Q1 - What is a version control system?

Ans: It is also known as source control, is the practice of tracking and managing changes to software code. It is a software tool that help software teams manage changes to source code over time .

Q2 - Why did a version control system develop? What were the necessities?

Ans: It helps software teams manage changes to source code. As development environments have accelerated, version control systems help software teams work faster and smarter.

Q3 - Define the different types of version control systems.

Ans: There are 2 types of version control: centralized and distributed.

centralized - have a single central copy of your project on a server and commit your change to this central copy.

Distributed version - you dont rely on a central server to store all the versions of a projects file, you clone a copy of a repository locally so that you have the full history of the project.

Q4 - List a few differences between the two version control system types.

Ans: There are 2 moat popular types of version control system. centralized and distributed. Centralized version control system store all the files in a central repository, while distributed version control systems stores files across multiple repositories.

Q5 - What is Git?

Ans: Git is an open-source project that tracks changes in source code during software development. It can handle both small and large projects with speed and efficiency.

Q6 - List a few features of Git.

Ans: 1. Tracks history.

2. Free and open source.

3. Supports non-linear development.

4. Creates backups.

5. Scalable.

6. Supports collaboration.

7. Branching is easier.

8. Distributed development.

Q7 - State any three commands of Git and why we use them.

Ans: 1. Git Branch : By using branches, several developers are able to work in parallel on the same project simultaneously

2. Git Clone : Git clone basically makes an identical copy of the latest version of a project in a repository and saves it to your computer.

3. Git Status : The Git status command gives us all the necessary information about the current branch.

Q8 - Is Git the same as Github? Why or Why not?

Ans: 1. Git is a software whereas github is a service.

2. Git is a command-line tool and Git hub is a graphical user interface

3. Git is installed locally on the system and github is hosted on the web

4. Git is maintained by linux. whereas Git hub is maintained by microsoft.

Q9 - What is the command to get the installed version of Git?

Ans: git --version

Q10 - What is the command to add all files and changes of the current folder to the staging environment of the Git repository?

Ans: git add --all

Q11 - What is the difference between git status and git log commands?

Ans: The git log command displays committed snapshots while git status lets you inspect the working

directory and the staging area, git log only operates on the committed history.

Q12 - What is the command to initialize Git on the current repository?

Ans: git init

Q13 - What are the different states of a file in Git? Explain them along with the associated commands.

Ans: Three States of Git

1. Committed :This state indicates that the file is safely stored in the local database.

2. Modified: When any change to the file occurs, the state of the file changes from committed to modified.

3. Staged: When we're finished with all the modifications to our file, it moves to the staged state.

Q14 - Git automatically adds new files to the repository and starts tracking them. True or False? Give reasons.

Ans:

Q15 - What is the command to commit the staged changes for the Git repository?

Ans : git commit

Q16 - What is the command to commit with the message "New email"?

Ans: git commit -m "New email" .

Q18 - What is a branch in Git?

Ans: A branch in Git is simply a lightweight movable pointer to one of these commits. The default branch name in Git is master.

Q19 - What is the command to create a new branch named "new-email"?

Ans : git branch "new-email" .

Q20 - What is the command to move to the branch named "new-email"?

Ans: git checkout "new-email"

Q21 - What is the option, when moving to a branch, to create the branch it if it does not exist?

Ans: Checkout a New Branch or Reset a Branch to a Start Point.

Q22 - What does the git init command does?

Ans: The git init command creates a new Git repository.

Q23 - What is a fork? How is it different from clone in Git? How do you fork and clone a repository?

Ans: A fork is a copy of a repository that you manage. Forks let you make changes to a project without affecting the original repository.

Forking is a concept while cloning is a process operated over a repository.

Q24 - What does ‘push’ mean in Git? Give the command.

Ans : The git push command is used to upload local repository content to a remote repository. Pushing is how you transfer commits from your local repository to a remote repo.