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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. Due credit will be given to neatness and adequate dimensions.
 9. Assume suitable data whenever necessary.

1. a) Define software engineering. Explain software characteristics in detail. 6
- b) Explain software engineering- a layered Technology. 7

OR

2. a) Explain common process framework for software engineering in detail. 7
- b) Explain Unified Process model in detail. 6
3. a) What is FAST? Explain in detail. 7
- b) Explain the component of computer based system. 6

OR

4. a) What is SRS? Explain in brief. 6
- b) Explain system Engineering Hierarchy in detail. 7
5. a) Explain the components of analysis modelling. 8
- b) Explain the Behavioural model in detail. 6

OR

6. a) Give and explain ten design principles in detail. 10
- b) Write short note on modularity. 4
7. a) Explain different testing principles suggested by Davis. 4
- b) Explain Black- Box Testing techniques in detail. 10

OR

8. a) Write short notes on: 9
- i) Validation Testing.
 - ii) System Testing.
 - iii) Integration Testing.
- b) What is Debugging? Explain the process of debugging in detail. 5
9. a) Explain McCall's Quality factor. 6
- b) What is software Maturity Index? Why it is used? How it is computed? 4
- c) What are Metrics, Measures and Indicators. 3
- OR**
10. a) Explain formal Technical Review (FTR) in detail. 6
- b) How decision tree is used for Make-buy decision of software system? 7
11. a) Define Risk? Explain different types of Risk. 5
- b) Explain in detail: 8
- i) Change Management.
 - ii) Project scheduling.
- OR**
12. a) Explain in detail software Reengineering Process. 7
- b) Explain RMMM plan. Also explain the concept of Risk projection. 6



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It's hard to beat a person who never gives up.

~ Babe Ruth

