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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.
 10. Illustrate your answers whenever necessary with the help of neat sketches.
 11. Use of non programmable calculator is permitted.

1. a) Explain the concept of software Engineering, also explain its characteristic in brief. 7
- b) Explain the software process framework. 6

OR

2. a) Define. 6
- i) The waterfall model.
- ii) Evolutionary process model.
- b) Explain software Engineering as a layered technology. 7
3. a) Write short notes on product Engineering. 7
- b) Explain system Engineering process in brief. 7

OR

4. a) Describe the process of modeling practices used in software engineering. 7
- b) Explain Business process Engineering hierarchy. 7
5. a) List & explain the process of Requirement analysis. 7
- b) What do you mean by data modeling? Explain. 6

OR

6. Write short notes on **any three**. 13
- i) Design model. ii) Design Engineering concepts.
- iii) Scenario-based modeling. iv) Object-oriented analysis.
- v) Pattern-based software design.

7. a) Differentiate between white box testing & Black box testing. 8
b) What is cyclomatic complexity, how it is computed? 6

OR

8. a) Write short notes on Alpha testing & Beta testing. 7
b) Explain Integration testing & validation testing in brief. 7
9. a) Write short notes on software Quality & explain different factors available to measure quality of software. 6
b) What are the various quality factors used to measure software quality? 7

OR

10. a) Explain the process metric in brief. 4
b) Write notes on function point metrics. Also state its advantages & disadvantages. 5
c) What is metrics, measures & Indicators? 4
11. a) Explain the process of software Reengineering. 6
b) Write short notes on software project estimation techniques. 7

OR

12. Explain any three. 13
i) Risk management.
ii) Quality management.
iii) Project scheduling.
iv) Change management.



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The best time to plant a tree was 20 years ago. The second best time is now.

~ Chinese Proverb

