CBCS SCHEME

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BCS755C



# Seventh Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026

## Software Engineering

Time: 3 hrs. Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.*
*2. M : Marks , L: Bloom's level , C: Course outcomes.*

| | | Module – 1 | M | L | C |
|---|---|---|---|---|---|
| Q.1 | a. | Explain the different activities of a generic process framework for software engineering. | 10 | L2 | CO1 |
| | b. | With necessary sketches, explain two common evolutionary process models. | 10 | L2 | CO1 |
| | | **OR** | | | |
| Q.2 | a. | Write a short note on following specialized process model.<br>i) Component Based Development<br>ii) Formal Method Model | 10 | L2 | CO1 |
| | b. | With a neat diagram explain unified process with its different phases. | 10 | L2 | CO1 |
| | | **Module – 2** | | | |
| Q.3 | a. | Define requirement engineering. Why it is necessary? Explain seven distinct tasks of requirement engineering. | 10 | L2 | CO2 |
| | b. | Develop a use-can template description for safe home system considering home owner as a primary Stake-holder. | 10 | L3 | CO2 |
| | | **OR** | | | |
| Q.4 | a. | Develop following UML diagrams for access camera surveillance via the internet display camera view function :<br>i) Activity diagram<br>ii) Swimlane diagram | 10 | L3 | CO2 |
| | b. | With suitable examples, explain the data modeling concepts covering data objects, data attributes and relationships. | 10 | L2 | CO2 |
| | | **Module – 3** | | | |
| Q.5 | a. | Define twelve agility principles for those who want to achieve agility. | 10 | L2 | CO3 |
| | b. | With a neat diagram, explain extreme programming process. | 10 | L2 | CO3 |
| | | **OR** | | | |
| Q.6 | a. | Write a short note on:<br>i) Scrum<br>ii) Feature Driven Development (FDD) | 10 | L2 | CO3 |
| | b. | Explain the different principles that guide each frame work activity. | 10 | L2 | CO3 |

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| | | **Module – 4** | | | |
| **Q.7** | **a.** | With a help of a neat diagram explain translating the requirements model into design model. | **10** | **L2** | **CO4** |
| | **b.** | Briefly explain quality guidelines and quality attributes with respect to design process. | **10** | **L2** | **CO4** |
| | | **OR** | | | |
| **Q.8** | **a.** | Briefly explain the taxonomy of architecture styles. | **10** | **L2** | **CO4** |
| | **b.** | Explain the generic structure of architectural context diagram. Also illustrate context diagram for the "Safe Home Security Function". | **10** | **L3** | **CO4** |
| | | **Module – 5** | | | |
| **Q.9** | **a.** | Write a short note on:<br>i) Garvin's Quality Dimensions<br>ii) Mc.Call's Duality Factors Features | **10** | **L2** | **CO5** |
| | **b.** | Explain a reference model for a technical reviews. | **10** | **L2** | **CO5** |
| | | **OR** | | | |
| **Q.10** | **a.** | Explain the different object oriented testing strategies. | **10** | **L2** | **CO5** |
| | **b.** | In detail explain the control structure testing. | **10** | **L2** | **CO5** |

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