

Course Code: 20MCA107

Course Name: ADVANCED SOFTWARE ENGINEERING

Duration: 3 Hours

Max mark: 60

PART A

Answer all questions, each carries 3 marks.

Marks

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|----|---|-----|
| 1 | List out the main characteristics of a good software. | (3) |
| 2 | Write the advantages of prototyping development model. | (3) |
| 3 | Differentiate git pull and git fetch commands. | (3) |
| 4 | Write a note on literate programming. | (3) |
| 5 | Explain the four essential elements of design pattern. | (3) |
| 6 | A design pattern may turn into an antipattern. Justify the statement. | (3) |
| 7 | Write any three software-testing principles. | (3) |
| 8 | Distinguish between black box testing and white box testing. | (3) |
| 9 | Write down the principles of software delivery. | (3) |
| 10 | How dependencies are managed in software configuration management. | (3) |

PART B

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

Module I

- 11 Explain COCOMO. How can you estimate a software project using COCOMO II model? (6)

OR

- 12 Spiral model follows a risk-driven approach to help project teams decide on what development approach to take for various parts of the project. Justify the statement. (6)

Module II

- 13 Illustrate the core operations in Git version control system to manage a software project in local system and remote server. (6)

OR

- 14 Explain the four dimensions of software quality. (6)

Module III

- 15 Illustrate the architecture of xUnit framework with a neat diagram. (6)

OR

- 16 How design pattern is useful in software development? Explain in detail about different types of design patterns. (6)

Module IV

- 17 Define agility. Explain various agile design principles. (6)

OR

- 18 Write short notes on equivalence class testing and control flow testing. (6)

Module V

- 19 Explain the essential practices of continuous integration. (6)

OR

- 20 With a neat diagram, explain the architecture of deployment pipeline. (6)
