



## UNIT – I:

### Introduction to Software Engineering

#### PART A: Multiple Choice Questions (MCQs)

1. **Software Engineering is defined as:**

- A) Writing code only
- B) Systematic application of engineering principles to software development
- C) Testing software only
- D) Maintaining hardware

**Answer: B**

2. **Which of the following describes the evolving role of software?**

- A) Only data processing
- B) Only entertainment
- C) Controlling business, scientific, and embedded systems
- D) Only documentation

**Answer: C**

3. **The changing nature of software is mainly due to:**

- A) Decreasing user demands
- B) Rapid technological advancements
- C) Reduced computing power
- D) Lack of internet access

**Answer: B**

4. **A false belief about software and its development is called:**

- A) Software Process
- B) Software Myth
- C) Software Requirement
- D) Software Model

**Answer: B**

5. **Software Engineering is considered a \_\_\_\_\_ technology.**

- A) Linear
- B) Layered
- C) Sequential
- D) Circular

**Answer: B**

6. **Which is NOT a layer of Software Engineering?**

- A) Quality Focus
- B) Process
- C) Methods
- D) Hardware

**Answer: D**

7. **The foundation of Software Engineering is:**

- A) Testing
- B) Coding
- C) Quality Focus
- D) Maintenance

**Answer: C**

8. **A Process Framework provides:**

- A) Programming languages
- B) Activities applicable to all software projects
- C) Hardware specifications
- D) Network protocols

**Answer: B**

9. **CMMI stands for:**

- A) Capability Maturity Model Integration
- B) Computer Management Model Integration
- C) Capability Management Method Interface
- D) Computer Maturity Measurement Index

**Answer: A**

10. **How many maturity levels are there in CMMI?**

- A) 3
- B) 4
- C) 5
- D) 6

**Answer: C**

11. **The Waterfall Model follows a:**

- A) Incremental approach
- B) Sequential approach
- C) Iterative approach
- D) Parallel approach

**Answer: B**

12. **Which process model emphasizes risk analysis?**

- A) Waterfall Model
- B) Agile Model
- C) Spiral Model
- D) RAD Model

**Answer: C**

13. **Agile methodology focuses on:**

- A) Extensive documentation
- B) Customer collaboration and adaptability
- C) Sequential development
- D) Risk management only

**Answer: B**

14. **Which Agile principle values working software over:**

- A) Testing
- B) Customer interaction
- C) Comprehensive documentation

- D) Coding standards

**Answer: C**

**15. The first phase in the Waterfall Model is:**

- A) Design
- B) Coding
- C) Requirements Analysis
- D) Testing

**Answer: C**

**PART B: Fill in the Blanks**

1. The application of engineering principles to software development is called **Software Engineering**.
2. Incorrect beliefs regarding software development are known as **Software Myths**.
3. Software Engineering is a **layered** technology.
4. The bedrock of Software Engineering is a quality **focus**.
5. The generic process framework consists of framework **activities**.
6. CMMI stands for **Capability Maturity Model Integration**.
7. The highest maturity level in CMMI is **Optimizing**.
8. The Waterfall Model follows a **sequential** software development approach.
9. The Spiral Model combines iterative development with **risk analysis**.
10. Agile methodology promotes **customer** collaboration.
11. The changing nature of software is driven by technological **advancements**.
12. The Process layer forms the basis for management control of software **projects**.
13. Methods in Software Engineering provide the technical **how-to's** for building software.
14. Agile development emphasizes responding to **change** over following a plan.
15. In the Waterfall Model, testing is performed after the **implementation** phase.



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