



- 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 various software characteristics in detail. **7**
- b) Define software Engineering and comment on 'Software Engineering as a Layered Technology'. **6**

OR

2. a) Write short note on **any two**. **6**
- i) Spiral Model.
- ii) Agile Process Model.
- iii) RAD model.
- b) What is software process framework? **7**
3. a) Explain system Engineering hierarchy in detail. **7**
- b) Explain in detail about SRS and its contents. **6**

OR

4. a) Explain Business process Engineering in detail. **6**
- b) What is requirement Engineering? Explain steps in requirement Engineering. **7**
5. a) Explain following terms : **8**
- i) Abstraction. ii) Modularity
- iii) Information Hiding iv) Refactoring.
- b) Explain the components of analysis modelling. **6**

OR

6. a) Explain Behavioural model in detail. 6
b) Explain design principles in detail. 8
7. Write notes on **any two**. 14
- i) White Box Testing.
ii) Black Box Testing.
iii) Art of debugging.

OR

8. a) Explain how unit testing is performed for software. 6
b) Explain Alpha testing and Beta testing. 4
c) Explain system Testing in details. 4
9. a) Explain McCall's Quality factors. 7
b) Explain Quality function deployment. 6

OR

10. a) List and Explain the activities involved in SQA. 7
b) Explain in detail about project tracking and project scheduling. 6
11. a) What is software Risk? Explain their types. 6
b) Explain the layers of SCM process. 7

OR

12. Write short note on **any two**: 13
- i) Software Reengineering.
ii) Reverse Engineering.
iii) RMMM Plan.
