**Subject: Working with Git**

1. Why Version Control and git? Version control allows you to **keep track** of your work and helps you to **easily explore the changes you have made**, be it data, coding scripts, notes, etc.
2. What is a Repository? what are the important criteria of it? A repository **is a file structure** where git **stores all the project-based files**.
   * README.md
   * .gitignore
   * a license
3. What are the sections of a good document? 3 Parts
   * 2 compulsory parts, about the repository and about how to use
   * 1 optional part, about how to contribute
4. What is Git Clone? transferring **codes from REMOTE Repo to Local Repo**
5. How to update local Reop with Remote one? git pull
6. What is the difference between rest, revert, checkout?
   * checkout: Use this to **move the HEAD pointer to a specific commit** or **switch between branches**.
   * Revert is **rollback changes you have committed**.
   * Reset command, using this to **return the entire working tree to the last committed state**.
7. what is the difference between rebase and merge?
   * git merge is **combining contents of the source branch with the target branch**, only the target branch is updated in this process. The **history of the source branch remains similar**.
   * git rebase, rebase compresses all the modifications into **a single patch** and the patch is then inserted into the target branch.
8. How to view **the commit history**? **git log**
9. How to **view changes** in the file? **git diff**
10. What Tag is? How does it create? Tags are usually used to **mark stable releases** or the achievement of very important milestones.
    * create a new tag: “**git tag”**
11. What is the process of getting involved in a git project?
    * Add to the project
    * Clone repo
    * Create branch
    * Request to pull 🡪 approved by admin
    * Merge 🡪 by admin
12. What do we need git branch? **Branching facilitates the development of bug** fixes, the addition of new capabilities and **the integration of new versions** after they have been **tested in isolation**.
    * **git merge**