-: Interview Questions : DevOps :-

1. What is SCM?

Software Configuration management (CM) is basically a practice of systematic handling of the changes in such a way that system does not lose its integrity over a period of time. This involves certain policies, techniques, procedures, and tools for evaluating change proposals, managing them, and tracking their progress along with maintaining appropriate documentation for the same.

2. What is Continuous Integration (CI)?

Continuous Integration (CI) is a software development practice that makes sure developers integrate their code into a shared repository as and when they are done working on the feature. Each integration is verified by means of an automated build process that allows teams to detect problems in their code at a very early stage rather than finding them after the deployment.

3. Explain the different phases in DevOps methodology.

Planning, Development, Continuous Integration (CI), Deployment, Operations, Monitoring

4. Explain agile methodology?

Agile is nothing but a software development methodology that focuses on incremental, iterative, and rapid releases of software features by involving the customer by means of feedback. This methodology removes the gap between the requirement understanding of the clients and the developers.

5. What are the various branching strategies used in the version control system?

Feature branching
Task branching
Release branching

6. Can you list down certain KPIs which are used for gauging the success of DevOps?

KPIs stands for Key Performance Indicators. Some of the popular KPIs used for gauging the success of DevOps are:
• Application usage, performance, and traffic
• Automated Test Case Pass Percentage.
• Application Availability
• Change volume requests
• Customer tickets
• Successful deployment frequency and time
• Error/Failure rates
• Failed deployments
• Meantime to detection (MTTD)
• Meantime to recovery (MTTR)

7. How does AWS contribute to DevOps?

AWS stands for Amazon Web Services and it is a well known cloud provider. AWS helps DevOps by providing the below benefits:

• **Flexible Resources:** AWS provides ready-to-use flexible resources for usage.

• **Scaling:** Thousands of machines can be deployed on AWS by making use of unlimited storage and computation power.

• **Automation:** Lots of tasks can be automated by using various services provided by AWS.

• **Security:** AWS is secure and using its various security options provided under the hood of Identity and Access Management (IAM), the application deployments and builds can be secured.

8. Can you explain the "Shift left to reduce failure" concept in DevOps?

In order to understand what this means, we first need to know how the traditional SDLC cycle works. In the traditional cycle, there are 2 main sides -

• The left side of the cycle consists of the planning, design, and development phase

• The right side of the cycle includes stress testing, production staging, and user acceptance.

In DevOps, shifting left simply means taking up as many tasks that usually take place at the end of the application development process as possible into the earlier stages of application development. From the below graph, we can see that if the shift left operations are followed, the chances of errors faced during the later stages of application development would greatly reduce as it would have been identified and solved in the earlier stages itself.

The most popular ways of accomplishing shift left in DevOps is to:

• Work side by side with the development team while creating the deployment and test case automation. This is the first and the obvious step in achieving shift left. This is done because of the well-known fact that the failures that get notices in the production environment are not seen earlier quite often. These failures can be linked directly to:

• Different deployment procedures used by the development team while developing their features.

• Production deployment procedures sometimes tend to be way different than the development procedure. There can be differences in tooling and sometimes the process might also be manual.

• Both the dev team and the operations teams are expected to take ownership to develop and maintain standard procedures for deployment by making use of the cloud and the pattern capabilities. This aids in giving the confidence that the production deployments would be successful.

• Usage of pattern capabilities to avoid configurational level inconsistencies in the different environments being used. This would require the dev team and the operation team to come together and work in developing a standard process that guides developers to test their application in the development environment in the same way as they test in the production environment.

9. Do you know about post mortem meetings in DevOps?

Post Mortem meetings are those that are arranged to discuss if certain things go wrong while implementing the DevOps methodology. When this meeting is conducted, it is expected that the team has to arrive at steps that need to be taken in order to avoid the failure(s) in the future.