[4860]-1311

M.E. (Computer Engineering)
SOFTWARE DESIGN AND ARCHITECTURE
(2013 Credit Pattern)(Semester - II)

Time : 3 Hours]   *[Max. Marks : 50*

Instructions to the candidates:
  1)   Solve question number 1 or 2, 3 or 4 and 5 or 6.
  2)   Neat diagram must be drawn whenever necessary.
  3)   Figures to the right indicate full marks.
  4)   Assume suitable data, if necessary.

Q1) a)   Write in short the applicability, structure and implementation of:-   **[8]**
  i)   Abstract factory.
  ii)   Flyweight pattern.

  b)   Describe the use of design patterns to solve design problems.   **[8]**

OR

Q2) a)   What are design patterns? How they are documented using a template?
  Explain the way they are documented with examples to illustrate from
  Facade pattern.   **[8]**

  b)   What is design notation? Explain with example.   **[8]**

Q3) a)   Explain the styles of module view - type and execution Architecture
  View type.   **[8]**

  b)   What is software architecture? Why it is important? What are the different
  Quality Attribute scenarios?   **[8]**

OR

Q4) a)   Explain styles of Component- and - connector view- type.   **[8]**
  b)   What are the concept of systematic reuse and its particular implementation
  using product lines?   **[8]**

Q5) a) What are the concepts of Data -Centered Software Architecture. Evaluate the benefits and limitations of data- centered software architecture and examine data- centered architecture when incorporated with other architectures. **[9]**

b) Write short notes on :- **[9]**

   i) Model Driven Architecture (MDA).

   ii) Customer Relationship Management (CRM).

OR

Q6) a) Explain the concepts of any three archetype patterns. **[9]**

b) Describe a complete object - oriented analysis and design process and discuss general design principles in the context of object - oriented design. **[9]**

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