

Code No: 117CF

R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, November/December - 2017

**DESIGN PATTERNS
(Common to CSE, IT)**

Time: 3 Hours

Max. Marks: 75

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART- A

(25 Marks)

- 1.a) What is design pattern? [2]
- b) Explain design patterns in Smalltalk MVC. [3]
- c) Draw the structure Factory Method. [2]
- d) Explain about recursive composition. [3]
- e) Write intent of Proxy pattern. [2]
- f) Write motivation of Wrapper pattern. [3]
- g) What are known uses of Iterator pattern? [2]
- h) Write benefits and drawbacks of Mediator pattern. [3]
- i) What is the intent of Strategy pattern? [2]
- j) Describe patterns in software. [3]

PART-B

(50 Marks)

- 2.a) What are some common causes of redesign? Explain.
 - b) How to use a design pattern? Explain in detail. [5+5]
- OR**
- 3.a) Discuss about toolkits and frameworks.
 - b) Draw a diagram to describe design pattern relationships. [5+5]
- 4.a) Describe formatting in Lexi's design.
 - b) What are consequences of Builder pattern? Explain Builder pattern implementation.[5+5]
- OR**
- 5.a) Explain about encapsulating the analysis in Lexi's design.
 - b) Write sample code of Prototype pattern. [5+5]
- 6.a) Explain the sample code of Flyweight pattern.
 - b) Discuss about implementation issues of Decorator pattern. [5+5]
- OR**
- 7.a) Write about motivation and consequences of Façade pattern.
 - b) Write sample code of Composite pattern. [5+5]

- 8.a) Explain about Mediator pattern.
b) Explain about motivation of Mediator pattern. [5+5]

OR

- 9.a) Briefly discuss about Memento pattern.
b) Describe implementation of Command pattern. [5+5]

- 10.a) Write some of the benefits and liabilities of the Visitor pattern.
b) Discuss about the pattern community. [5+5]

OR

11. Explain the following:
a) Discussion of behavioral patterns
b) Template method pattern. [5+5]

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