1)What is Git ?
ans:

GIT is a very popular and efficient open source Version Control System. It tracks content such as files and directories.

2) In what form is Git being used in your Company? Give examples of a few types of Git implementations.
ans:
There are couple of form of Git being used in my Company like GitLab GitLab EE , GitLab, GitHub, GitLab EE ,GitHub Enterprise
GitLab.com, GitHub.com etc
3) What are the different Tools that you integrated Git with in your company ?
Ans: In my company I integrated Git with few Tool like Jenkins , Heroku, Chep etc

4) What are Git hooks ?
ans:
Like many other Version Control Systems, Git has a way to fire off custom scripts when certain important actions occur. There are two groups of these hooks: client-side and server-side. Client-side hooks are triggered by operations such as committing and merging, while server-side hooks run on network operations such as receiving pushed commits.

5) Give us an example of a Git Hook that you implemented?
just for simple example
```
#!/bin/bash
echo Running $BASH_SOURCE
set | egrep GIT
echo PWD is $PWD
```

6) List all commands a developer uses to push to git starting from clean workspace ?
ans:
```
git init
git add .
git commit -m 'Initial Project Version'
git remote add origin https://github.com/mohammad/SimpleFragment.git
git push origin master
```

7)Difference between Git push and Git pull
ans:
git push is how we transfer commits from your local repository to a remote repo. It's the counterpart to git fetch. But whereas git pull,
Merging upstream changes into your local repository in Git-based collaboration workflows

8) Different between Git Rebase and git pull
ans:
git rebase, Rebasing is the process of moving a branch to a new base commit.rebasing really is just moving a branch from one commit to another. But whereas git pull, Merging upstream changes into your local repository in Git-based collaboration workflows

9) What is the command to know what branch you are currently on ?
ans:
git symbolic-ref --short HEAD

10) Command to know what other git branches exist on the git server ?

ans: git branch

11) How do you know which remote branch your local git branch is tracking? Give exact command.

git symbolic-ref --short HEAD

11) what is a git remote ?
ans:
A remote is Git's fancy way of saying "the place where our code is stored." That is a URL could be our repository on GitHub, or another user's fork, or even on a completely different server.

12) How can you temporarily save changes before pulling/merging or switching branches?
ans:
git branch fix20

git checkout fix20

git commit -a - m 'Added Branch fix20'

13) difference between git branches and git tags ?
ans:
A branch in Git is simply a lightweight movable pointer to one of these commits. The default branch name in Git is master. But whereas A git tag can be used to give a name to a git commit . For example, when you finish beta for version 1.0, we might want to tag the current state as “1.0beta”

14) what are different types of git tags available ? give exact commands on how to create each type of tag ?
ans:
Lightweight Tags: A lightweight tag is nothing more than a reference to a particular revision
$ git tag v1.4-lw

Annotated Tags: Annotated tags are almost like lightweight tags, the big difference is that they contain a message.
$ git tag -a v1.4 -m "my version 1.4”

Signed tags: Signed tags take annotated tags a step further, they include an OpenPG signature to provide trust.
git tag -s -m “Tagging release 2.0” v2.0

15) what command do you use to merge two branches ? give exact commands. How do you know what files need conflict resolution?
How do you proceed after resolving a conflict?

ans: $ git checkout master
$ git merge hotfix
If we want to see which files are unmerged at any point after a merge conflict, we can run git status:
$ git status
Anything that has merge conflicts and hasn’t been resolved is listed as unmerged. Git adds standard conflict-resolution markers to the files that have conflicts. so we can open them manually and resolve those conflicts.For instance, we might resolve some conflict by replacing the entire block or line etc. if we want to use a graphical tool to resolve these issues, we can run git mergetool, which fires up an appropriate visual merge tool and walks through the conflicts. After we have resolved each conflicted file,we have to run git add on each file to mark it as resolved. Staging the file marks it as resolved in Git.

16) How do you know current state of your workspace to that on git server ?
ans: we can use command like:
$ git status
$ git diff
$ git diff —cached
$ git diff HEAD

17) What command is used to fetch the latest updates by others?
ans:

git fetch origin
git pull https://github.com/Skoruz/SimpleFragment.git

18) What command is used to create a git repo for your personal development?
ans:
We can initialize the local directory as a Git repository
$ git init
$ git add .
$ git commit -m "First commit”
$ git remote add origin remote “repository URL”
$ git remote -v

19) Explain the relationship between the working directory,
the index, the repository
ans:
The working directory is a single checkout of one version of the project. These files are pulled out of the compressed database in the Git directory and placed on disk for us to use or modify.

The index is a staging area where the new commit is prepared. Essentially, the contents of the index are what will go into the new commit (though if you do git commit -a, this will automatically add all changes to files that Git knows about to the index before committing, so it will commit the current contents of our working tree).

A repository is the basic unit of GitHub, most commonly a single project. Repositories can contain folders and files, including images anything our project needs.

21) what command do you use to know list of previous commits ?
ans:
$ git log
lists the commits made in that repository in reverse chronological order.

22) What is 3a525393f6a5c47fa08d91ef16c16927ed3cd33a? What are the benefits of this?
ans:
SHA1 hash of a git object, e.g. a commit. This is an example of
direct-access content storage, and it also protects from and detects
corruption

23) command to rename a file in Git?
ans:
git mv DeleteMe.txt Delete.txt

24) What git command is used to undo changes made to your local repo? What are the variations and how do they work?
Ans
git revert <commit>
Generate a new commit that undoes all of the changes introduced in <commit>, then apply it to the current branch.

25) What is the command to use
1) to delete a local git branch?
2) to delete git branch on remote server

To delete a local branch

$ git branch -d the_local_branch

To remove a remote branch

$ git push origin :the_remote_branch