

**R18**

**Code No: 155DB**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech III Year I Semester Examinations, July/August - 2023**

**SOFTWARE ENGINEERING**

**(Common to CSE, IT, ECM, ITE)**

**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) | Define software.                                 | [2] |
| b)   | What are software application domains?           | [3] |
| c)   | What is formal system specification?             | [2] |
| d)   | What is the goal of requirements analysis phase? | [3] |
| e)   | What are the design principles?                  | [2] |
| f)   | Write basic concepts of basic interface design.  | [3] |
| g)   | Discuss about white-box testing.                 | [2] |
| h)   | Why design test cases?                           | [3] |
| i)   | What are elements of SQA?                        | [2] |
| j)   | Explain Software Risks.                          | [3] |

**PART - B**

**(50 Marks)**

- |           |   |       |
|-----------|---|-------|
| 2.a)      | Describe the nature of the software and software process.               |       |
| b)        | Describe incremental process models.                                    | [5+5] |
| <b>OR</b> |   |       |
| 3.a)      | Explain the personal and team models.                                   |       |
| b)        | What are specialized process models? Explain in detail.                 | [5+5] |
| 4.a)      | Explain about Functional and non-functional requirements.               |       |
| b)        | Write a short note on behavioral models.                                | [5+5] |
| <b>OR</b> |   |       |
| 5.a)      | Explain about software requirements document.                           |       |
| b)        | Write a short note on Context models.                                   | [5+5] |
| 6.a)      | Explain the layered arrangement of modules in software design.          |       |
| b)        | Discuss about collaboration diagram.                                    | [5+5] |
| <b>OR</b> |   |       |
| 7.a)      | Write a brief taxonomy of architectural styles and architecture design. |       |
| b)        | Discuss about use case diagram.   | [5+5] |

QA QA QA QA QA QA QA G

- 8.a) Explain unit testing.
- b) Write a short note on metrics for source code.

[5+5]

**OR**

QA QA QA QA QA QA QA G

- 9.a) Discuss in detail about black-box testing.
- b) Write a short note on metrics for maintenance.

[5+5]

- 10.a) Describe the methods for Risk Identification.
- b) Explain metrics for Software Quality.

[5+5]

**OR**

- 11.a) Write short note on RMMM.
- b) Elaborate on risk projection steps.

[5+5]

QA QA QA QA QA QA QA G

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QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G

QA QA QA QA QA QA QA G