[5560] - 589

T. E. (Computer Engineering)
SOFTWARE MODELING AND DESIGN
(2015 Pattern) (Semester - II)(310253)

Time : 2 ½ Hours]   *[Max. Marks :70*

Instructions to the candidates:

1) *Q. 1 and Q. 2 are compulsory. Solve Q. 3 or Q. 4, Q. 5 or Q. 6, Q. 7 or Q. 8.*
2) *Assume suitable data if required.*
3) *Figure to the right indicate full marks.*

Q1) a) Explain difference between procedural/structural and Object-Oriented paradigm of design. **[5]**

b) Write a use case specification for the use case: User authentication? **[5]**

Q2) a) Draw sequence diagram for Event registration system? **[5]**

b) Why class diagram is important in static modeling? Explain different relationship used in class diagram? **[5]**

Q3) a) Explain synchronous communication pattern in client server architecture with example? **[6]**

b) Explain Location & Platform transparency in service oriented architecture? **[6]**

c) Write short notes on **[6]**

i) web registration services

ii) Brokering & discovery services

OR

Q4) a) Explain asynchronous message communication with call back pattern with suitable example? **[6]**

b) Explain important characteristic of real time software architecture? **[6]**

c) Explain dynamic view of software architecture with the help of example?**[6]**

Q5) a) Explain proxy pattern? Describe its intent, motivation, Applicability & implementation with example? **[6]**

b) Draw structure of observer pattern with suitable class diagram including subject and observer? **[6]**

c) Write short note on **[4]**

i) Port provided & required interface

ii) Real time software architecture

OR

Q6) a) Explain Behavioral Design Pattern in short? **[4]**

b) Explain factory pattern? Describe its intent, motivation & implementations with example? **[6]**

c) What is singleton pattern? Explain one example scenario where you will Singleton pattern to get applied? **[6]**

Q7) a) What is integration testing; Explain its type in details? Define Stub & Driver? **[8]**

b) What is Black box testing? Why it is called BBT? Also explain boundary value analysis? **[8]**

OR

Q8) a) Explain graph based testing with suitable example? **[6]**

b) Compare white box testing and black box testing. **[4]**

c) What is performance testing? List few tools of performance testing? **[6]**

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