

[5060] - 807

**M.E. (Computer Engineering) (Semester - II)**  
**SOFTWARE DESIGN & ARCHITECTURE**  
**(2013 Pattern)**

*Time : 3 Hours]*

*[Max. Marks :50*

*Instructions to the candidates:*

- 1) Answer any three questions from Q1 or Q2, Q3 or Q4, Q5 or Q6.*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Assume suitable data, if necessary.*
- 4) Figures to the right indicate full marks.*

- Q1)** a) Explain the applicability, structure & implementation of [8]  
i) Adapter  
ii) Flyweight  
b) Describe design solution. What are the two major components of a software design method. [8]

OR

- Q2)** a) Explain design patterns. How are they documented using a template Explain the way they are documented with examples to illustrate from FACADE pattern. [8]  
b) Illustrate with correct examples, various design notations that can be used to depict a system design. [8]

- Q3)** a) Explain various styles of Component & connector viewtype. [8]  
b) List various Quality Attributes of a system & explain the testability attribute with specific examples. [8]

OR

- Q4)** a) Define Architectural Analysis. Discuss various analysis goals that are met in Architectural Analysis with an example each. [8]  
b) Explain the styles of module view-type and execution Architectural view type. [8]

**P.T.O.**

- Q5) a)** Describe the components of an Data-centered Software Architecture. Evaluate the benefits and limitations of data-centered Architectures. Examine them when incorporated with other prominent architectures. **[9]**
- b)** Define Model Driven Archicecture (MDA). List and explain various MDA approaches and tools. **[9]**

OR

- Q6) a)** Describe and depict a Complete object oriented analysis & design process and discuss general design principles employed in the context of object-oriented design. **[9]**
- b)** Describe the concepts of Implicit Asynchronous communication Software Architecture. Discuss the benefits and limitations of the Asynchronous Software Architecture. **[9]**

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