

POKHARA UNIVERSITY

Level: Bachelor Semester: Spring Year : 2019
 Programme: BE Full Marks: 100
 Course: Object Oriented Design and Modeling Pass Marks: 45
 through UML Time : 3hrs.

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

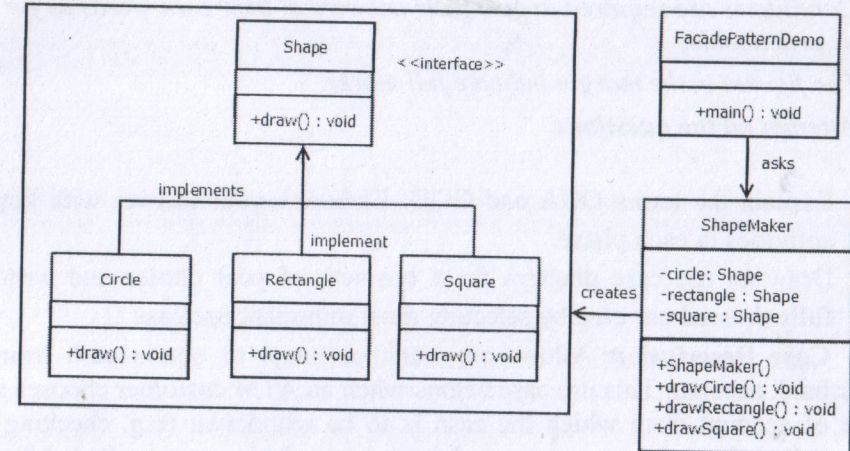
The figures in the margin indicate full marks.

Attempt all the questions.

1. a) Explain the terms OOA and OOD. Elaborate your answer with key activities in each phase. 7
 b) Draw an use case diagram for a business of your choice and write fully dressed use case by selecting most important use case. 8
2. **Use Case Description:** Allows any bank customer to obtain cash from their bank account. This use case begins when an ATM customer chooses a type of account from which the cash is to be withdrawn (e.g. checking) from a list of possible accounts, and to choose a dollar amount from a list of possible amounts. The system sends the transaction to the financial system for verification. If the financial system approves the transaction, the machine dispenses the appropriate amount of cash and issues a receipt. The dispensing of cash is also recorded in the ATM's log. 8
 a) Draw a use case diagram on the basis of above case study. 7
 b) Draw a domain model of the above use case by choosing the noun and noun phrases of your use case diagram. 7
3. a) Discuss about the different methods for identifying conceptual classes. 7
 b) What do you understand by the term association? Explain multiplicity with an example. 8
4. a) How cohesion and coupling affects the object pattern. Describe using the dependency diagram. 8
 b) What is Contract? Pre and ppost conditions are essential for drawing a contract. Describe it using a suitable use case condition. 7
5. a) Why design patterns are considered as important artifacts in object oriented design? Explain the use of Creator and Information Expert patterns. 8
 b) What is visibility? Describe the use of attribute and parameter 7

visibility among classes while designing class diagram.

6. a) How errors and exceptions can be handled during Mapping codes to design?. Elaborate using a simple code snippets using any Object oriented programming language of your choice. 7
 b) Convert the diagram into code using any of the object oriented languages (C++, Java etc.) 8



7. Write short notes on: (Any two) 2×5
 a) Unified Process
 b) Sequence versus collaboration diagram
 c) Mapping design to codes steps