

Reg No.: _____ Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

MCA (Two Year) Degree S1 (R, S) Examination December 2024

Course Code: 20MCA107

Course Name: ADVANCED SOFTWARE ENGINEERING

Max. Marks: 60

Duration: 3 Hours

PART A

Answer all questions, each carries 3 marks. Marks

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| 1 | Justify the statement: "Software Engineering is a modelling and optimisation process". | (3) |
| 2 | Explain the advantages of Sashimi model and the origin of that name. | (3) |
| 3 | How do programming style guides contribute to the development of better software? | (3) |
| 4 | Distinguish between centralised and distributed Version Control System. | (3) |
| 5 | List out and explain any 6 design patterns and their purpose. | (3) |
| 6 | How do we test abstract classes and interfaces? | (3) |
| 7 | Write a short note on agile development methodology. | (3) |
| 8 | Distinguish between program inspections and program walkthroughs. | (3) |
| 9 | How can we achieve SCM with the help of version Control? | (3) |
| 10 | Is the Deming Cycle effective in improving the software delivery process? Justify your answer. | (3) |

PART B

Answer any one question from each module. Each question carries 6 marks.

Module I

- 11 a. Which are the different methods used for eliciting software requirements? (3)
b. Why is QFD known as the "House of Quality"? (3)

OR

- 12 a. Write a short note on staffing and personnel planning. (3)
b. Which are the different team structures used in staffing? (3)

Module II

- 13 a. Explain the different file stages in git with the help of a diagram. (3)
b. Which are the core operations in git? (3)

OR

- 14 a. Which are the different dimensions of a software quality? (2)
b. Explain the requirement specifications quality and how it can be ensured. (4)

Module III

- 15 List out the different criteria used for classifying design patterns. Explain the purpose wise classification of design patterns. Write any one example for each. (6)

OR

- 16 Briefly explain the X-unit architecture used in unit testing with the help of a neat diagram. (6)

Module IV

- 17 Which are the participant roles in SCRUM? Explain the SCRUM process with the help of a neat diagram. (6)

OR

- 18 What is Black Box testing? Distinguish between boundary value analysis and equivalence class partitioning. (6)

Module V

- 19 What is meant by a release candidate in software delivery? Write down the principles of continuous delivery. (6)

OR

- 20 Write a short note on Ansible and Robot Framework. (6)
