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- Notes :
1. All questions carry marks as indicated.
  2. Solve Question 1 OR Questions No. 2.
  3. Solve Question 3 OR Questions No. 4.
  4. Solve Question 5 OR Questions No. 6.
  5. Solve Question 7 OR Questions No. 8.
  6. Solve Question 9 OR Questions No. 10.
  7. Solve Question 11 OR Questions No. 12.
  8. Assume suitable data whenever necessary.
  9. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) Define Software Process. What are the activities include in Software Architecture? Explain in detail? 7

b) What is the design process of software? Explain the importance of s/w design? 6

**OR**

2. a) What scalability and interoperability issues are available in software architecture? 7

b) Write a short note on Architectural patterns. 6

3. a) What are the different quality attribute? Explain it? 7

b) What are the needs of quality attributes in s/w architecture? 7

**OR**

4. a) Explain achieving quality attributes in s/w architecture? 7

b) What are the six characteristics of scenario for quality attributes specification? 7

5. a) Enlist and explain principles and expectations of Design Pattern? 6

b) How designing of the architecture is accomplish using Attribute. Driven design Approach? 7

**OR**

6. a) Explain ways of using Design pattern? 4

b) Write notes on **any three** :- 9

i) Observer pattern.

ii) Singleton pattern

iii) Mediator pattern.

iv) Proxy pattern.

v) Facade pattern.

7. a) Explain the concept of REST? 6  
b) Describe in brief about the architecture of the grid. 7

OR

8. a) Considering skype describe overlayed peer to peer? 7  
b) Explain Decentralized Architecture? 6  
9. a) Enlist different components of middleware along with their features? 7  
b) What are the different system qualities of middleware and COTS? 7

OR

10. a) Write notes on :- 7  
i) Programming models.  
ii) Economics – Driven architecture.  
b) Explain architecture of middleware? 7  
11. a) What is the need of client side technology in multi-tier architecture? 6  
b) Give overview of three-tier web architecture? 7

OR

12. a) Write short notes on :-  
i) Servlet. 5  
ii) Applet. 5  
iii) AJAX. 3

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~ Babe Ruth

