

Code No: **R41052****R10****Set No. 1****IV B.Tech I Semester Supplementary Examinations, February - 2019****UML AND DESIGN PATTERNS****(Computer Science and Engineering)****Time: 3 hours****Max. Marks: 75****Answer any Five Questions****All Questions carry equal marks**

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- 1 a) Give the usages of Unified Modeling Language. [4]  
b) Explain in brief about the four kinds of relationships in UML. [4]  
c) What is an UML diagram? How many diagrams are there in UML? Explain. [7]
- 2 a) What is class diagram? What is the use of Class diagram? Explain with an example. [8]  
b) Discuss the common modeling techniques in UML. [7]
- 3 a) Explain about the Interaction diagram in UML with an example. [8]  
b) Brief the purpose of an activity diagram in UML. Draw an Activity diagram for Hospital Management system. [7]
- 4 a) Draw a component diagram for Railway Reservation System. [8]  
b) What is the use of Deployment Diagram? Draw a neat Deployment diagram for Online Shopping Web application. [7]
- 5 a) Discuss design patterns in Smalltalk MVC. [8]  
b) Describe the step by step approach for applying a design pattern effectively. [7]
- 6 a) Discuss the benefits of Creational Patterns. [8]  
b) Explain the motivation for Singleton and Discuss the applications and consequences of Singleton. [7]
- 7 a) Discuss various implementation issues involved in applying decorator pattern. [8]  
b) Distinguish between the adapter and bridge patterns. [7]
- 8 a) Describe implementation issues to be considered in chain of responsibility. [8]  
b) Describe about the implementation and dependency mechanism of observer design pattern. [7]