

DevOps MCQ's and Fill in the blanks

UNIT-I: Introduction

Multiple Choice Questions (MCQs):

1. What does ITIL stand for?
a) Information Technology Infrastructure Library b) Integrated Technology Infrastructure Library
c) Information Technology Integration Lab d) Infrastructure Tools and Innovation Library
Answer: a) Information Technology Infrastructure Library
2. What is the primary focus of Agile development?
a) Creating extensive documentation b) Iterative development and customer collaboration
c) Avoiding changes during development d) Waterfall model integration
Answer: b) Iterative development and customer collaboration
3. Which of the following is a key process in DevOps?
a) Continuous Delivery b) Manual Deployment
c) Sequential Waterfall Development d) Static Code Reviews Only
Answer: a) Continuous Delivery
4. What does the Kanban methodology emphasize?
a) Sprints and Scrum Masters b) Visualization of workflows and limiting work in progress
c) Coding only in small teams d) Eliminating deployment pipelines
Answer: b) Visualization of workflows and limiting work in progress
5. Which term refers to delays or inefficiencies in the delivery pipeline?
a) Triggers b) Bottlenecks c) Continuous Integration d) Release Candidates
Answer: b) Bottlenecks

Fill in the Blanks:

1. _____ is a framework of best practices that aligns IT services with business needs.
Answer: ITIL
2. The Agile development model promotes _____ development and collaboration with stakeholders.
Answer: iterative
3. The DevOps process enables _____ and _____ teams to work together for faster delivery.
Answer: development, operations
4. A _____ in the delivery pipeline is a point where inefficiencies or delays occur.
Answer: bottleneck
5. In Scrum, the _____ ensures that the team adheres to Agile practices.
Answer: Scrum Master

UNIT-II: Software Development Models and DevOps

Multiple Choice Questions (MCQs):

- What is the primary goal of Continuous Testing in DevOps?
 - Reduce coding effort
 - Eliminate manual testing entirely
 - Ensure code quality at all stages of development
 - Accelerate database migrationsAnswer: c) Ensure code quality at all stages of development
- Which term is used to describe a unified and tightly coupled software architecture?
 - Monolithic architecture
 - Microservices architecture
 - Layered architecture
 - Event-driven architectureAnswer: a) Monolithic architecture
- What is the purpose of the "separation of concerns" principle in software architecture?
 - To reduce overall team size
 - To minimize dependencies between components
 - To combine database layers into one module
 - To simplify version controlAnswer: b) To minimize dependencies between components
- Microservices architecture is characterized by:
 - Tight coupling of all components
 - Independent and loosely coupled services
 - A single point of failure
 - Centralized data tiers for all servicesAnswer: b) Independent and loosely coupled services
- Which database operation is critical for software changes in a DevOps process?
 - Data tier flattening
 - Database migrations
 - Table merging
 - Query simplificationAnswer: b) Database migrations

Fill in the Blanks:

1. Continuous Testing in DevOps ensures _____ at every stage of the software development lifecycle.
Answer: code quality
2. A _____ architecture is a software design where the application is built as a single, unified unit.
Answer: monolithic
3. The principle of _____ helps in creating modular and maintainable software architecture by reducing interdependencies.
Answer: separation of concerns
4. In a Microservices architecture, services are loosely coupled and communicate through _____.
Answer: APIs
5. _____ is the process of modifying a database schema to accommodate software changes in DevOps.
Answer: Database migration

UNIT-III: Introduction to Project Management

Multiple Choice Questions (MCQs):

1. What is the primary purpose of a build server in DevOps?
a) To monitor system performance b) To automate and manage the build process
c) To replace manual testing entirely d) To create database schemas
Answer: b) To automate and manage the build process
2. In Jenkins, what is a build slave responsible for?
a) Hosting the master server b) Executing build jobs assigned by the master
c) Managing Jenkins plugins d) Monitoring job performance
Answer: Executing build jobs assigned by the master
3. What is the purpose of Infrastructure as Code (IaC) in build servers?
a) To manage hardware manually b) To write code without build dependencies
c) To automate infrastructure provisioning and management
d) To define software testing environments manually
Answer: c) To automate infrastructure provisioning and management
4. Which of the following is NOT a feature of Jenkins plugins?
a) Extending Jenkins functionality b) Integration with third-party tools
c) Automating code development d) Adding build triggers
Answer: c) Automating code development
5. What does job chaining in Jenkins allow?
a) Parallel execution of unrelated tasks b) Sequential execution of multiple build jobs
c) Merging multiple pipelines d) Removal of dependencies between jobs
Answer: b) Sequential execution of multiple build jobs

