

R18

Code No: 155DB

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year I Semester Examinations, January/February - 2023

SOFTWARE ENGINEERING

(Computer Science and Engineering - IOT)

Time: 3 Hours

Max. Marks: 75

Note: i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.

iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A**(25 Marks)**

- 1.a) What are the drawbacks of RAD model? [2]
- b) What are differences between software and hardware? [3]
- c) What are functional requirements of a software? [2]
- d) Discuss about the classification of volatile requirements. [3]
- e) Why is architecture important? [2]
- f) What about component diagrams? [3]
- g) What are ISO 9126 quality factors? [2]
- h) Explain about metrics for testing. [3]
- i) Define software quality. [2]
- j) What are SQA activities? Explain. [3]

PART – B**(50 Marks)**

- 2.a) What are merits and demerits of evolutionary process models? Explain in brief.
 - b) Explain about the personal software process. [5+5]
- OR**
- 3.a) Define software legacy. Explain about the quality of software legacy.
 - b) Discuss about the changing nature of the software. [5+5]
- 4.a) Explain in detail about state machine models.
 - b) Discuss about requirements validation. [5+5]
- OR**
5. Draw a sequence diagram showing the actions performed in the ticket issuing system. You may make any reasonable assumptions about the system. Pay particular attention to specifying user errors. [10]
- 6.a) Explain about the conceptual model of the UML.
 - b) What are design concepts? Explain in detail. [5+5]
- OR**
- 7.a) Define class diagram. Explain about common modeling techniques of class diagrams.
 - b) Discuss about brief taxonomy of architectural styles. [5+5]

- 8.a) What are debugging strategies? Explain in detail.
b) Explain about architectural design metrics. [5+5]

OR

- 9.a) Distinguish between unit testing and integration testing.
b) Discuss in detail about the CK metrics suite in detail. [5+5]

10. Explain the following:
a) The RMMM plan
b) Metrics for software quality. [5+5]

OR

11. Explain the following:
a) Statistical SQA
b) Risk components and drivers. [5+5]

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Used papers 2023