Reg. No ..... Name **25U542**

B.Sc. DEGREE END SEMESTER EXAMINATION - OCTOBER 2025

SEMESTER 5 : COMPUTER APPLICATIONS

COURSE : **19U5CRCAP10 : SOFTWARE ENGINEERING AND ENVIRONMENTAL STUDIES**

(For Regular 2023 Admission and Supplementary 2022/ 2021/ 2020/ 2019 Admissions)

Time : Three Hours Max. Marks: 75

PART A

Answer All (1 mark each)

1. What is the benefit of modular design?
2. Give the methods of water conservation.
3. What is the significance of software engineering?
4. Define Verification.
5. What is data modeling?
6. Define software prototyping.
7. What is a Real time system?
8. Define Cyclomatic complexity.
9. What is validation in software engineering?
10. Define temporal cohesion.

(1 x 10 = 10)

PART B

Answer any 8 (2 marks each)

11. Identify the different steps involved in requirement engineering process.
12. What are the reasons behind to perform 'white box testing'?
13. What are the merits of incremental model?
14. What are environmental rights?
15. List the difference between sub-systems and modules.
16. What is the need for simulation testing tools?
17. Explain the main purpose of DFD?
18. How Architecture design can be represented?
19. What are the drawbacks of RAD models?
20. How requirements are classified? Explain with an example of each.

(2 x 8 = 16)

PART C

Answer any 5 (5 marks each)

21. Explain the types of software products.
22. What are the pros and cons of Client-Server architecture?
23. What are the effects of modern agriculture practices on environment?
24. What are the steps in bottom-up integration testing?
25. Explain in detail about repository model and its characteristics.
26. Analyse possible functional and non functional requirements of a specific system.
27. Elaborate on Data Dictionary.

(5 x 5 = 25)

PART D

Answer any 2 (12 marks each)

28. What is black box testing? Is It necessary to perform this? Explain various test activities?
29. With suitable illustration explain spiral model evolutionary software development?
30. Explain in detail about the Fundamental Software Design Concepts.
31. What is a data flow diagram explain rules for drawing good data flow diagrams with the help of a suitable example?

(12 x 2 = 24)