

Reg. No.

Question Paper Code

12055

**B.E / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2023****Third Semester****Computer Science and Business Systems**

(Common to M.Tech - Computer Science and Engineering)

**20CBPC303 - SOFTWARE ENGINEERING**

(Regulations 2020)

**Duration: 3 Hours****Max. Marks: 100****PART - A (10 × 2 = 20 Marks)**

Answer ALL Questions

- |  | <i>Marks,<br/>K-Level, CO</i> |
|--|-------------------------------|
| 1. What is Software Engineering?   | 2,K1,CO1                      |
| 2. List the types of Software Development Models.                              | 2,K1,CO1                      |
| 3. Name two metrics-based control methods used in software projects.           | 2,K1,CO2                      |
| 4. State the purpose of a feasibility study in software project planning.      | 2,K1,CO2                      |
| 5. Identify key components of the Unified Modeling Language (UML).             | 2,K2,CO4                      |
| 6. Define Software Testing.  | 2,K1,CO4                      |
| 7. Identify the role of reliability models in estimating software reliability. | 2,K2,CO5                      |
| 8. Define internal and external qualities in the context of software quality.  | 2,K1,CO5                      |
| 9. Write the five steps of CMMI.   | 2,K1,CO6                      |
| 10. Define FURPS.  | 2,K1,CO6                      |

**PART - B (5 × 13 = 65 Marks)**

Answer ALL Questions

11. a) Given a software project, how would you apply the principles of software engineering to ensure its successful execution? Elaborate. 13,K2,CO1
- OR**
- b) Explain the steps, advantages and limitations in the Waterfall Model. 13,K2,CO1
12. a) Discuss the effectiveness of configuration management in ensuring software project success. 13,K2,CO2
- OR**
- b) Explain about the concept of COCOMO Models with suitable examples. 13,K2,CO2
13. a) Explain concepts of Inspection in detail. 13,K2,CO4

**OR**

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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b) Explain Black box testing with suitable example. 13.K2.CO4

14. a) Discuss the Capability Maturity Model (CMM) in a software organization. 13.K2.CO5

**OR**

b) Explain the concept of software reliability and its importance in software development. 13.K2.CO5

15. a) Describe about the concept of ISO 9126 in detail. 13.K2.CO6

**OR**

b) Illustrate the concept of McCalls' model in detail. 13.K2.CO6

**PART - C (1 × 15 = 15 Marks)**

16. a) Explain and prepare an SRS document for Library Management System. 15.K2.CO3

**OR**

b) Discuss in detail about the object oriented construction principles with metrics. 15.K2.CO3