

Code No: 137SG**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year I Semester Examinations, July/August - 2022****DESIGN PATTERNS****(Computer Science and Engineering)****Time: 3 Hours****Max. Marks: 75****Answer any Five Questions
All Questions Carry Equal Marks**

- 1.a) How to select a design pattern? Explain.
b) Discuss about design patterns in Smalltalk MVC. [8+7]
- 2.a) What is a design pattern? Explain 4 essential elements of design patterns.
b) Draw a diagram to show design patterns relationships. [8+7]
- 3.a) Discuss about compositor and composition.
b) Explain about command history in user operations of Lexi's design. [8+7]
- 4.a) Describe abstracting object creation in Lexi's design.
b) Discuss about encapsulating the analysis in a separate class. [8+7]
- 5.a) What are the issues to be considered when applying the Factory Method? Explain.
b) Write and explain the sample code of Prototype pattern. [8+7]
- 6.a) Explain about subclassing the singleton class issue.
b) Discuss about motivation and applicability of Abstract Factory pattern. [8+7]
- 7.a) Discuss about consequences and implementation of Flyweight pattern.
b) Explain motivation and structure of Proxy pattern. [8+7]
8. Explain the following:
a) Motivation of Template Method pattern
b) Known uses and related patterns of Chain of Responsibility pattern [8+7]

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