



RAN-2511001004044001

S. Y. B. Sc. Computer Science (Sem. - IV)

Examination September - 2025

Minor - CS - 402 - Software Engineering

Time: 2 Hours]

[Total Marks: 50

સૂચના : / Instructions

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નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book

Name of the Examination:

S. Y. B. Sc. Computer Science (Sem. - IV)

Name of the Subject :

Minor - CS - 402 - Software Engineering

Subject Code No.: **2511001004044001**

Seat No.:

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Student's Signature

Q.1. (A) Attempt the following. (Any Five)

(05)

1. Which of the following is NOT a software quality factor?

a) Reliability	b) Maintainability
c) Tangibility	d) Usability
2. Which design concept focuses on reducing dependencies between different modules?

a) Cohesion	b) Coupling
c) Refinement	d) Abstraction
3. Which of the following correctly defines a “Bug” in software testing?

a) A feature that enhances user experience	b) A mistake in the code that leads to unexpected results
c) A successful test case	d) A security loophole

4. Which one of the following models is not suitable for accommodating any change?
- a) Incremental Model
 - b) Prototyping Model
 - c) RAD Model
 - d) Waterfall Model
5. Which level of testing ensures that the entire system works as expected?
- a) Unit Testing
 - b) Integration Testing
 - c) System Testing
 - d) Smoke Testing
6. What is a project timeline used for?
- a) Scheduling tasks and tracking progress
 - b) Assessing project risks
 - c) Analyzing stakeholder engagement
 - d) Defining the project budget
7. What is a Functional Requirement?
- a) specifies the tasks the program must complete
 - b) specifies the tasks the program should not complete
 - c) specifies the tasks the program must not work
 - d) All of the mentioned

(B) Answer the following in short. (Any Five) (05)

- 1. In which type of software development projects spiral Model is used?
- 2. What is significance of feasibility study?
- 3. Which is the best type of cohesion? Why?
- 4. Discuss QFD in requirement gathering.
- 5. Define Bugs. What do you mean by Debugging?
- 6. What are the key characteristics of a good Software Requirement Specification (SRS)?
- 7. What is data dictionary?

Q.2. Answer the following questions.

- (a) Explain incremental model with its advantages. (05)
- (b) What is DFD. Discuss various symbols used in constructing DFD of system. (05)

OR

- (a) Define software. Discuss various types of software. (05)
- (b) Discuss terms Abstraction, Refinement, Coupling of design (05)

Q.3. Answer the following questions.

- (a) Explain design principles in detail. (05)
- (b) Discuss the various UI/UX design guidelines that should be followed to create user-friendly interfaces. (05)

OR

- (a) What is coupling? Explain different types of coupling. (05)
- (b) Write a detailed note on normalization with its merits and demerits (05)

Q.4. Answer the following questions.

- (a) Define software team management. Write a note on various team structures. (05)
- (b) Write differences between COCOMO -I and COCOMO- II. (05)

OR

- (a) Discuss COCOMO- II Model. (05)
- (b) Write a note on coding rules and guidelines. (05)

Q.5. Answer the following questions.

- (a) Discuss Gannt Chart in detail. (05)
- (b) What do you mean by software maintenance? Discuss various types of it. (05)

OR

- (a) Explain black box testing with its advantages. (05)
- (b) Explain Software Testing life cycle in detail. (05)