



R20 Regulation

Subject code: 3P4EC

# TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

## B.Tech IV Semester Supplementary Examinations, February 2024

### SOFTWARE ENGINEERING (Common to CSE & CSE(AI&ML))

Maximum Marks: 70

Date: 21.02.2024

Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
  2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
  3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
  4. Each question carries 10 marks and may have a, b, c, d as sub questions.

#### Part-A

| All the following questions carry equal marks (10X2M=20 Marks) |                                                                                | CO  | Bloom Tx |
|----------------------------------------------------------------|--------------------------------------------------------------------------------|-----|----------|
| 1                                                              | Define the term "software myths".                                              | CO1 | L1       |
| 2                                                              | Compare the waterfall model with incremental process model.                    | CO1 | L2       |
| 3                                                              | What is the purpose of feasibility studies?                                    | CO2 | L1       |
| 4                                                              | What is meant by requirements management in the context of software projects?  | CO2 | L1       |
| 5                                                              | Distinguish between classes and components.                                    | CO3 | L2       |
| 6                                                              | What is pattern-based software design?                                         | CO3 | L1       |
| 7                                                              | Define validation testing.                                                     | CO4 | L1       |
| 8                                                              | Differentiate between Black-Box and White-Box testing methods.                 | CO4 | L2       |
| 9                                                              | Define risk projection.                                                        | CO5 | L1       |
| 10                                                             | Why is early risk identification vital in the software development life cycle? | CO5 | L1       |

#### Part-B

| Answer All the following questions. (5X10M=50Marks) |                                                                                                                                            |     |          |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-----|----------|
| 11                                                  | Explain about the Capability Maturity Model Integration (CMMI) and the waterfall model with neat sketch. [10M]                             | CO1 | L2       |
| OR                                                  |                                                                                                                                            |     |          |
| 12                                                  | A. Elaborate on evolution of software. [5M]<br>B. Explain the unified process model with a neat sketch. [5M]                               | CO1 | L2       |
| 13                                                  | A. Explain clearly about software requirements document. [5M]<br>B. Differentiate between functional and non-functional requirements. [5M] | CO2 | L2       |
| OR                                                  |                                                                                                                                            |     |          |
| 14                                                  | Discuss about the Context Models and Behavioral models. [10M]                                                                              | CO2 | L2       |
| 15                                                  | A. State the software design concepts. [3M]<br>B. Describe mapping data flow into software architecture. [7M]                              | CO3 | L2<br>L3 |
| OR                                                  |                                                                                                                                            |     |          |
| 16                                                  | A. Explain various architectural styles & patterns with neat diagram. [7M]<br>B. Discuss the characteristics of a good design. [3M]        | CO3 | L2       |

|    |                                                                                                                                                 |     |          |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------|
| 17 | What is black box testing? Explain the different types of black box testing strategies. Explain by considering suitable examples. [10M]         | CO4 | L2       |
|    | OR                                                                                                                                              |     |          |
| 18 | A. What are the Various Metrics used for Analysis and Design models? Discuss. [5]<br>B. Discuss in detail on function-based metrics. [5]        | CO4 | L2       |
| 19 | A. Differentiate between Reactive and Proactive Risk strategies. [5M]<br>B. Differentiate between Risk identification and Risk projection. [5M] | CO5 | L2       |
|    | OR                                                                                                                                              |     |          |
| 20 | A. Explain about risk mitigation, monitoring and management. [5M]<br>B. List the seven principals of risk management. [5M]                      | CO5 | L2<br>L4 |