**Jenkins Installation:**

1. **Which command is used to start Jenkins after installation?**
   * **a) sudo start jenkins**
   * **b) sudo systemctl start jenkins**
   * **c) sudo init jenkins**
   * **d) sudo begin jenkins**
2. **Where is the default Jenkins configuration file located?**
   * **a) /etc/default/jenkins**
   * **b) /usr/local/jenkins/config**
   * **c) /var/lib/jenkins/settings**
   * **d) /etc/init/jenkins.conf**
3. **Which of the following ports does Jenkins use by default?**
   * **a) 80**
   * **b) 443**
   * **c) 8080**
   * **d) 8081**
4. **How can you install Jenkins on a Linux system?**
   * **a) Using APT or YUM package managers**
   * **b) Only via source code installation**
   * **c) Using Docker only**
   * **d) Installing from a ZIP file**
5. **What approach is crucial for ensuring consistent quality in continuous integration and delivery?**
   * **a) Periodic Manual Testing**
   * **b) Randomized QA executions**
   * **c) Continuous testing & automated QA processes**
   * **d) Ad hoc testing procedures**

**Maven and Automation Tools:**

1. **What is the default build lifecycle in Maven?**
   * **a) deploy**
   * **b) clean**
   * **c) install**
   * **d) default**
2. **Which of the following commands is used to compile a Maven project?**
   * **a) mvn test**
   * **b) mvn clean**
   * **c) mvn compile**
   * **d) mvn install**
3. **Where are the dependencies stored in Maven by default?**
   * **a) /opt/maven/**
   * **b) target/**
   * **c) /usr/local/maven/**
   * **d) ~/.m2/repository/**
4. **Which Maven phase packages the compiled code into a JAR or WAR file?**
   * **a) verify**
   * **b) package**
   * **c) test**
   * **d) deploy**
5. **What file is used to configure a Maven project?**

* **a) pom.xml**
* **b) build.xml**
* **c) maven.xml**
* **d) config.xml**

**Git:**

1. **Which command is used to initialize a new Git repository?**

* **a) git new**
* **b) git init**
* **c) git start**
* **d) git create**

1. **What does the git clone command do?**

* **a) Create a new branch**
* **b) Create a copy of a repository**
* **c) Merge two branches**
* **d) Stage changes for commit**

1. **How do you undo the most recent local commit without affecting the working directory?**

* **a) git revert**
* **b) git reset --hard HEAD~1**
* **c) git reset --soft HEAD~1**
* **d) git checkout HEAD~1**

1. **Which command lists all remote branches in Git?**

* **a) git branch**
* **b) git pull**
* **c) git fetch**
* **d) git branch -r**

1. **What is the purpose of git stash?**

* **a) To permanently delete untracked files**
* **b) To save uncommitted changes temporarily**
* **c) To apply changes from one branch to another**
* **d) To push changes to a remote repository**

**DevOps Concepts:**

1. **Which of the following is a key benefit of DevOps?**

* **a) Slower development cycles**
* **b) Reduced collaboration between teams**
* **c) Increased deployment frequency**
* **d) Manual release processes**

1. **What is Continuous Integration in DevOps?**

* **a) Automating server deployment**
* **b) Frequently merging code changes into the main branch**
* **c) Ensuring production system uptime**
* **d) Managing hardware resources efficiently**

1. **Which tool is commonly used for configuration management in DevOps?**

* **a) Jenkins**
* **b) Docker**
* **c) Ansible**
* **d) Git**

1. **What does the 'Continuous Delivery' phase ensure?**

* **a) Code is manually deployed to production**
* **b) Code changes are automatically tested and prepared for release**
* **c) New infrastructure is provisioned**
* **d) Manual testing is bypassed**

1. **Consider that Alex is a DevOps Engineer working on a software project that requires seamless integration and delivery. What does continuous integration (CI) aim to achieve in software development?**

* **a) Real-time code integration**
* **b) Manual code reviews**
* **c) One-time code deployment**
* **d) Periodic code updates**

**AWS S3 CLI Commands:**

1. **Which command is used to list all buckets in S3?**

* **a) aws s3 list**
* **b) aws s3 ls**
* **c) aws s3api buckets**
* **d) aws s3 show-buckets**

1. **How do you upload a file to S3 using the CLI?**

* **a) aws s3 upload <file> <bucket>**
* **b) aws s3 cp <file> s3://<bucket>**
* **c) aws s3 put <file> s3://<bucket>**
* **d) aws s3 push <file> s3://<bucket>**

1. **Which command would you use to download an entire S3 bucket to your local machine?**

