

Code No: L0522**R07****Set No. 1**

IV B.Tech. II Semester Supplementary Examinations, July/August, 2012
DESIGN PATTERNS
(Common to Computer Science & Engineering and Information Technology)

Time: 3 Hours**Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. a) Explain how to select a Design Pattern.
b) How can we relate Run-Time and Compile-Time structures? Explain. [8+8]
2. a) What are command class and sub classes? Explain.
b) Discuss about visitor class and subclasses. [8+8]
3. a) Explain the sample code of prototype design pattern.
b) Discuss about implementation issues when using the singleton pattern. [8+8]
4. a) Explain the applicability of bridge design pattern.
b) Give the structure and participants of bridge design pattern. [8+8]
5. a) What is the motivation of Flyweight Design Pattern?
b) Briefly explain Proxy Design Pattern. [8+8]
6. Explain the implementation and consequences of Command Pattern. [16]
7. a) Explain the Known uses & related patterns of Visitor pattern.
b) What is the structure & participants of Momento pattern? [8+8]
8. a) Discuss how decoupling of senders and receivers is achieved in different behavioural design patterns.
b) Explain about Target for Refactoring. [8+8]

Code No: L0522**R07****Set No. 2**

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Time: 3 Hours**Max Marks: 80**

Answer any FIVE Questions
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1. a) Explain the template of a Design pattern.
b) Discuss Design patterns in SmallTalk MVC [10+6]
2. a) State the differences between Traversal and Traversal actions.
b) Explain visitor class and subclasses in detail. [8+8]
3. a) What are the uses of Abstract Factory design pattern? Explain.
b) Write a detailed note on prototype design pattern. [8+8]
4. a) Explain the consequences of class and object adapter.
b) Explain the structure and participants of adapter design pattern. [8+8]
5. What are the applications of Facade Pattern? Explain the structure & participants of Facade pattern with suitable example. [16]
6. a) Explain the collaborations and consequences of Interpreter pattern.
b) Explain the collaborations and consequences of Chain of Responsibility pattern. [8+8]
7. a) What are the applications of Template pattern?
b) Explain the structure of Template pattern. [8+8]
8. Write notes on
a) What to expect from Design Pattern.
b) Essential elements of Design pattern. [8+8]

Code No: L0522**R07****Set No. 3**

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Time: 3 Hours**Max Marks: 80**

Answer any FIVE Questions
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1. a) Define Design Pattern. Explain the classification of Design Pattern.
b) What are the causes of redesign? Explain. [8+8]
2. a) Explain about abstracting object creation in detail.
b) With a neat diagram explain the GUI factory class hierarchy. [8+8]
3. a) Mention the consequences of builder design pattern.
b) Explain the implementation of abstract factory. [8+8]
4. a) Discuss about window and windowimp subclasses in detail.
b) With a neat diagram explain abstract Product classes and concrete sub classes. [8+8]
5. a) Explain the motivation for Decorator method with relevant Patterns.
b) What are the participants of Facade Method? [8+8]
6. Explain the Structure of Iterator method with sample code. [16]
7. a) Explain the Known uses of Template method.
b) What are the participants of Visitor method? [8+8]
8. Write notes on
 - a) Delegation
 - b) A common design vocabulary.
 - c) The object community
 - d) The object granularity. [4+4+4+4]

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Set No. 4

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Time: 3 Hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. a) Compare inheritance versus parameterized types.
b) Compare and contrast class inheritance and interface inheritance. [8+8]
2. a) Explain the basic responsibilities of glyphs in detail.
b) Discuss about abstracting object creation in supporting multiple look and feel standards. [8+8]
3. a) What are the features of creational patterns? Explain.
b) Discuss about structure, applicability participants of abstract factory method. [8+8]
4. a) Explain the features of structural patterns in detail
b) Explain the motivation of adapter design pattern. [8+8]
5. What are the applications of Flyweight Pattern? Explain the structure of Flyweight pattern with suitable example. [16]
6. a) Explain the motivation of Iterator pattern.
b) Explain the structure & participants of chain of Responsibility with one example. [8+8]
7. a) Describe the following aspects of behavioral patterns Encapsulating
b) Should communication be encapsulated & distributed. [8+8]
8. Write Notes on:
 - a) Aggregation Vs Association
 - b) Abstract Class. Vs Concrete Class.
 - c) Documentation and Learning Aid [6+6+4]