(T) Roll No. .....

PAPER ID—11162

Bachelor of Technology (Computer Science & Engineering)

EXAMINATION, 2025

(Fifth Semester)

SOFTWARE ENGINEERING

Professional Elective Course-I

Time : 3 *Hours* *Maximum Marks :* 70

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Question No. **1** is compulsory and carries 14 marks (parts 2 marks each). Out of the remaining eight questions, attempt any *four* by selecting *one* question from each Section. Each question carries 14 marks.

1. (a) What is Software Crisis ? Explain. 2

(b) Explain the steps of Software Process. 2

(c) Explain Data Dictionary. 2

(d) Explain the incremental model 2

(e) Write any two difference between "Black Box Testing" and "White Box Testing". 2

(f) Explain CMM in brief. 2

(g) Differentiate between Validation and Verification of software. 2

Section A

2. (a) What do you mean by software ? Explain what the different myths are associated with software development. 7

(b) Explain the Spiral model with example. 7

3. Discuss the relationship and differences between test-driven development (TDD), behavior-driven development (BDD), continuous delivery, clean code and refactoring. Illustrate how these practices support agile frameworks such as extreme programming (XP) or Scrum. 14

Section B

4. (a) What do you mean by data dictionary ? 7

(b) Write the brief description about requirement engineering. 7

5. (a) What do you mean by data flow diagram ? Explain. 7

(b) What is software requirement specification ? How is it prepared ? Explain. 7

Section C

6. Write a brief description about cohesion and coupling in detail. **14**

7. (a) What are the various types of Software Maintenance ? Discuss in detail. **7**

   (b) Explain the concept of Unit Testing and Integration Testing in Detail. **7**

Section D

8. (a) What is SQA Plan ? Illustrate the activities involved in SQA Plan. **7**

   (b) Explain the Software Quality and its Parameters. **7**

9. (a) Explain Software Project Management and its Planning with example. **7**

   (b) Explain the COCOCMO Model in Detail. **7**

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