Question Paper Code: R22A31CS03

R22

# ANURAG Engineering College

## (An Autonomous Institution)

## III B.Tech I Semester Regular Examinations, December – 2024

## DEVOPS

## (COMPUTER SCIENCE AND ENGINEERING)

**Time: 3 Hours** **Max. Marks: 60**

### Section – A (Short Answer type questions) (10 Marks)

| Answer All Questions | | Course Outcome | B.T Level | Marks |
|---|---|---|---|---|
| 1. | What is release management in DevOps? | CO1 | L1 | 1M |
| 2. | What are Scrum and Kanban in DevOps? | CO1 | L1 | 1M |
| 3. | What is the monolithic scenario in software architecture? | CO2 | L1 | 1M |
| 4. | What is the separation of concerns in architecture? | CO2 | L1 | 1M |
| 5. | What is Gerrit? | CO3 | L1 | 1M |
| 6. | What is the pull request model? | CO3 | L1 | 1M |
| 7. | What are build slaves in Jenkins? | CO4 | L1 | 1M |
| 8. | What is job chaining in Jenkins? | CO4 | L1 | 1M |
| 9. | What is Test-Driven Development (TDD)? | CO5 | L1 | 1M |
| 10. | What is the purpose of a Puppet master in deployment systems? | CO5 | L1 | 1M |

### Section B (Essay Questions)

**Answer all questions, each question carries equal marks. (5 X 10M = 50M)**

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|---|---|---|---|---|
| 11. A) | Explain the concept of Release Management in the context of Agile and DevOps practices. | CO1 | L2 | 10M |
| | **OR** | | | |
| B) | Explain DevOps and ITIL, their guiding concepts, and how they enhance operational effectiveness and IT service management. | CO1 | L2 | 10M |
| 12. A) | Explain the importance of Continuous Testing in the DevOps lifecycle. | CO2 | L2 | 10M |
| | **OR** | | | |
| B) | Explain the "Rules of Thumb" in Software Architecture and their relevance in a DevOps environment. | CO2 | L2 | 10M |
| 13. A) | Explain hosted Git servers like GitHub, GitLab, and Bitbucket. | CO3 | L2 | 10M |
| | **OR** | | | |
| B) | Explain how the pull request workflow facilitates code review and collaboration. | CO3 | L2 | 10M |
| 14. A) | Analyze the role of Jenkins as a build server in continuous integration and delivery (CI/CD). | CO4 | L3 | 10M |
| | **OR** | | | |
| B) | Explain the architecture of a Jenkins setup, including the roles of the host server and build slaves. | CO4 | L2 | 10M |
| 15. A) | Explain Selenium as a testing tool and its key features. | CO5 | L2 | 10M |
| | **OR** | | | |
| B) | Explain Selenium and its constituent parts, such as the IDE, Grid, and WebDriver. | CO5 | L2 | 10M |