sdlc and agile

- what do you mean by software development methodologies ?
- what is software development life cycle ?
- which are popular SDLC models ?
- mention few issues of waterfall model
- what do mean by iterative model? what are the benefits of iterative model over waterfall model ?
- what is agile manifesto ?
- mention few agile methodologies
- what is scrum ?
- what do you mean by sprint ?
- what are different events in scrum ?
- why companies prefer agile over iterative or waterfall ?
- what are the responsibilities of scrum master ?
- who manages the dev team in scrum ?
- why is it important to get feedback from client in early stages ?

cloud

- what is virtualization ?
- what are the types of virtualization ?
- what are the differences between NAS and SAN ?
- what are the differences between type I and type II virtualization ?
- in which scenario you would use type I and type II ?
- define the following terms
    - IaaS
    - PaaS
    - SaaS
    - FaaS
    - DaaS
- what the characteristics of cloud ?
- what are the differences between private and public cloud ?
- in which scenario would you prefer using hybrid cloud ?
- list popular cloud providers ?
- what do you mean by AWS ?
- how would you create a virtual machine in AWS ?
- list the steps to upload react application in cloud ?
- list the steps to upload express application in cloud ?
- why companies are moving the data to cloud ?
- what are the benefits of using cloud ?
- what is the issue you face because of scaling ?
- what are the differences between vertical and horizontal scaling ? which one would you prefer and why ?
- how to implement horizontal scaling in real world ?

devops

- what is devops ?
- why devops is important ?
- what are the differences between devops and agile methodologies ?
- what is devops lifecycle ? list all the stages of devops lifecycle
- list important or popular tools used in devops stages
- define the following terms
    - continuous development
    - continuous testing
    - continuous integration
    - continuous delivery
    - continuous deployment
    - continuous monitoring
- what are the benefits of devops ?

SCM

- what is SCM or VCS ?
- what are the types of VCS ?
- what is the main reason of failure of CVCS ?
- what are the benefits of using VCS ?
- which tools come under DVCS category ?
- what is git ? what are the benefits of using git over other SCM tools ?
- explain the git workflow ?
- what do you mean by staging area ?
- what is git stash and in which scenario it is beneficial ?
- what is branch ? how to implement branching in git ?
- how to how to
    - create a branch ?
    - merge a branch ?
    - delete a branch ?
- what is the branching strategy in git ?
- what do you mean by local and remote repository ?
- how developers working in a team can share the code using git ?
- how to resolve conflicts in git ?

docker

- explain differences between hardware virtualization and os virtualization
- explain containerization
- which are the tools you would use to achieve containerization ?
- why docker is a popular tool ?
- what is docker image and container ?
- what is the lifecycle of docker container ?
- what is docker hub ?
- what is image repository ?
- explain docker architecture
- how would containerize your application ?
- how would you create your own docker image ?
- what is orchestration ?
- what is docker swarm ?
- what is service in docker swarm ?
- how to scale containers in docker swarm ?
- how do you check which containers are running ?
- how would you push your image to docker hub ?
- how to delete all containers ?
- how to balance the load in docker swarm ?
- what is service ? what is role of service ?

kubernetes

- what are the tools used for container orchestration ?
- what is kubernetes ?
- what benefits of kubernetes over docker swarm ?
- why companies prefer kubernetes ?
- what are the differences between docker swarm and kubernetes?
- what are the features of kubernetes ?
- explain kubernetes architecture
- what is cluster ? how do you create kubernetes cluster ?
- what are the components of kubernetes ?
- what is pod ?
- why kubernetes uses pod to container instead of running containers directly ?
- what is a service ? what is the role of service in cluster ? what are the types of service ?
- what is minikube ?
- what is namespaces ? why namespaces are used in kubernetes ?
- how do you scale your pods ?

CI/CD pipeline

- what is CI ? what is CD ?
- which tools are popular for implementing CI/CD pipeline ?
- what are the steps in pipeline ?
- what is jenkins ? what are the benefits of jenkins ?
- how would you create pipeline in jenkins ?
- explain jenkins architecture
- what are types of jenkins pipeline ?
- what is jenkins job ? what are types of jobs ?
- what is jenkins node ?
- how to create jenkins cluster ?
- what is jenkins agent ?
- what is groovy ?