CBCS SCHEME

USN | 1 | M | E | 2 | 2 | C | S | 1 | 4 | 2 |

BCS501

# Fifth Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025
## Software Engineering and Project Management

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 software process and software engineering practices. | 10 | L2 | CO1 |
| | b. | Explain the waterfall model and incremental model, with diagram. | 10 | L2 | CO1 |
| | | **OR** | | | |
| Q.2 | a. | Explain Boehm Spiral process model with a neat diagram. Mention its advantages and disadvantages. | 10 | L2 | CO1 |
| | b. | Explain the five activities of a generic process framework for software engineering. | 10 | L2 | CO1 |
| | | **Module – 2** | | | |
| Q.3 | a. | Explain the distinct tasks of requirement engineering. | 10 | L2 | CO2 |
| | b. | Illustrate the UML use case diagram for safe home system. | 10 | L2 | CO2 |
| | | **OR** | | | |
| Q.4 | a. | Explain Class-Responsibility-Collaborator(CRC) modeling and data modeling with an example. | 10 | L2 | CO2 |
| | b. | Explain the elements of analysis model in requirement modeling. | 10 | L2 | CO2 |
| | | **Module – 3** | | | |
| Q.5 | a. | Explain the principles of agile process development. | 10 | L2 | CO3 |
| | b. | Explain the following :<br>i) Adaptive software development<br>ii) SCRUM | 10 | L2 | CO3 |
| | | **OR** | | | |
| Q.6 | a. | Explain the concepts of extremes programming with a neat diagram. | 10 | L2 | CO3 |
| | b. | Explain design modeling principles that guide the respective framework activity. | 10 | L2 | CO3 |
| | | **Module – 4** | | | |
| Q.7 | a. | Illustrate the project management life cycle with a neat diagram. | 10 | L2 | CO4 |
| | b. | Explain : i) Different ways of categorizing software projects<br>ii) Smart objectives | 10 | L2 | CO4 |
| | | **OR** | | | |
| Q.8 | a. | Explain the difference between traditional versus modern project management practices along with the role of management. | 10 | L3 | CO4 |
| | b. | Explain software development life cycle (ISO 12207) with a neat diagram. | 10 | L2 | CO4 |
| | | **Module – 5** | | | |
| Q.9 | a. | Explain Quality Management System with principles of BS EN ISO-9001-2000. | 10 | L2 | CO5 |
| | b. | Explain the following :<br>i) McCall model ii) Garvin's Quality Dimensions. | 10 | L2 | CO5 |
| | | **OR** | | | |
| Q.10 | a. | Describe six generic functions allowed in automated estimation techniques of software projects. | 10 | L3 | CO5 |
| | b. | Explain COCOMO II model. | 10 | L2 | CO5 |

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