Pokhara University

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| Level: Bachelor | Semester: Fall | Year : 2013 |
| Programme: BE | | Full Marks: 100 |
| Course: Object Oriented Design and Modeling  Through UML | | Pass Marks: 45 |
| Time : 3hrs. |

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| *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. |

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|  | 1. “Good and Precise Requirements leads to good design”, justify it. State Expanded Use case with suitable example describing main flow and alternative flow. 2. How are objects perceived in design phase? Explain with suitable example. Distinguish between OOAD and Structural Analysis and Design. | 8  7 |
|  | 1. Why do you make a system sequence diagram? Explain all the steps while designing domain model with example? 2. Describe the importance of contract in OOAD. Design is initiated by contract, justify your answer with suitable example. | 7  8 |
|  | 1. Define the term visibility and explain different types of visibility between objects? Illustrate with an example. 2. Explain the importance of pattern in design. How do cohesion and coupling effect design? Explain. | 8  7 |
|  | 1. Distinguish between class and object, what are the major factors for designing Design Class Diagram (DCD), explain with suitable logic. 2. How does design traces and adjusts the change of requirement during design phase and coding phase? Explain with suitable example and reasoning? | 8  7 |
|  | Library Management System  System Description:  This system is a Library management system which controls and grants access to different types of users such as system administrator, head librarian, librarian and members. This system should be able to manage books, loans, late fees, searching of books, should be able to keep members in a queue for loans. It should be able to generate automatic email and SMS message before expiry of book loan.  Add qualitative requirements according to the need of the scenario.   1. Draw complete use case diagram. 2. Draw behavioral model of this case. | 8  7 |
|  | 1. Explain how can code be generated from collaboration diagram. Explain taking suitable examples. 2. State the importance of development process in design. What do you understand by updating of class definitions? Illustrate with an example. | 8  7 |
|  | Write short notes on: (Any two)   1. Error and Exception handling. 2. Unified Process. 3. Activity Diagram. | 2×5 |