* **a) aws s3 sync s3://<bucket> ./local-dir**
* **b) aws s3 cp s3://<bucket> ./local-dir**
* **c) aws s3 get s3://<bucket> ./local-dir**
* **d) aws s3 mv s3://<bucket> ./local-dir**

1. **What is the purpose of aws s3 sync?**

* **a) To synchronize files between two S3 buckets**
* **b) To move files from S3 to EC2**
* **c) To sync local files with an S3 bucket**
* **d) To delete all files in an S3 bucket**

1. **Which CLI option would you use to delete a file from an S3 bucket?**

* **a) aws s3 rm s3://<bucket>/<file>**
* **b) aws s3 delete s3://<bucket>/<file>**
* **c) aws s3 remove s3://<bucket>/<file>**
* **d) aws s3 purge s3://<bucket>/<file>**

**Additional DevOps and AWS Concepts:**

1. **What is Infrastructure as Code (IaC)?**

* **a) Writing scripts to configure servers manually**
* **b) Using code to automate server and infrastructure setup**
* **c) Provisioning hardware resources manually**
* **d) Deploying applications in production**

1. **Assume that a DevOps engineer wants to use the "FlexDeploy's CI" server for deploying a particular project in the project pipeline. Why does the engineer in the given scenario prefer the "CI server"?**

* **a) Because it eases the execution of "sanity test cases" in the deployment pipeline**
* **b) Because it tests the pipelines, which reduces the error occurrence in production time**
* **c) Because it eases the implementation of the "continuous integration" process in the deployment stage**
* **d) Because it reduces the number of tests to be conducted before the deployment process**

1. **Which of the following AWS services allows monitoring and management of cloud infrastructure?**

* **a) AWS CloudWatch**
* **b) AWS RDS**
* **c) AWS S3**
* **d) AWS Lambda**

1. **What is the main purpose of Jenkins pipelines?**

* **a) To define and automate the stages of a software delivery process**
* **b) To create Docker images**
* **c) To store environment configurations**
* **d) To deploy infrastructure**

1. **Which tool is primarily used for containerization in DevOps?**

* **a) Jenkins**
* **b) Docker**
* **c) Kubernetes**
* **d) Ansible**

**Jenkins Installation:**

1. **Which command is used to start Jenkins after installation?**
   * a) sudo start jenkins
   * b) sudo systemctl start jenkins
   * c) sudo init jenkins
   * d) sudo begin jenkins
   * **Answer:** b
2. **Where is the default Jenkins configuration file located?**
   * a) /etc/default/jenkins
   * b) /usr/local/jenkins/config
   * c) /var/lib/jenkins/settings
   * d) /etc/init/jenkins.conf
   * **Answer:** a
3. **Which of the following ports does Jenkins use by default?**
   * a) 80
   * b) 443
   * c) 8080
   * d) 8081
   * **Answer:** c
4. **How can you install Jenkins on a Linux system?**
   * a) Using APT or YUM package managers
   * b) Only via source code installation
   * c) Using Docker only
   * d) Installing from a ZIP file
   * **Answer:** a

5.What approach is crucial for ensuring consistent quality in continuous integration and delivery?

A. Periodic Manual Testing

B. Randomized QA executions

C. Continuous testing & automated QA processes

D. Ad hoc testing procedures

ANSWER C

**Maven and Automation Tools:**

1. **What is the default build lifecycle in Maven?**
   * a) deploy
   * b) clean
   * c) install
   * d) default
   * **Answer:** d
2. **Which of the following commands is used to compile a Maven project?**
   * a) mvn test
   * b) mvn clean
   * c) mvn compile
   * d) mvn install
   * **Answer:** c
3. **Where are the dependencies stored in Maven by default?**
   * a) /opt/maven/
   * b) target/
   * c) /usr/local/maven/
   * d) ~/.m2/repository/
   * **Answer:** d
4. **Which Maven phase packages the compiled code into a JAR or WAR file?**
   * a) verify
   * b) package
   * c) test
   * d) deploy
   * **Answer:** b
5. **What file is used to configure a Maven project?**

* a) pom.xml
* b) build.xml
* c) maven.xml
* d) config.xml
* **Answer:** a

**Git:**

1. **Which command is used to initialize a new Git repository?**

* a) git new
* b) git init
* c) git start
* d) git create
* **Answer:** b

1. **What does the git clone command do?**

* a) Create a new branch
* b) Create a copy of a repository
* c) Merge two branches
* d) Stage changes for commit
* **Answer:** b

1. **How do you undo the most recent local commit without affecting the working directory?**

