Code :R7420507 **1**

IV B.Tech II Semester(R07) Regular Examinations, April 2011
DESIGN PATTERNS
(Common to Computer Science & Engineering, Information Technology and Computer Science & Systems Engineering)

Time: 3 hours **Max Marks: 80**

Answer any FIVE questions
All questions carry equal marks

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1. (a) Define design pattern. List and explain the essential elements of a design pattern.
   (b) Explain in detail the design pattern in Smalltalk.
2. (a) Explain the GUI factory class hierarchy in detail.
   (b) Give brief description about command history.
3. (a) Briefly discuss about the builder pattern.
   (b) Explain the description of a factory method.
4. (a) Discuss in detail about the consequences and implementation issues of a bridge pattern.
   (b) Draw and explain the typical structure of a composite object.
5. (a) Explain the different participants involved in decorator and also explain the issue in implementing it.
   (b) When can we apply flyweight pattern. Explain.
6. Explain in detail about the interpreter.
7. (a) Discuss in detail about the observer behavioral pattern.
   (b) Mention the role of participants in visitor pattern.
8. (a) Write a short notes on pattern community.
   (b) Discuss in detail about refactoring.

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Code :R7420507 **2**

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Time: 3 hours **Max Marks: 80**

Answer any FIVE questions
All questions carry equal marks

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1. (a) How can we design the patterns. Discuss in detail the different patterns for design.
   (b) How many classes of design patterns are there. Explain them in detail.
2. (a) Explain in details the iterator class and its subclasses.
   (b) What is the use of windowimp. Explain it in detail.
3. (a) Discuss in detail the different techniques for implementing abstract factory.
   (b) Explain the different participants involved in builder pattern.
4. (a) What are structural patterns. Explain the usage of them.
   (b) Discuss in detail about the adapter.
5. (a) What is a decorator and why we are using it. Explain the benefits of it.
   (b) Explain in detail the implementation of a facade pattern.
6. (a) Discuss about the various implementation variants for iterator.
   (b) Explain the role of participants in command design pattern.
7. (a) Explain the role of mediator in behavioral patterns.
   (b) List the different consequences and implementation issues of memento pattern.
8. (a) Give brief description about alexander's pattern languages.
   (b) Discuss in detail about the pattern community.

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Code :R7420507 **3**

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Time: 3 hours **Max Marks: 80**

Answer any FIVE questions
All questions carry equal marks

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1. (a) Give brief description about any four design patterns.
   (b) Explain, how to organize the catalog.
2. (a) Discuss in detail, how to construct a structure.
   (b) What is glyph. Explain monglyph in detail.
3. (a) What are the different issues that are involved in factory method. Explain them.
   (b) Prototype is useful for what type of languages. Discuss the issues in implementing it.
4. (a) What are different issues that should be considered when using adapter. Explain them.
   (b) Give brief description about the narrow interface.
5. (a) Write a short note on proxy pattern.
   (b) Explain the different issues involved in implementing the flyweight.
6. (a) How can we avoid coupling. Explain them with suitable example.
   (b) Explain the implementation issues of a chain of responsibility pattern.
7. Write short notes on the following:
   (a) Encapsulation variation.
   (b) Decoupling sender and receiver.
   (c) Implementation issues of template methods.
   (d) Collaborations in visitor.
8. (a) Give brief description about what we can expect from design pattern.
   (b) Discuss in detail about the pattern community.

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Code :R7420507 4

IV B.Tech II Semester(R07) Regular Examinations, April 2011
DESIGN PATTERNS
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Time: 3 hours **Max Marks: 80**

Answer any FIVE questions
All questions carry equal marks

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1. (a) What are the criteria that should be considered for selecting the design pattern. Explain.
   (b) Explain the usage of design patterns in detail.
2. (a) List and explain the various problems that are involved in design.
   (b) Give brief description about recursive composition and glyphs.
3. (a) Write a short notes on singleton pattern.
   (b) Explain the different issues that are involved in implementations of a builder.
4. (a) What are structural patterns. Explain the structural pattern usages.
   (b) Discuss in detail about adapter pattern.
5. (a) Give brief description about the decorator pattern.
   (b) When can we use proxy pattern. Explain with example.
6. (a) What is the use of command behavioral pattern. Explain the applicability of a command pattern in detail.
   (b) Explain the different participants involved in interpreter pattern.
7. (a) Discuss in details about the strategy behavioral pattern.
   (b) Mention the role of participants in visitor pattern.
8. (a) Explain the role of patterns in software.
   (b) Give brief description about alexander's pattern languages.
   (c) Explain the various steps in life cycle of an object oriented software.

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