

Code: 9A05801

**R09**

B.Tech IV Year II Semester (R09) Advanced Supplementary Examinations June/July 2016

**DESIGN PATTERNS**

(Common to CSE, IT &amp; CSSE)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Draw a class diagram and explain the notations.  
(b) Explain what is foundation class in C++.
- 2 (a) What is a design pattern? How to describe a design pattern?  
(b) Give the catalogue of design patterns.
- 3 (a) Explain the design problems of a designing document editor.  
(b) Explain the document structure of editor.
- 4 (a) Explain creational patterns.  
(b) What is the motivation for a builder? Explain its applicability.
- 5 (a) Explain how to implement a bridge pattern using class adaptor pattern.  
(b) Explain the composite design pattern giving its structure.
- 6 (a) Explain the motivation for a façade. What is its applicability?  
(b) Give the structure of a flyweight. Who are the participants of fly weight?
- 7 (a) Explain the behavioral pattern 'observer' giving its structure, applicability and implementation.  
(b) Explain the behavioral pattern 'visitor' giving its structure, applicability and implementation.
- 8 Write short notes on the following:
  - (a) Consequence of state pattern.
  - (b) Applicability of template method.
  - (c) Structure of a visitor pattern.

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