No. of Printed Pages : **2**

21CSC2C7L

Sl. No.

M.Sc. II Semester Degree Examination, Sept./Oct. - 2024

COMPUTER SCIENCE

Software Engineering

(NEP)

Time : 3 Hours Maximum Marks : 70

Note : *Answer **any five** of the following questions with Question **No. 1 Compulsory**, each question carries **equal** marks.*

1. (a) Define software engineering. Explain its significance and how it differs from traditional engineering disciplines. **7**

(b) Outline the key components of the software process. How do these components contribute to successful software development ? **7**

2. (a) Describe a generic process model in software engineering. What are the key phases, and how do they contribute to the overall development process ? **7**

(b) Describe the importance of the design phase in a generic process model. What are the key activities are involved in this phase ? **7**

3. (a) What is the requirements analysis in the context of software engineering, and why is it crucial for successful software development ? **7**

(b) What is Class Responsibility Collaborator (CRC) modeling, and how does it contribute to the requirements modeling process ? **7**

4. (a) Define software architecture and explain its importance in software engineering. What key elements are typically included in a software architecture ? **7**

(b) What is a software component, and what role do components play in the design of a software system ? **7**

5. (a) Describe a strategic approach to software testing. What are the key elements involved, and why are they important for ensuring software quality ? **7**

(b) What is white-box testing, and what are its key techniques ? Discuss the advantages and limitations of this testing approach. **7**

P.T.O.

6. (a) Define process patterns in software engineering. How do they assist in the creation and improvement of software development processes ? **7**

(b) Describe the concepts of associations and dependencies in class based modeling. How do they impact the design and implementation of software ? **7**

7. (a) What are the Golden Rules of user interface design, and how do they enhance the usability of software applications ? **7**

(b) Explain the process and objectives of system testing in software engineering. How does it contribute to the overall quality assurance process ? **7**

8. Write short notes on the following : **5+5+4**

(a) Process Patterns

(b) Scenario-based Modeling

(c) User Interface analysis and design

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