(T) Roll No. .....

PAPER ID—11162

B. Tech. EXAMINATION, 2024

(Fifth Semester)

COMPUTER SCIENCE AND ENGINEERING
(ARTIFICIAL INTELLIGENCE AND DATA SCIENCE)

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 : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.

1. (a) What is a software crisis ?

(b) Explain the term scrum in reference of software engineering.

(c) What is data dictionary ?

(d) Differentiate between software Verification and Validation.

(e) What is the use of Data flow diagram ?

(f) Briefly explain any *three* roles of an SQA.

(g) What do you mean by reverse engineering ? **7×2=14**

Unit I

2. Discuss the evolving role of Software. List out the characteristics of a good software. **14**

3. (i) Explain the pair and mob programming. **7**

(ii) Elaborate the behaviour driven software development methodology. **7**

Unit II

4. What are the essential components of SRS document ? Explain by taking a simple example of your choice. 14

5. What is the difference between functional and non-functional requirements ? Give *two* examples of each for a library management system. 14

Unit III

6. What do you mean by Software Testing ? Explain in detail the process of integration testing. 14

7. What is software design process ? Explain the characteristics of good software design. 14

Unit IV

8. What do you mean by SQA ? Explain the ISO 9126 Quality Standards. **14**

9. Write notes on the following : **14**

   (a) Staffing

   (b) Software estimation.