FSE (CHAPTER WISE IMP topics)

UNIT 1

1. Give two reasons why system engineers must understand the environment of a system?
2. State the difference between project and product?
3. Discuss Computer Systems Engineering 2
4. Discuss about changing nature of software.
5. Identify the umbrella activities in software engineering process?
6. Explain the prime objective of software engineering?
7. What are the fundamental activities of a software engineering process?
8. Discuss software crisis and write factors contributing to the software crisis, solutions for the software crisis.
9**. Discuss emergence of software engineering development process.(L) 4**
10. Discuss types of software development projects(L)
11. Identify Notable Changes in Software Development Practices.(L)
12. Illustrate the process of Software Engineering in detail (L)
13. Explain System engineering in detail with an example (L) 2 or short
14. How did the increasing complexity of software systems contribute to the need for Software Engineering
Practices?

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UNIT 2

1. List out the phases of SDLC

2. List the advantages and disadvantages of waterfall model.

3. Define Prototyping 3

4. What are the merits of incremental model?

5. List the task regions in the spiral model.

6. What are SDLC models available

7. Identify any two benefits does a development process offer to software development teams?

8. Explain classical waterfall Model? (L) or Explain the advantages of Waterfall Model?(L)

9. Explain Waterfall Model and its Extensions (L)

10. Define Basic Concepts of Software Life Cycle Models & Discuss Waterfall Model and its Extensions?(L)

11. Explain V model in detail and its advantages over waterfall model(L)

12. Interpret Rapid Application Development? 2

13. Compare Rapid Application Development (RAD) and Spiral Model.

14. Explain spiral model with a real time example.(L)

15. Explain the core principles of Rapid Application Development and how they influence the development process?

UNIT 3

1. List the roles and responsibilities of a project manager.

2. What is Work Break down Structure (WBS).

3. Classify Metrics for Project

4. What are PERT Charts?

5. Describe the key components of Software Configuration Management?

6. Explain the metrics for project size estimation

7. Describe Risk Management

8. Discuss Software Project Management and List out Complexities (L)

9. Briefly explain the responsibilities of Software Project Manager?(L)

11. Explain the necessities of cost estimation. Justify your answer with an example (L)

12. Discuss about COCOMO model in detail.(L) 4

13. Explain Software Configuration Management (L)

14. What are the types of Risk which can happen while developing a software(L) or

15. How does Risk Management contribute to the overall success of a software development? (L)

UNIT 4

1. What you mean by unit testing?

2. How is the SRS Document validated? Or what methods are commonly used to validate the SRS document?

3. Find any two differences between requirement analysis and requirement specification?

4. Explain white box testing.

5. Differentiate between Functional and Non-Functional Requirements

6. Compare Black-box Testing and White-Box Testing (L) short or

7. Explain merits and demerits of Black box and White box testing?

8. Explain Software Requirements Specification (SRS) Document (L)

9. Discuss Functional requirements and Non Functional Requirements(L) or

10. How do functional and non-functional requirements influence the design and implementation of a software

System? OR

11. What is requirement engineering and explain Requirements Analysis and Specification phase in detail

12. Write Functional and Non-Functional Requirements for library Management system. (L)

13. Explain deployment diagram with an example? (L)
14. Explain Use case diagram with an example?
15. Explain Software Design in detail with an example scenario (L)
16. Explain Testing and Design a Test Case with suitable example (L)

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UNIT 5

1. Explain the principles of agile methodology.

2. What is the agile process model?
3. Briefly explain importance of Devops? Or Define DevOps
4. What is the primary goal of SCRUM methodology in software development?
5. What is the outcome of a SPRINT?
6. Compare agile with traditional process models.
7. Describe Agile process models (L) short or 2
8. Explain specific agile methods that follow the core principles of Agility?

9. List out Roles and Responsibilities of Business owner, Product Manager & Designers (L) 3

10. Explain Quality Assurance & agile project management (L)
11. Explain the following:

i. SCRUM

ii. SPRINT

12. Explain Roles and Responsibilities of Scrum team (L)
13. Illustrate the working of scrum with an example scenario
