CBCS SCHEME

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18CS35

Third Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026
Software Engineering

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-1

1 a. Discuss the four important attributes that all software professional should have. Also list and explain the key challenges faced in software engineering. **(10 Marks)**

b. Illustrate the spiral model with its salient features. Elucidate why Bochmi spiral model is an adaptable model that can support both change avoidance and change tolerance activities. **(10 Marks)**

OR

2 a. Distinguish between functional and non-functional requirements. With a neat sketch explain the classification of non-functional requirement types. **(10 Marks)**

b. Briefly explain the structure of requirement documentation. **(10 Marks)**

Module-2

3 a. Define object orientation. Explain the characteristics of object orientation with an example. Explain the 3 models of object orientation. **(10 Marks)**

b. Explain the OO theme. Also explain OOD with an illustration. **(10 Marks)**

OR

4 a. Discuss generalization with an example. Explain the modeling concepts. **(10 Marks)**

b. What is Multiple Inheritances? Explain the kinds of multiple inheritance. Illustrate the class model of C windowing system. **(10 Marks)**

Module-3

5 a. Explain context model. Illustrate the context for MHC-PMS. Explain sequence model with an illustrate for data transfer. **(10 Marks)**

b. Explain model driven engineering with a neat sketch. Define design pattern and explain four essential elements of design pattern. **(10 Marks)**

OR

6 a. With a neat sketch explain the state machine model for microwave oven. **(10 Marks)**

b. Discuss the issues during implementation process and Bayerdonder principle for using open source. **(10 Marks)**

Module-4

7 a. Sketch and explain test driven development. Explain the stages of acceptance testing process with a neat diagram. **(10 Marks)**

b. Explain Lehman's laws for evolutionary dynamics. **(10 Marks)**

OR

8 a. With a neat sketch explain maintenance prediction. **(10 Marks)**

b. Illustrate software re-engineering process and re-engineering approaches. **(10 Marks)**

Module-5

9 a. Explain plan decision development planning process with a neat sketch and project scheduling process. **(10 Marks)**

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b. Briefly explain the different types of estimation techniques with an activity graph. **(10 Marks)**

OR

10 a. Explain software quality plan and software standards with importance. **(10 Marks)**

b. Write a neat sketch explain review and inspection process. Explain software measurement and metrics for predictor and control. **(10 Marks)**

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