1. Check all that are TRUE about version control:

**xCan revert files to a previous state**

**xCan compare changes over time**

**xCan see who modified something last**

**xCan recover lost files**

2. What is the difference between centralized version control systems and distributed version control systems?

**CVCS have a single server which hosts all the versioned files, whereas with DVCS all collaborators mirror the entire repository. This allows for safety in case one server goes down, a copy of the repository can be copied back to the server from one of the collaborators to restore it.**

3. What are the three states that files can reside in?

a) committed, changed, waiting

b) saved, changed, staged

**xc) committed, modified, staged**

d) saved, modified, staged

4. What command initializes a new repository?

a) git clone

b) git branch

c) git fork

**xd) git init**

5. What does git diff do?

a) compares the differences between the home directory and staging area

**xb) compares the differences between the working directory and staging area**

c) compares the differences between the working directory and what’s been committed

d) compares the differences between the staging area and what’s been committed

6. How do you add a message to your commit? (select all that apply)

**xa) git commit -m**

b) git commit -messages

**xc) git commit**

d) git commit -message

7. How do you add a remote repo? (select all that apply)

a) git remote

b) git add remote

**xc) git clone**

d) git add clone

8. What is the difference between git pull and git fetch?

**Git fetch will get any new changes but will not merge to or modify our work, whereas git pull will automatically merge a remote branch to our current branch.**

Git pull fetches a copy from the remote repository and merges a remote branch to our current branch. I would typically use git pull rather than git fetch.

9. How do you switch branches?

**xa) git checkout**

b) git checkout -b

c) git branch -c

d) git branch

10. Why are messages important? What would make a good commit message?

**Messages are important so that we and our collaborators know what changes have been made, what was committed, and what we did last.**

11. Please correct the merge shown below (both codes are suitable, neither has errors):

df.loc[df['sex'] == 'f', 'age'].mean()

**12. The remainder of this assignment can be found at https://github.com/filiptosic/DSI\_assignment2**