**PVP 20**

Code: 20AM3401,20DS3401

## II B.Tech - II Semester – Regular Examinations - MAY 2024

# SOFTWARE ENGINEERING

### (Common for AIML, DS)

Duration: 3 hours Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.
2. All parts of Question must be answered in one place.

BL – Blooms Level CO – Course Outcome

| | | | BL | CO | Max. Marks |
|---|---|---|---|---|---|
| | | **UNIT-I** | | | |
| 1 | a) | Compare and contrast the Perspective Process Models and the Unified Process Model in terms of their approach to software development lifecycle management. | L2 | CO1 | 7 M |
| | b) | Which aspects of each model make them suitable for different project types or sizes? | L2 | CO1 | 7 M |
| | | **OR** | | | |
| 2 | a) | Investigate the role of customer feedback in the Agile model and its influence on product evolution. | L3 | CO2 | 7 M |
| | b) | Briefly explain about Extreme Programming. | L2 | CO1 | 7 M |

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| **UNIT-II** | | | | | |
| 3 | a) | Discuss the strategic importance of stakeholder involvement in the Requirements Engineering process. | L2 | CO1 | 8 M |
| | b) | How can organizations ensure meaningful stakeholder engagement throughout the software development lifecycle, and what benefits does this involvement yield? | L2 | CO1 | 6 M |
| **OR** | | | | | |
| 4 | a) | Analyze the practical utility of usecases in Requirements Engineering. | L4 | CO4 | 7 M |
| | b) | How do usecases facilitate requirements elicitation, validation, and verification processes, and how can they be tailored to different project contexts? | L2 | CO1 | 7 M |
| **UNIT-III** | | | | | |
| 5 | a) | Evaluate the evolution of the design process. | L4 | CO4 | 6 M |
| | b) | How do Design concepts contribute to the improvement of designs in the design engineering? | L2 | CO1 | 8 M |
| **OR** | | | | | |
| 6 | a) | Analyze the relationship between software architecture and system quality attributes, such as performance, reliability and security. | L4 | CO4 | 8 M |
| | b) | How do architectural decisions impact the above attributes, and what strategies can architects employ to balance competing quality requirements during the design of architecture styles? | L2 | CO1 | 6 M |

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| **UNIT-IV** | | | | | |
| 7 | a) | Analyze the role of system testing in the software development lifecycle. | L4 | CO4 | 7 M |
| | b) | How does system testing ensure that the integrated components of a software system function correctly together, and what techniques can be used to verify system behavior under various operating conditions and user scenarios? | L2 | CO1 | 7 M |
| **OR** | | | | | |
| 8 | a) | Evaluate the impact of test strategies for Object oriented software. | L4 | CO4 | 7 M |
| | b) | Discuss about Black box testing. | L2 | CO1 | 7 M |
| **UNIT-V** | | | | | |
| 9 | a) | Evaluate the effectiveness of reactive and proactive risk management strategies in Software development projects. | L4 | CO4 | 7 M |
| | b) | Discuss about RMMM plan and various components of Risk Information Sheet. | L2 | CO1 | 7 M |
| **OR** | | | | | |
| 10 | a) | Compare and contrast statistical software quality assurance techniques with traditional inspection-based approaches. | L4 | CO4 | 6 M |
| | b) | How do statistical SQA methods, provide insights into process performance and product quality that complement traditional inspection-based techniques? | L2 | CO1 | 8 M |