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?

Ans:-git is a version control system

Git hub is remote repository

1. What is CVCS and DVCS ?

Centralized version control system and de centralized version ontrol stystem

3.Create a project of any and push the project

Ans:-

First we have to create a repository in git hub

After that give push the project

Git --version

Git init

Git status

Git add filename

Git status

Git commit -m “new commit”

Git branch -m main

Git remote add origin “ssh key”

Git push -u origin main

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

Ans:-The Software Development Life Cycle (SDLC) outlines the process for designing, developing, and maintaining software. It ensures systematic and efficient software delivery.

The phases available in sdlc:-

1. Planning phase:- to define the project scope,objectives and feasibility
2. Requirement analysis:- to gather detailed requirements from stakeholders
3. Design:- create detail designs for the software
4. Implementation:- convert the design into functional software
5. Testing:- to ensure the software is defect free and meets requirements
6. Deployment:- release the software to the production environment
7. Maintenance :- Ensure the software remains functional and up-to-date
8. What are the main objectives of the Requirements Gathering phase in SDLC?

Ans:- the main objectives of requirement and phase is

> take the detailed requirements from the client

>

1. Explain the significance of the Design phase in the SDLC process.

Ans:-

This is the second phase in the SDLC process. This is so significant because,

This phase contains all the details of the project

The tools used are generally decided by the project manager based on the client requirement

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

Ans:- in the testing phase of sdlc the testing will be important because the developer will develop the code they will think they did all right but as a tester have to check the code.if we find the bug or error in the testing phase the time and cost will be low if we find the bug after the deployment.

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

Ans:-

Waterfall model:- waterfall model is an sequential model that means take the requirements from the customer and design and develop after that it has to test the entire developed code

In water fall model the process will be requirement,design,development,testing,deploy and maintenance

Agile methodologies:- agile methodology is a flexible model that where testing is on going and the client involvement will be continuous.

Advantages and disadvantages of waterfall model

**Advantages**

>it is a sequential process the product quality will be good

>the number of errors will be low because everything is documents at the start of the project

>cost will be low because there is no need of tester in development phase in waterfall model we need tester after development

>the client involvement will be limited in waterfall model

>errors occurs very low

Preferred for small project

**Disadvantages:-**

**>**the time taken to deliver the project is high

>there is no change in between the project

>bad for large projects

Advantages and disadvantages of agile model:-

**Advantages:-**

**>**agile model is flexible

>it will takes the input from client any time of the project deleviery.

>agile works as a ongoing testing model it will rectify the issues as early as possible

>it is

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

Ans:-

Length = float(input(“enter the length value”))

width = float(input(“enter the width value”))

area  = length \* width

print(“the area of the rectangle is”,area)

10.What is devops ?

Ans :- devops is the process of delivering the project or product by ensuring automation in place and by ensuring quality with continues monitoring and continues testing

11.What is need of devOps?

Ans:-What devops solves is developers write the code and operations team deploy and maintain it .this separates communication,delays, and errors.devops bridges the gap.

1. What are the devOps tools?

Ans:-

1. For planning/coding:- git,jira
2. For building the code:-maven,gradle,apache ant
3. For testing:- selenium testing with python
4. For integration:- Jenkins(ci/cd)
5. For deployment:- dockers,kubernates
6. For operations :- ansible (managing tools)
7. Monitoring:- teraform
8. Difference b/w break continue and pass ?

Ans:-

Break:- in the break statement terminate the loop

Continue:- the continue statement used to stop the current loop and moved to the loop

Pass:-it is a place holder that does nothing .it is used to when there is no action is needed

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

python to demonstrate 3 of them.?

Ans:-

Remove:removes the first occurred value from the list,only remove the values using index

My\_list[10,20,30,40,50]

Remove(30)

Print(“ after removing:” my\_list)

Output:- [10,20,40,50]

Delete:-delete the items in specific index or entire object ,can delete list or entire item in the list

My\_list[10,20,30,40,50]

Delete[2]# it will deletes 30 after

Print(“after deleting[2],my\_list)

Pop:-removes and returns items in the specified index(default.last),pop compulsory required an index we we are not provides index it will remove last element

My list[10,20,30,40,50]

Pop(1)

Print(“after pop”,my\_list)

1. D/w append and extend..?

Ans:-

append ( ) adds a single element to the end of the list.

The entire element is added as one item,it it is list or another iterate

Extend( ) adds multiple elements from iterables

Ex:-another list,tuple,string)to the end of the list

The elements are iterate and not as a single element added as individual element