**UNIT I**

**PART – A Short Answer Questions**

1. **Define** software?
2. **What** is Software Engineering?
3. **List** the categories of computer software
4. **State** management myths
5. **What** are customer myths?
6. **List** practitioner’s myths
7. **Discuss** the architecture of layered technology?
8. **List** all the umbrella activities in process framework?
9. **Explain** is process pattern?
10. **List** the types of software models?
11. **List** the measures of software tracking and control
12. **List** the models in CMMI?
13. **Explain** the levels in continuous model in CMMI?
14. **Explain** staged model in CMMI?
15. **What** is open source software

**PART – B Long Answer Questions**

1. **Explain** the changing nature of software?
2. **Define** software and explain the various characteristics of software?
3. **Describe** “Software myth”? Discuss on various types of software
4. **Explain** in detail the capability Maturity Model Integration (CMMI)?
5. **Explain** personal and team process models?

**UNIT II**

**PART – A Short Answer Questions**

1. **Explain** waterfall model and list out the problems of it
2. **Explain** prototyping model and list out the disadvantages of it
3. **What** is spiral model and list out advantages
4. **What is** concurrent development model
5. **Define** agile process
6. **List** out the human factors of agile process
7. **Explain** functional requirement?
8. **Explain** nonfunctional requirement?
9. **Explain** domain requirements?
10. **List** out the classification of non functional requirements
11. **What** is SRS
12. **What** are the sub process and requirement engineering process
13. **What** is feasibility study
14. **Explain** about requirement elicitation and analysis
15. **What** are the process activities in requirement elicitation and analysis
16. **What** are view points
17. **What** are the characteristics of effective interviewers
18. **What** is usecase? Give an example scenario
19. **What** is ethnography
20. **Explain** the term stake holder?
21. **Explain** requirements management?

**PART – B Long Answer Questions**

1. **Explain** the incremental process models with neat diagrams
2. **Explain** the evolutionary process models
3. **List** and explain any three agile process models
4. **Compare** functional requirements with nonfunctional requirements?
5. **Explain** requirement engineering process?
6. **Explain** in detail about requirement validation

**UNIT III**

**PART – A (Short Answer Questions)**

1. **Define** system modelling?
2. **Explain** context model?
3. **What** is object model?
4. **What** are the system models for analysis?
5. **Draw** a neat context diagram for ATM system.
6. **Draw** a neat data flow diagram for insulin pump.
7. **Draw** the state machine model for simple microwave oven.
8. **Construct** the semantic data model for library system.
9. **Explain** why design is important in design engineering?
10. **Discuss** design model?
11. **List** the design concepts?
12. **Justify** the importance of refactoring?
13. **Write** short notes on coupling?
14. **List** out the steps for conducting component level design?
15. **Write** short notes on cohesion?
16. **Design** the class based components?
17. **List** out the golden rules for interface design?
18. **Write** short notes on interface design steps?
19. **List** out all the design issues?
20. **Explain** process in user interface design?

**PART – B (Long Answer Questions)**

1. **Discuss** briefly about behavioral models with examples?
2. **Discuss** about various object models with examples?
3. **Explain** the components of case tool for structured method support.
4. **Discuss** briefly the following fundamental concepts of design:

a) Abstraction b) Modularity c) Information hiding

1. **Explain** the goals of the user interface design?
2. **Explain** the design concepts in software engineering?
3. **Elaborate** modeling component level design?
4. **Describe** the way of conducting a component level design?

**UNIT IV**

**PART – A (Short Answer Questions)**

1. **Explain** about the importance of test strategies for conventional software?
2. **Compare** black box testing with white box testing?
3. **What** is regression testing?
4. **Explain** integration testing.
5. **What** is smoke testing?
6. **Compare** validation testing and system testing?
7. **What** is glass-box testing?
8. **Discuss** software quality factors?
9. **Discuss** an overview of quality metrics?
10. **Explain** about Product metrics?
11. **Describe** validation testing
12. **Discuss** a framework for product metrics
13. **Explain** about Metrics for maintenance?
14. **List** the metrics for the design model.
15. Explain metrics for analysis model.
16. **Describe** metrics for source code and testing.
17. **What** is software metric?
18. **Compute** the function point value for a project with the following information domain characteristics:

Number of user inputs: 32

Number of user outputs: 60

Number of user inquiries: 24

Number of files: 8

Number of external interfaces: 2

Assume that all complexity adjustment values are average.

1. **Discuss** about class oriented metrics.
2. **Explain** component design metrics.

**PART – B (Long Answer Questions)**

**1. What** is software testing strategy? Explain the characteristics in detail.

**2. Define** black box testing .Explain the metrics for testing.

**3. Compare** validation testing and system testing in detail.

**4. What** are metrics for Software quality? Explain

**5. What** are metrics for source code and maintenance? Explain.

**UNIT V**

**PART – A (Short Answer Questions)**

1. **What** is metric?
2. **What** is metric for software quality?
3. **Explain** about software risks?
4. **List** types of metrics.
5. **List** out product metrics.
6. **Elaborate** the concepts of Risk management Reactive vs Proactive Risk strategies?
7. **What** is the goal and issues of RMMM**?**
8. **Explain** about RMMM Plan?
9. **Explain** about Quality concepts?
10. **What** is quality management?
11. **Explain**?
12. **Explain** about formal technical reviews?
13. **Explain** in detail ISO 9000 quality standards?
14. **Discuss** risk refinement?
15. **Discuss** risk projection?
16. **What** is software reliability?
17. **Demonstrate** risk identification?
18. **Discuss** what kind of risks can be documented using RIS(Risk Information Sheet).
19. **Explain** software reviews in brief?
20. **Discuss** about formal technical reviews.

**PART – B (Long Answer Questions)**

**1. Difference** between reactive and proactive risk strategies?

**2. Explain** RMMM in RMMM plan?

**3. Write** a short notes on

a) Cost of quality

b) ISO 9000 quality standards

c) Software reviews

d) Review guidelines

**4. Define** the terms

a) Risk Identification

b) Risk refinement

c) Risk projection

**5. Explain** software reviews in brief?