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Candidate's Seat No : _____

MSc/IMSc (CA & IT) Sem.-5 Examination

Software Engineering

December-2025

Time : 2-30 Hours]

[Max. Marks : 70

Q1: Answer the following questions:

1. Explain the nature of software. How is software different from hardware? (6)
OR
1. Define software engineering. Explain why software engineering is essential for large-scale software development. (6)
2. Compare Waterfall and Incremental Models. (4)
3. Explain the advantages and challenges of using Agile methodologies. (4)
OR
3. What are software myths? Explain any four common software myths (4)

Q2: Answer the following questions:

1. Describe the major activities involved in Requirements Engineering. (6)
OR
1. Explain any four software quality attributes with suitable examples. (6)
2. Attempt any two (8)
 - a. What is architectural design? Explain the steps involved in creating an architectural design.
 - b. What is information hiding? How does it support good design?
 - c. Describe software quality attributes with suitable examples

Q3: Answer the following questions:

1. Explain the three views of a component in component-level design. (6)
OR
1. List and explain the Golden Rules of User Interface Design. (6)
2. Explain the key features of an effective WebApp interface. (4)
OR
2. Explain the process of architectural design. What are its key steps? (4)

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3. What is navigation design? Explain its importance in WebApps. (4)

Q4: Answer the following questions:

1. What is software quality? Explain how it differs from the general concept of quality. (6)

OR

1. Explain different software review techniques used in quality assurance. (6)
2. Explain the role of system testing in the software development lifecycle. (4)
3. Explain the cost impact of software defects with an example. (4)

OR

3. Explain different review techniques used for improving software quality. (4)

Q5: Answer the following questions:

1. What are software product metrics? Explain the framework including measures, metrics, and indicators. (6)

OR

1. Differentiate between black-box and white-box testing with examples. (6)
2. What tools and environments are used for mobile app testing? (4)
3. What are maintenance metrics? Explain their importance in software evolution. (4)

OR

2. Explain the fundamental concepts of software testing. Why is testing important? (4)
3. Differentiate between product metrics and process metrics. (4)

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