNIVERSITY

Level: Bachelor Semester: Fall Year : 2016  
 Programme: BE Full Marks: 100  
 Course: Object Oriented Software Development Pass Marks: 45  
 Time : 3hrs.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

**Attempt all the questions.**

- a) What is object-oriented analysis and design? Support your answer with suitable example. 8
- b) What are the phases of Unified Process? Describe in short. 7
2. a) "System development is model development." Do you agree? Justify your answer. 7
- b) Discuss the strength and weakness of Object-Oriented and procedural programming with the help of Banking transaction example. 8
3. a) Describe workflow for capturing requirement as use cases, including the participating workers and their activities. 7
- b) Design is four dimensional view of a system. Justify along with design concepts. 8
4. a) Define design pattern. How is design pattern important? Is software development possible without applying design pattern? 7
- b) Describe a suitable design pattern for following problem. 8  
 "What is the best way to represent related objects (occurrence) in a class diagram?"
5. a) Define design principle, design concept and design pattern. What are the disadvantages of design patterns? 8
- b) What is software architecture? Why do we need it? 7
- a) Describe Service oriented architecture and design principles it helps to adhere. 7
- b) Discuss in short about MVC Architecture with suitable diagram. 8
7. Write short notes on: **(Any two)** 2×5
  - a) Player-Role design pattern
  - b) Reuse vs Reusability
  - c) Class Diagram

# POKHARA UNIVERSITY

Level: Bachelor Semester: Spring Year : 2016  
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**Attempt all the questions.**

1. a) Describe the Object Oriented Analysis and Design process with example. 8
- b) Differentiate process and product engineering. Justify process engineering ultimately is also a product engineering. 7
2. a) How object oriented programming is flexible than procedure oriented programming? Explain with banking transaction example. 8
- b) Change management is very important in Iterative and Incremental Development. Why and how is it done? 7
3. a) What is software quality? Software qualities have different perspectives. Justify. 7
- b) Models development is driven by use case. Explain with suitable diagram. 8
4. a) Describe Player-Role pattern. 7
- b) Read following problem and suggest a design pattern with relevant information. 8  
 Problem: How do you ensure that it is never possible to create more than one instance of a single class?
5. a) Can anyone build a software without implementing design pattern? What are advantage of using design pattern? 7
- b) List and describe the principles that leads to good design in brief. 8
6. a) Can one architecture be applied to multiple software projects? 7
- b) Compare and contrast design and architectural pattern. 8
7. Write short notes on: **(Any two)** 2×5
  - a) Architecture centric process
  - b) Interaction Diagram
  - c) Importance of design pattern