Fill in the Blanks:

1. In Jenkins, a _____ server coordinates and distributes build tasks to build slaves.
Answer: master
2. _____ is a practice in DevOps that manages infrastructure using code to automate processes.
Answer: Infrastructure as Code
3. A _____ in Jenkins is a script or tool that extends its functionality.
Answer: plugin
4. The process of defining build steps in the correct order to avoid dependency issues is known as _____.
Answer: building by dependency order
5. Jenkins uses _____ to initiate builds based on specific events or conditions.
Answer: triggers

UNIT-IV: Integrating the System

Multiple Choice Questions (MCQs):

1. What is the primary function of a build system in DevOps?
 - a) Manual code integration
 - b) Automating the software compilation process
 - c) Monitoring team activities
 - d) Testing hardware configurationsAnswer: b) Automating the software compilation process
2. In Jenkins, what is the primary role of build slaves?
 - a) Hosting the Jenkins master
 - b) Executing build tasks assigned by the master server
 - c) Managing dependencies manually
 - d) Controlling plugins on the host serverAnswer: b) Executing build tasks assigned by the master server
3. What does Infrastructure as Code (IaC) enable in a DevOps environment?
 - a) Manual server configuration
 - b) Automating infrastructure setup and provisioning
 - c) Minimizing the use of build pipelines
 - d) Simplifying job chainingAnswer: b) Automating infrastructure setup and provisioning
4. Which Jenkins feature allows triggering a job based on specific conditions?
 - a) Build pipelines
 - b) Job chaining
 - c) Triggers
 - d) Host server dependenciesAnswer: c) Triggers
5. What is "building by dependency order" in the context of a build system?
 - a) Executing tasks in parallel without dependencies
 - b) Defining the sequence of builds based on their dependencies
 - c) Ignoring dependencies during the build phase
 - d) Using Jenkins plugins for visual pipelinesAnswer: b) Defining the sequence of builds based on their dependencies

Fill in the Blanks:

- _____ in Jenkins extend its core functionality, enabling integration with additional tools and services.
Answer: Plugins
- In a build pipeline, _____ are used to trigger a new build when certain conditions are met.
Answer: triggers
- The process of automating infrastructure provisioning and management in DevOps is known as _____.
Answer: Infrastructure as Code
- A _____ server in Jenkins serves as the central controller, distributing jobs to build slaves.
Answer: master
- _____ refers to organizing build tasks in the correct sequence to avoid dependency issues.
Answer: Building by dependency order

UNIT-V: Testing Tools and Automation

Multiple Choice Questions (MCQs):

1. What is one of the main advantages of automated testing in DevOps?
a) Increased testing time
b) Faster feedback and error detection
c) Manual intervention for every test
d) Reduced code quality
Answer: b) Faster feedback and error detection
2. Which tool is primarily used for automating browser testing?
a) Ansible
b) Selenium
c) Chef
d) Docker
Answer: b) Selenium
3. What does REPL stand for in REPL-driven development?
a) Repeat, Execute, Program, Loop
b) Read, Evaluate, Print, Loop
c) Read, Execute, Print, Line
d) Run, Edit, Print, Loop
Answer: b) Read, Evaluate, Print, Loop
4. Which deployment tool uses a "master and agent" architecture?
a) Chef
b) Puppet
c) Salt Stack
d) Docker
Answer: b) Puppet
5. What is the primary function of virtualization stacks in deployment?
a) To automate code testing
b) To provide isolated environments for system execution
c) To replace source control systems
d) To create Docker images
Answer: b) To provide isolated environments for system execution

Fill in the Blanks:

1. Automation of testing provides faster feedback and increases _____ throughout the development process.
Answer: efficiency
2. Selenium is widely used for _____ testing in web applications.
Answer: browser
3. The process of testing backend integration points ensures seamless communication between _____ in a system.
Answer: components
4. Test-Driven Development (TDD) involves writing _____ before writing the actual code.
Answer: tests
5. Deployment tools like Chef and _____ are used for configuration management in a DevOps workflow.
Answer: Salt Stack