

Code No: 183CD**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech II Year I Semester Examinations, February - 2024****SOFTWARE ENGINEERING****(Common to CSE (AI&ML), CSE(IOT), AI&ML)****Time: 3 Hours****Max. Marks: 60****Note:** This question paper contains two parts A and B.i) **Part- A** for 10 marks, ii) **Part - B** for 50 marks.

- Part-A is a compulsory question which consists of ten sub-questions from all units carrying equal marks.
- Part-B consists of **ten questions** (numbered from 2 to 11) **carrying 10 marks each**. From each unit, there are two questions and the student should answer one of them. Hence, the student should answer five questions from Part-B.

PART- A**(10 Marks)**

- 1.a) What is the significance of software process model? [1]
- b) What are the advantages and disadvantages of Spiral model? [1]
- c) What are called system requirements? [1]
- d) What is traceability with respect to requirements? [1]
- e) What is design quality? [1]
- f) What is design pattern? [1]
- g) What is the importance of software measurement? [1]
- h) Why do we need to test the software? [1]
- i) What is the significance of software reviews? [1]
- j) What is software risk? Explain. [1]

PART - B**(50 Marks)**

- 2.a) Discuss the evolving role of software.
 - b) With a neat sketch, explain software process framework. [5+5]
- OR**
- 3.a) Explain the changing nature of the software and common software myths.
 - b) Can we integrate waterfall model with Spiral model? If so, in what situations these are to be integrated? Discuss. [5+5]
- 4.a) List and explain various requirements elicitation techniques.
 - b) Differentiate between functional and non-functional requirements with examples. [5+5]
- OR**
- 5.a) Write and explain the structure of software requirements document.
 - b) What are the types of feasibility studies? Explain. [5+5]
- 6.a) Explain class diagram and its relationships.
 - b) Differentiate between component and deployment diagrams. [5+5]

OR

- 7.a) Describe the conceptual model of UML.
b) Explain any two software architectural styles of importance. [5+5]
- 8.a) Explain the metrics used for software processes.
b) Write about the test strategies used for testing conventional software. [5+5]
- OR**
- 9.a) Compare and contrast black-box and white-box testing techniques.
b) What are the metrics used for software product? Explain. [5+5]
- 10.a) List and explain different types of software risks with examples.
b) What is software reliability? Explain. [5+5]
- OR**
- 11.a) Write about the significance of software quality management.
b) Explain about formal technical reviews in detail. [5+5]

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