NCIT

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| Level: Bachelor | Assessment Exam | Year : 2012 |
| Programme: B.E. | | Full Marks : 100 |
| Course: Object Oriented Design and Modeling through UML | | 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. | 1. What do you mean by Object Oriented Analysis and Design? What is the need of UML during objects oriented analysis and design? 2. Explain mutually exclusive conditional path in collaboration diagram. How are the exceptions addressed by the UML | 8  7 |
| 2. | 1. Define use-cases? Why use cases model is important during analysis? Explain real and essential use-cases? 2. When is it necessary to prepare contracts? State the guidelines for preparing a contract with one example? | 8  7 |
| 3. | 1. What is behavioural modelling? Explain importance of system behaviours in system development. 2. What are the GRASP patterns? Explain with an example how you apply the Expert pattern during object design. | 8  7 |
| 4. | 1. What is the significant of using interaction diagram during design? Compare and contrast sequence diagram and collaboration diagram in terms of their strengths and weakness. 2. Discuss the method name issues while creating Design class Diagram. | 8  7 |
| 5. | a) Generate code for the following design.   |  |  |  | | --- | --- | --- | | **Sales Line item** | DescribedBy PS  \* 1 | **ProductSpecificationn** | | Quantity : integer | Description : text | | Get Subtotal():many | Price : many | |  | ItemsID: itemID |   OR  Explain how code can be generated from collaboration diagram and design class diagram. Justify with necessary examples.  b) What is visibility? Explain its types. | 8  7 |
| 6. | 1. Draw use-case model for a basic ATM-Teller machine 2. Draw a domain model for the ATM system. 3. Mapping designs to code changes occur. Do you agree? Justify your opinion.   OR  Case Study: Flush Game  Consider an online flush game in which minimum of two players and maximum of fifteen players can play at a time. The decks and colours are as usual.   1. Identify the classes and draw the class diagram in the scenario. 2. Use the above class diagram to create the general definition of the classes for coding. 3. Discuss the general problem that might occur while mapping the class design into the code. | 5  5  5  5  5  5 |
| 7. | Write short notes on: **(Any Two)**   1. Visibility Scopes between Objects 2. Elaboration of Use Cases 3. Incremental development process. | 5x2 |