

Code No: 154CQ**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech II Year II Semester Examinations, February - 2024****SOFTWARE ENGINEERING****(Common to CSBS, CSIT, CSE(AI&ML), CSE(DS), AI&ML)****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)**

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|------|---|-----|
| 1.a) | What is a myth? | [2] |
| b) | What is meant by software process? | [3] |
| c) | Define Requirements validation. | [2] |
| d) | What are the non-functional requirements of software? | [3] |
| e) | Write the characteristics of a good design. | [2] |
| f) | What is the importance of modeling? | [3] |
| g) | How testing is different from debugging? | [2] |
| h) | What is an effort? How it is estimated? | [3] |
| i) | Define a risk. | [2] |
| j) | What is meant by software reliability? | [3] |

PART – B**(50 Marks)**

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|-----------|---|-------|
| 2.a) | Draw and explain the spiral model and list the advantage and disadvantages. | |
| b) | Discuss in detail Software development lifecycle. | [5+5] |
| OR | | |
| 3.a) | Give a focus on various software myths regarding Management and Practitioner. | |
| b) | Discuss about evolutionary process models. | [5+5] |
| 4.a) | Discuss software requirements document in detail. | |
| b) | Write detailed note on Requirement Specification. | [5+5] |
| OR | | |
| 5.a) | List and explain the techniques involved in gathering Requirements. | |
| b) | What is the goal of requirements analysis phase? Give reasons why the requirements analysis phase is a difficult one. | [5+5] |
| 6.a) | Explain sequence diagram with suitable example. | |
| b) | Draw and explain the class diagram for an ATM bank system. | [5+5] |
| OR | | |
| 7. | Explain building blocks of UML in detail. | [10] |

- 8.a) Explain Blackbox Testing and White Box testing techniques in detail.
b) Discuss about the software metrics for small organizations. [5+5]

OR

- 9.a) Discuss in detail the metrics for software maintenance.
b) Write detailed note on metrics for source code. [5+5]

- 10.a) What do you mean by risk management? Explain how to select the best risk reduction technique when there are many ways of reducing a risk?
b) Explain about risk projection and risk refinement. [5+5]

OR

- 11.a) What types of risks occur during software development? Discuss.
b) Write a detailed note on ISO 9000 quality standards. [5+5]

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