Pokhara University

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| Level: Bachelor | Semester: Fall | Year : 2014 |
| Programme: BE | | Full Marks: 100 |
| Course: Object Oriented Design and Modelling  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. How is Object Oriented Analysis and Design paradigm different from other paradigms? Write down the advantages of object oriented approach. 2. What are the important components of a use case model? Illustrate the importance of use case diagram for a system being developed. | 7  8 |
|  | 1. What do you mean by System Event and System Operation? Draw a System Sequence diagram for return book use case of a Library system. 2. What is a contract? Write down a contract for enterItem system event explaining the significance of post conditions? | 8  7 |
|  | 1. What is a Domain Model? How do you construct the Domain Model? Explain with example. 2. Define associations and attributes. Taking a system into consideration, draw the necessary classes of the system and represent the association and attributes of these classes. *(You are free to choose any system of your choice like POS, Library System)* | 7  8 |
|  | 1. Define pattern and list out different types of GRASP pattern. How Expert pattern differs from Creator pattern, explain with suitable examples? 2. How do you make a conceptual model? Illustrate. | 8  7 |
|  | 1. Why is interaction diagrams used? Compare and contrast the different types of interaction diagrams. 2. Explain how code can be generated from collaboration diagram and design class diagram. Justify with necessary examples. | 8  7 |
|  | **Case Study**  In hospital a patient goes to registration machine he press the on button then the screen opens. He enters patient id number. He books for the doctor for his checkup. He checks the category of disease from given list, then he chooses doctor's name from given doctors name list, he enters time he wants to meet with doctor. For this registration he need to enters the amount, if the amount digit is ok it accepts the registration and prints the registration slip, otherwise it will give a signal of alarm of in sufficient amount.  Now draw a use case model(no description required), Domain model, interaction diagrams and design class diagram from these information. | 15 |
|  | Write short notes on: **(Any two)**   1. Exceptions and Error Handling 2. Programming and development process 3. Representation of system behavior. | 2×5 |