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Question Paper Code: R4F06

B.E./B.Tech. DEGREE EXAMINATION, APRIL /MAY 2025

Fourth Semester

Computer Science and Design

R21UCD406–AGILE METHODOLOGIES

(Regulations R2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

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|-----|---|---------|
| 1. | What is software evolution? Explain with a diagram. | CO1 - U |
| 2. | List the types of software models. | CO1 - U |
| 3. | What is agile methodology? | CO1 - U |
| 4. | Write down the different types of agile methodology. | CO1 - U |
| 5. | What is XP? write down the primary practices of XP? | CO1 - U |
| 6. | What is meant by Test first programming and pair programming? | CO1 - U |
| 7. | Define the common values exist among scrum, XP, and Lean methodologies. | CO1 - U |
| 8. | What are the thinking tools of the lean value, “empowering the team”? | CO1 - U |
| 9. | With an example explain Liskov Substitution Principle. | CO1 - U |
| 10. | Give a short note on the Open Closed Principle. | CO1 - U |

PART B - (5 x 16 = 80 Marks)

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|-----|-----|---|--------|------|
| 11. | (a) | (i) Explain the Detail about Software paradigm. | CO1- U | (8) |
| | | (ii) Explain the details about characteristics of good software. | | (8) |
| | | Or | | |
| | (b) | Explain in detail the phases involved in Software Development Life Cycle. | CO1- U | (16) |

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| 12. | (a) | Explain in detail about scrum methodology. | CO1- U | (16) |
| | | Or | | |
| | (b) | Explain the values and principles of the Agile manifesto. | CO1- U | (16) |
| 13. | (a) | Explain the programming and integration practices of XP. | CO1- U | (16) |
| | | Or | | |
| | (b) | Explain the planning and team practices of XP. | CO1- U | (16) |
| 14. | (a) | Write notes on Lean practices and their application in Agile development. | CO1- U | (16) |
| | | Or | | |
| | (b) | Describe the application of the Lean practice “Eliminate Waste” in software development projects. | CO1- U | (16) |
| 15. | (a) | What are the odors of rotting software? Explain in detail. | CO1- U | (16) |
| | | Or | | |
| | (b) | Discuss the Single Responsibility Principle in detail with examples. | CO1- U | (16) |