

CSV 303 ASSINGMENT 1

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Unit I: Introduction to CI/CD and DevOps

1. What does CI/CD stand for in software development?

A) CI/CD stands for Continuous Integration and Continuous Delivery or Deployment.

2. Name one core principle of DevOps.

A) The core principle of DevOps is to maintain collaboration between Development and Operation Team.

3. What is the primary goal of a CI/CD pipeline?

A) Primary goal of CI/CD pipeline is to automate the sodtware delivery process into production team.

4. Name one popular CI/CD tool.

A) Jenkins is one of the popular CI/CD tool.

5. How does Continuous Integration benefit the development process?

A) By allowing developers frequent code changes into repositories and detecting issues.

6. What is the main difference between CI and CD in a CI/CD pipeline?

A) The CI is mainly automating the build and tests, CD is about deploying the build to production.

7. Name a practice that is essential for CI/CD to work effectively.

A) Automation testing is essential for CI/CD to work effectively.

8. What type of tests are typically run during the CI phase?

A) Unit tests , Integration tests are typically run during the CI phase.

9. How can CI/CD pipelines improve code quality?

A) By running automated test and providing constant feedback can improve code quality of CI/CD pipelines.

10. What role does automation play in DevOps?

A) By reliable software delivery process and through automation process.

Unit II: Cloud Infrastructure and Services

11. What is cloud computing?

A) Cloud Computing is all about computing services over internet and making access for all users to the resources on internet.

12. Name two leading cloud service providers.

A) AWS and Microsoft Azure are two leading cloud providers.

13. What is a common use case for cloud services in CI/CD pipelines?

A) To provide scalable infrastructure for automation and deployment.

14. How do you provision resources in the cloud?

A) By using IaC tools like AWS CloudFormation and Azure Resource Manager Templates.

15. What AWS service can be used for CI/CD?

A) AWS CodePipeline can be used for CI/CD.

16. What Azure service provides similar functionalities to AWS for CI/CD?

A) Azure DevOps provides similar functionality to AWS for CI/CD .

17. Name one benefit of using cloud infrastructure for CI/CD pipelines.

A) One of the benefits of using cloud infrastructure is to scalability , allowing resources to easily scale up or down based on demand.

18. How can cloud services be managed?

A) Through web servers , Command Line Interface(CLI) and API's.

19. What is Infrastructure as Code (IaC)?

A) It is an practice of managing and provisioning infrastructure through enabling deployments and consistent environments.

20. How does IaC benefit CI/CD pipelines?

A) By providing version-controlled and automated infrastructure deployments.

Mixed Questions from Both Units

21. What is one key advantage of integrating DevOps practices into software development?

A) To increase agility and faster delivery into software development.

22. Name a tool that helps manage infrastructure as code.

A) Terraform is a tool that helps managing infrastructure as code.

23. How does Continuous Delivery differ from Continuous Deployment?

A) Continuous Delivery automate deployment of a release and needs manual interactions and Continuous Deployment is fully automated and it automatically deploys releases to production.

24. What is the significance of monitoring in CI/CD pipelines?

A) The monitoring in CI/CD pipelines is to detect issues, ensuring performance and increasing delivery process.

25. How can scalability be achieved in cloud infrastructure?

A) By dynamically adjusting the resources on demand , utilizing auto-scalability resources.

26. What type of cloud service model is commonly used for deploying web applications?

A) Platform as a service(PaaS) is commonly used cloud service model for deploying web applications.

27. Name a security practice important in CI/CD and cloud environments.

A) Automate security testing , Vulnerability scanning are few security practices important in CI/CD and cloud environments.

28. How can rollback be implemented in CI/CD pipelines?

A) By having mechanisms to revert to previous versions of applications .

29. What is one method to ensure high availability in cloud services?

A) By deploying resources across multiple regions and utilizing load balancers.

30. How does containerization benefit CI/CD pipelines?

A) By providing portable and consistent environments for running applications and services.