1.What is the primary goal of manual testing?

 a)To find defects in software

 b)To automate the testing process

 c)To reduce the time required for testing

 d)To increase the efficiency of developers

2.Which of the following is NOT a phase of the manual testing process?

a)Test Planning

b)Test Execution

c)Test Automation

d)Test Closure

3.Which type of testing involves testing the software as a whole to ensure that all components work together?

a)Unit Testing

b)Integration Testing

c)System Testing

d)Acceptance Testing

4.Which testing technique involves testing a system's functionality without knowing its internal code structure?

a)White-box testing

b)Black-box testing

c)Gray-box testing

d)Glass-box testing

5.What is exploratory testing?

a)Testing based on pre-defined test cases

b)Testing without any specific test cases or plans

c)Testing only the critical functionalities

d)Testing performed by an external team

6.What is the result of my\_list[2] if my\_list = [10, 20, 30, 40]?

A) 10

B) 20

C) 30

D) 40

7.Which method is used to add an element to the end of a list in Python?

A) append()

B) insert()

C) extend()

D) add()

8.What does my\_list[::-1] do in Python?

A) Reverses the list

B) Returns the last element of the list

C) Sorts the list in descending order

D) Returns a copy of the list

9.Which data structure is used to store unique elements in Python?

A) List

B) Tuple

C) Set

D) Dictionary

10.How do you check if an element is present in a set?

A) Using contains()

B) Using in keyword

C) Using has()

D) Using exists()

11.What is the data type of the result in the following expression: 10 / 2?

a)int  
b)float  
c)str  
d)bool

12.Which data type is used to represent a sequence of characters in Python?

 a)int  
 b) float  
 c)str  
 d)list

13.What is the output of bool("False")?

a) False

b)True  
c)TypeError  
d )None

14.In Python, which data type is used to store an ordered collection of elements with no duplicate values?

a) tuple  
b) list  
c) set  
d) dictionary

15.What is the result of the expression 3 \*\* 2?

a) 5  
b) 6

c)9

d) 27

16.What command is used to initialize a Git repository locally?

 a) git clone

 b) git init

 c) git commit

 d) git push

17.How can you check the status of your changes in a Git repository?

 a) git status

 b) git check

 c) git diff

 d) git log

18.What command is used to stage files for a commit in Git?

 a) git add

 b) git stage

 c) git commit

 d) git push

19.What is the purpose of forking a repository on GitHub?

 a) To create a new branch in the original repository

 b) To merge changes from one repository to another

 c) To copy a repository under your GitHub account

 d) To revert changes in a repository

20.What is a Pull Request used for in GitHub?

 a) Requesting changes to be pulled into a repository

 b) Submitting changes for approval and merging

 c) Deleting branches in a repository

 d) Checking the status of commits in a repository

**1.What is git and github?**

Git: Git is a Version Control System.

🡪Git is used to tracking the changes in the project.

🡪Git is used to manage the source code.

GitHub: GitHub is used to host the repositories.

**2.What is CVCS  and DVCS ?**

CVCS: Centralizes version control system

🡪In Centralized VCS we have SVS

DVCS: Decentralized VCS/Distributed VCS

🡪In Decentralized VCS we have Git

**3.Create a project of any and push the project**

git –version

git init

git add hello.py

git branch

git status

git add remote origin https:link

git push

**4.Define Software Development Life Cycle (SDLC) and briefly explain its primary phases.**

🡪SDLC is the process used by the software industry to design, develop and high quality test.

🡪It is step-by-step procedure to create a new project is called Software development life cycle.

🡪In SDLC we have seven phases:

1.Requirements:

We can gather the requirements from the client, what the client needs the requirements.

2.Analysis:

We can understand the requirements and plan the design.

3.Design:

We have to design the project. In design we have 2 types of design:

Low level design

High level design

4.Coding:

After planning we can write the coding in the project.

5.Testing:

After the coding, the tester will test the code. If any errors are occur they can rectify the errors.

6.Deployment:

After the testing we can deploy the project.

BA is the bridge between developer and the client.

7.Maintanance:

🡪Maintenance is the phase in SDLC

🡪Any problem will occur in the project the developer can develop it and tester will test it and give the new project to the client.

**5.What are the main objectives of the Requirements Gathering phase in SDLC?**

There is a one person called business analyst, he can gather the requirements of the project what the client needs the requirements for the project.

**6.Explain the significance of the Design phase in the SDLC process.**

In SDLC, we have design phase. In design we have two types

1.Low level design

2.High level design

**7.Discuss the importance of thorough Testing during the SDLC.**

Testing: Testing is one of the part of software development life cycle.

🡪Testing is used to identify the errors and gaps in the project.

🡪The objective of the testing is to release the good quality of product.

🡪Once the testing is done, then the project is perfect.

🡪The tester will the test the project, if any problem will occur then the developer will develop end tester will test and give the project to the client.

**8.Differentiate between Waterfall and Agile methodologies in SDLC. Highlight the advantages and disadvantages of each.**

Waterfall Model: Waterfall model is also called linear sequential model.

🡪It is used for small products.

🡪It doesn’t allow requirement changes in project.

🡪It done by step-by-step process.

🡪After coding testing will be done.

Agile Model:

🡪It is used for large products.

🡪 It can allow the requirement changes in project.

**9.Write a Python program to calculate the area of a rectangle using user input for length and width.**

**10.What is devops ?**

DevOps is the “process of delivering the project/product by ensuring automation in place and ensuring the quality of continuous monitoring and continuous testing.”

🡪DevOps is the combination of developer team and operational team.

**11.What is need of devOps?**

🡪To deliver the software or product or project on time.

🡪It is a methodology and it is the bridge between developer team and operational team.

🡪It is cost effective.

🡪Compare to others, devops is very fast and less risky.

**12.What are the devOps tools?**

1.Planning/coding--------------Git, jira

2.Building-------------------------Avache, Gradle, Mavan, ANT

3.Testing---------------------------Selenium testing for python

4.Integration---------------------Jenkins

5.Deployment--------------------Dockers, Kubernetes

6.Operation----------------------Ansible

7.Monitoring--------------------Terraform

**13.Difference b/w break continue and pass ?**

**1.Break:** Break is used to iterate the block and skip the block or code.

**Ex:** for i in range(0,5):  
 if i==4:  
 break  
 print(i)

O/p: 0

1

2

3

2.Continue: Continue is used to skip to the next block.

Ex: for i in range(0, 5):  
 if i == 2:  
 continue  
 print(i)

O/p: 0

1

3

4

3.Pass: Pass will do nothing

Ex: for i in range(0, 5):  
 if i == 2:  
 pass  
 print(i)

**14. d/w remove , delete, pop and write an example program in**

**python to demonstrate 3 of them.?**

1.Remove:

Ex: fruits=["apple","banana","orange"]  
 fruits.remove("orange")  
 print(fruits)

O/p: ['apple', 'banana']

2.Delete:

Ex: fruits=[

O/p:

15. D/w append and extend..?

🡪Append and extend methods are used to add the elements in the list.

Append(): Append is used to add the single element in the end list.

Ex: fruits=["apple","banana","orange"]  
 fruits.append("graphs")  
 print(fruits)

O/p: ['apple', 'banana', 'orange', 'graphs']

Extend(): Extend method is used to add the multiple elements to the list.

Ex: fruits=["apple","banana","orange"]  
 fruits.extend(["guava","graphs"])  
 print(fruits)

O/p: ['apple', 'banana', 'orange', 'guava', 'graphs']