K24U 0717

IV Semester B.Sc. Degree (C.B.C.S.S. – O.B.E. – Regular/Supplementary/ Improvement) Examination, April 2024
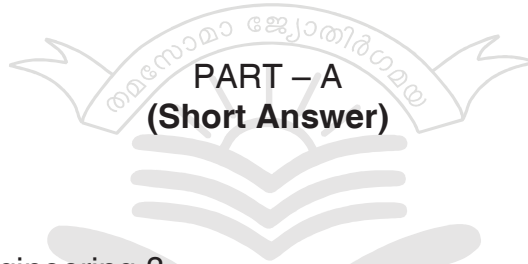### (2019 to 2022 Admissions)
CORE COURSE IN COMPUTER SCIENCE
4B05CSC : Software Engineering

Time : 3 Hours   Max. Marks : 40

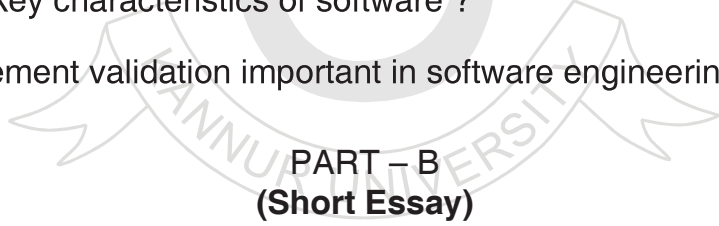### PART – A
(Short Answer)

Answer **all** questions.   (6×1=6)

1. What is Software Engineering ?

2. Define a Software Life Cycle Model.

3. What is Software Requirement Analysis ?

4. What is Requirement Documentation ?

5. What are the key characteristics of software ?

6. Why is requirement validation important in software engineering ?

PART – B
(Short Essay)

Answer **any six** questions.   (6×2=12)

7. Differentiate between a program and software.

8. Discuss the key features of the Evolutionary Process Model.

9. Outline various steps involved in Requirement Analysis.

10. Explain the purpose of Feasibility Studies in software development.

11. Explain the concept of Modularity in software design.

12. Define Object-Oriented Design-Analysis.

13. What are some techniques used to design test cases ?

14. What is Unit Testing ?

PART – C
(Essay)

Answer **any four** questions.   **(4×3=12)**

15. Explain waterfall model.

16. Explain design methodology.

17. Why is Requirement Validation an essential step in software engineering ?

18. Differentiate between Function-Oriented Design and Object-Oriented Design-Analysis.

19. Define Cyclomatic Complexity and discuss its role in software testing.

20. Describe the different levels of testing in the software testing process.

PART – D
(Long Essay)

Answer **any two** questions.   **(2×5=10)**

21. Explain the selection process parameters for a life cycle model.

22. Explain the process of Requirement Elicitation and highlight some common techniques used for gathering requirements from stakeholders.

23. Explain the objectives of the design phase in software engineering.

24. Explain the importance of Boundary Value Analysis and Equivalence Class Testing in designing test cases.

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