Q1.What is a version control system?

Ans. A software programme known as a version control system keeps track of changes made to a file or set of files over time so that you can later recall particular versions. You can collaborate with other programmers using it as well.

A team can manage changes to a source code by using a collection of software tools known as a version control system. To keep track of each change to the code, it employs a unique kind of database.

To correct the errors, developers can compare prior versions of the code with an earlier version.

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

Ans. Version control solutions allow several web developers, designers, and team members to work together on the same project. To guarantee that everyone has access to the most recent code, these systems—often referred to as Version Control Systems, or VCS—are crucial. Managing several versions of finished products becomes more crucial as development becomes more complex.

Q3 - Define the different types of version control systems.

## ANS. Types of Version Control System

Localized version Control System

Centralized version control systems

Distributed version control systems

Q5 - What is Git?

A free, open-source VCS called Git is used to monitor source code changes. It makes it possible for several developers to collaborate on non-linear development. Git is the most widely used VCS in the world because it is free, open-source, quick, and scalable.

Q6 - List a few features of Git.

1. Distributed System
2. Compatibility
3. Non-linear Development.
4. Branching
5. Lightweight

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

1. **git clone command**: If you wish to contribute an open-source project. Before you may contribute, you must first clone an existing repository onto your local repository (Your repository). You must do this by selecting the fork option on the GitHub repository of the existing repository.
2. **git status command:** After making code changes you have to add the files for that you have to check which files are not added. For that use git status. The command git status can show you the status of your current file whether it is added or committed or pushed.
3. **git add:** When you get to know which files are not added by typing git status(red-colored files are not added). Then type git add <file name> to add files

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

git commit -a -m "Add the file to directory"

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

Git checkout -b “new-email”.

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