Seat No. : _____

DJ-115

December-2025

Int. M.Sc. IT Cloud and Application Development, Sem.-V

DSC-M-CAD-354T : Software Development Life Cycle

Time : 2:00 Hours] **[Max. Marks : 50**

Instructions : (1) Attempt **all** questions.
(2) Make suitable assumptions wherever necessary.
(3) Do not write anything on the question paper.

1. Define the Software Development Life Cycle (SDLC). Explain in detail its objectives, importance, and how it helps in producing high-quality software. **7**

2. Define software measurement. Explain the principles of software measurement with suitable examples. Differentiate between direct measurement and indirect measurement with examples. **7**

OR

2. What is Lines of Code (LOC) ? Write its features, advantages and disadvantages. **7**

3. What is a Software Requirement Specification (SRS) ? Explain its purpose and characteristics/ features of a good SRS with suitable examples in SDLC. **7**

OR

3. What is requirement analysis ? Explain the steps of requirement analysis with an example and the importance of context diagram and prototypes in requirement analysis. **7**

4. What is Poka-Yoke (Mistake Proofing) ? Explain its categories, working and give one real-life software example. **7**

OR

4. Explain the role and activities of the Software Quality Assurance (SQA) group in a project. **7**

5. Differentiate between Quality Assurance (QA) and Quality Control (QC) with examples. **7**

6. SDLC stands for : **1**

(a) Software Design Life Cycle

(b) System Development Life Cycle

(c) Software Development Life Cycle

(d) System Design Level Code

7. Which of the following is not an SDLC phase ? **1**

(a) Planning

(b) Coding

(c) Testing

(d) Networking

8. Software engineering is defined as : **1**

(a) Writing code

(b) Managing databases

(c) A process with methods and tools for building quality software

(d) A hardware configuration

9. A main cause of the software crisis was : **1**

(a) Hardware failure

(b) Inefficient compilers

(c) Poor project management and complexity

(d) Network delay

10. A good SRS must be : **1**

(a) Verbose and lengthy

(b) Ambiguous

(c) Correct, complete, consistent

(d) Technically complex

11. Agile model divides work into : **1**

(a) Sprints / Time-boxes

(b) Phases

(c) Modules

(d) Components

12. Software measurement refers to : **1**

(a) Measuring only code lines

(b) Quantitative evaluation of product/ process attributes

(c) Measuring hardware performance

(d) Measuring test results only

13. Which of the following is not a characteristic of good metrics ? **1**

(a) Quantitative

(b) Repeatable

(c) Understandable

(d) Subjective

14. Which phase involves reviewing SRS for clarity and completeness ? **1**

(a) Design Review

(b) Requirement Review

(c) Code Review

(d) Maintenance Review

15. A DFD represents : **1**

(a) Logical flow of data in a system

(b) Sequence of program instructions

(c) Class hierarchy

(d) Database schema

16. Non-functional requirements focus on : **1**

(a) Features like usability, reliability, performance

(b) Code syntax

(c) Algorithm selection

(d) Hardware assembly

17. Quality Assurance is primarily a : **1**

(a) Corrective activity

(b) Preventive activity

(c) Debugging activity

(d) Maintenance activity

18. The SQA Plan includes all except : **1**

(a) SQA tasks and actions

(b) Tools and methods used

(c) Software marketing strategy

(d) Configuration management procedures

19. Software reliability is defined as : **1**

(a) Freedom from design errors

(b) Probability of failure-free operation in a specified time

(c) Conformance to coding standards

(d) Ease of maintenance

20. Quality Control focuses on : **1**

(a) Preventing defects

(b) Inspection and testing to find defects

(c) Project planning

(d) Resource management