* a) git revert
* b) git reset --hard HEAD~1
* c) git reset --soft HEAD~1
* d) git checkout HEAD~1
* **Answer:** c

1. **Which command lists all remote branches in Git?**

* a) git branch
* b) git pull
* c) git fetch
* d) git branch -r
* **Answer:** d

1. **What is the purpose of git stash?**

* a) To permanently delete untracked files
* b) To save uncommitted changes temporarily
* c) To apply changes from one branch to another
* d) To push changes to a remote repository
* **Answer:** b

**DevOps Concepts:**

1. **Which of the following is a key benefit of DevOps?**

* a) Slower development cycles
* b) Reduced collaboration between teams
* c) Increased deployment frequency
* d) Manual release processes
* **Answer:** c

1. **What is Continuous Integration in DevOps?**

* a) Automating server deployment
* b) Frequently merging code changes into the main branch
* c) Ensuring production system uptime
* d) Managing hardware resources efficiently
* **Answer:** b

1. **Which tool is commonly used for configuration management in DevOps?**

* a) Jenkins
* b) Docker
* c) Ansible
* d) Git
* **Answer:** c

1. **What does the 'Continuous Delivery' phase ensure?**

* a) Code is manually deployed to production
* b) Code changes are automatically tested and prepared for release
* c) New infrastructure is provisioned
* d) Manual testing is bypassed
* **Answer:** b
* **20.Cosider that Alex is a DevOps Engineer working on a software project that requires seamless integration and delivery.**
* **What does continuous integration (CI) aim to achieve in software development?**
* **A. Real-time code integration (Answer)**
* **B. Manual code reviews**
* **C. One-time code deployment**
* **D. Periodic code updates**
* **Answer:** b

**AWS S3 CLI Commands:**

1. **Which command is used to list all buckets in S3?**

* a) aws s3 list
* b) aws s3 ls
* c) aws s3api buckets
* d) aws s3 show-buckets
* **Answer:** b

1. **How do you upload a file to S3 using the CLI?**

* a) aws s3 upload <file> <bucket>
* b) aws s3 cp <file> s3://<bucket>
* c) aws s3 put <file> s3://<bucket>
* d) aws s3 push <file> s3://<bucket>
* **Answer:** b

1. **Which command would you use to download an entire S3 bucket to your local machine?**

* a) aws s3 sync s3://<bucket> ./local-dir
* b) aws s3 cp s3://<bucket> ./local-dir
* c) aws s3 get s3://<bucket> ./local-dir
* d) aws s3 mv s3://<bucket> ./local-dir
* **Answer:** a

1. **What is the purpose of aws s3 sync?**

* a) To synchronize files between two S3 buckets
* b) To move files from S3 to EC2
* c) To sync local files with an S3 bucket
* d) To delete all files in an S3 bucket
* **Answer:** c

1. **Which CLI option would you use to delete a file from an S3 bucket?**

* a) aws s3 rm s3://<bucket>/<file>
* b) aws s3 delete s3://<bucket>/<file>
* c) aws s3 remove s3://<bucket>/<file>
* d) aws s3 purge s3://<bucket>/<file>
* **Answer:** a

**Additional DevOps and AWS Concepts:**

1. **What is Infrastructure as Code (IaC)?**

* a) Writing scripts to configure servers manually
* b) Using code to automate server and infrastructure setup
* c) Provisioning hardware resources manually
* d) Deploying applications in production
* **Answer:** b

**27. Assume that a DevOps engineer wants to use the "FlexDeploy's Cl" server for deploying a particular project in the project pipeline. Why does the engineer in the given scenario prefer the "Cl server"**

**A. Because it eases the execution of "sanity test cases" in the deployment pipeline**

**B. Because it tests the pipelines which reduces the error occurrence in the production time**

**C. Because it eases the implementation of the "continuous integration" process in the deployment stage.**

**D. because it reduces the no. of tests to be conducted before deployment process.**

**ANSWER C**

1. **Which of the following AWS services allows monitoring and management of cloud infrastructure?**

* a) AWS CloudWatch
* b) AWS RDS
* c) AWS S3
* d) AWS Lambda
* **Answer:** a

1. **What is the main purpose of Jenkins pipelines?**

* a) To define and automate the stages of a software delivery process
* b) To create Docker images
* c) To store environment configurations
* d) To deploy infrastructure
* **Answer:** a

1. **Which tool is primarily used for containerization in DevOps?**

* a) Jenkins
* b) Docker
* c) Kubernetes
* d) Ansible
* **Answer:** b