

**Code No: 863AC****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****MCA II Semester Examinations, March/April - 2023****SOFTWARE ENGINEERING****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) Write a brief summary on process patterns. [5]
- b) Discuss the importance of requirement validation. [5]
- c) Draw a collaboration diagram for library management system. [5]
- d) Differentiate between verification and validation. [5]
- e) Explain metrics for software quality. [5]

**PART – B****(50 Marks)**

- 2.a) Explain the five generic process framework activities.
- b) Elaborate on the changing nature of software in detail. [5+5]

**OR**

- 3.a) What is CMMI? Describe the various levels of Capability Maturity model.
- b) With a neat diagram, explain the incremental process model. [5+5]

- 4.a) Compare functional and non-functional requirements.
- b) Describe the steps to do a feasibility study. [5+5]

**OR**

5. Explain the following terms.
  - a) User requirements.
  - b) Behavioral models. [5+5]

6. Explain in detail conceptual model of UML. [10]

**OR**

- 7.a) Discuss the importance of architectural design.
- b) With a neat example diagram, explain use-case diagram. [5+5]

8. Explain metrics for analysis and design model. [10]

**OR**

- 9.a) What is meant by boundary value analysis? Discuss about black-box testing.
- b) Explain about white-box testing. [5+5]

- 10.a) What is meant by software review? Discuss the importance of software reviews in project.
- b) What is SQA? Explain. [5+5]

**OR**

11. Explain the process of risk identification and risk refinement. [10]

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