



K25U 2520

Reg. No. :

Name :

**V Semester B.Sc. Degree (CBCSS – OBE – Regular)
Examination, November 2025
(2023 Admission)**

**CORE COURSE IN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
5B11 AIML : Software Engineering**

Time : 3 Hours

Max. Marks : 40

**PART – A
(Short Answer)**

Answer **all** questions. **Each** question carries **1** mark.

1. What is the primary goal of software engineering ?
2. Define the term “software development”.
3. What is the purpose of a software prototype ?
4. What is the difference between functional and non-functional requirements ?
5. Define the term “software evolution”.
6. What is the role of a software engineer ?

(6×1=6)

**PART – B
(Short Essay)**

Answer **any 6** questions. **Each** question carries **2** marks.

7. Explain the importance of software engineering ethics.
8. Describe the waterfall model and its limitations.
9. What are the benefits of iterative development ?
10. Explain the concept of modularity in software design.

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11. How do you choose between manual and automated testing ?
12. How do you manage changing requirements ?
13. Explain the term "software validation".
14. Describe the characteristics of a well-structured software design. **(6×2=12)**

PART – C
(Essay)

Answer **any 4** questions. **Each** question carries **3** marks.

15. Explain the different stages of the software development life cycle.
16. Differentiate quality control and assurance.
17. Explain the concept of object-oriented design using UML.
18. Describe the common challenges in software design.
19. Explain the different techniques for performing system design.
20. Describe the role of testing in ensuring software quality. **(4×3=12)**

PART – D
(Long Essay)

Answer **any 2** questions. **Each** question carries **5** marks.

21. Explain the RAD model in detail.
 22. Explain the importance of software configuration management.
 23. Explain the different approaches to structural testing.
 24. Describe the role of user to test a software product. **(2×5=10)**
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