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&#39;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(&quot;False&quot;)?

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 and github is the server

2.What is CVCS and DVCS ?

**CVCS (centralized version control system)**

SVN is the centralized version control system

In cvcs of the system failure is happened whole data will be lost.

I this all the system is connected at one centre point.

**DVCS(distributed version control system)**

Git is the distributed version control system

Where as in DVCS if the system crash is happened we can fetch the data from the another device.

3.Create a project of any and push the project

Ans:

Step1: created a project

Step 2: initialized empty repository using git init command

Step3: check the status

Step4: given the command git add file\_name

Step5: check the status wether the file is tracking or not.

Step6: now created one repository in github

Step 7: now I have made commit

Step 8: created branch

Step 9: given the origin link

Step 10: pushed the code to the main branch

PS C:\Users\navya\OneDrive\Desktop\test-project> git init

Initialized empty Git repository in C:/Users/navya/OneDrive/Desktop/test-project/.git/

PS C:\Users\navya\OneDrive\Desktop\test-project> git status

On branch master

No commits yet

Untracked files:

(use "git add <file>..." to include in what will be committed)

project

nothing added to commit but untracked files present (use "git add" to track)

PS C:\Users\navya\OneDrive\Desktop\test-project> git add project

PS C:\Users\navya\OneDrive\Desktop\test-project> git status

On branch master

No commits yet

Changes to be committed:

(use "git rm --cached <file>..." to unstage)

new file: project

PS C:\Users\navya\OneDrive\Desktop\test-project> git commit -m "this is my first project"

[master (root-commit) 57fe485] this is my first project

1 file changed, 0 insertions(+), 0 deletions(-)

create mode 100644 project

PS C:\Users\navya\OneDrive\Desktop\test-project> git branch -M main

PS C:\Users\navya\OneDrive\Desktop\test-project> git remote add origin https://github.com/Gopinadh18/test-project.git

PS C:\Users\navya\OneDrive\Desktop\test-project> git push -u origin main

Enumerating objects: 3, done.

Counting objects: 100% (3/3), done.

Writing objects: 100% (3/3), 222 bytes | 222.00 KiB/s, done.

Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)

To https://github.com/Gopinadh18/test-project.git

\* [new branch] main -> main

branch 'main' set up to track 'origin/main'.

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

**Ans:**

For the development of the any project or product it will under go certain steps in sdlc

**1.requirements gathering/analysis:**

It is one of the most critical step in the sdlc where whole foundation for the project will take place.

I this phase we gather the requirements from the customer and business analyst and make a src document.

**2.Desin phase:**

design phase we document the requirements which are mentioned in the requirement phase and allocation of the work to the teams will be done. In this phase we have develop to documents:

1.high level documentation

2.low level documentation

**3.coding:**

Actual development of the project will take place. and integrate all the units of the code.

**4.testing:**

The code which is developed in the above phase will be tested here

**5. deployment:**

Transferring the software from the local server to the global server will be done.

**6.maintaince/support:**

Continues maintained and support will be given to customer.

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

Ans: the main objectives of the requirements gathering phase is to gather the requirements of the client or customer and document will be done. To know the customer expetations. In this phase customers,client, project manager,business anlysists will take participation.

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

Ans:

The significance of design phase we document the requirements which are mentioned in the requirement phase and allocation of the work to the teams will be done in this phase and actual development of the code will take place. In this phase we develop to type of documents

1.high level document

2.low level document

So by following he steps in src document the development of the project will be taking place so here high level document is called as user manual which is given to the customer.

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

Ans:

The importance of testing during the sdlc is to find the bugs. Find the bugs in the early stage causes less cost where as finding the bugs in the later stages will cost more. So testing is very important in the sdlc to check the software meets the user requirements or not and to find if any error raises. To find these thigs we use testing.

In testing we have 2 types:

**Static testing :**

Static testing will be done before the development of the code.

**Dynamic testing:**

Dynamic testing will be done after the development of the code.

We have different types of tastings

White box testing :

This testing will be done by having knowledge on the code.

Black box testing:

Black box testing will be done by without having any knowledge on the code.

In black box testing we have

Functional testing and non functional testing

8.Differentiate between Waterfall and Agile methodologies in SDLC. Highlight the Advantages and disadvantages

**Waterfall model:**

* Water fall model is the linear sequential model.
* It is well suited for small size projects.
* To complete whole project it will take 6months to 12 months
* We cannot add requirements in the middle of the project
* Testing will be done at the end of the development

**Advantages:**

It is very simple to adopt.

All the requirements are gathered at the starting of the project.

**Disadvantages:**

If any error is raised at the middle of the phase it will be carry forword to the next phase.

We cannot add changes in the middle of the project.

Testing will be done after development only as we know early detection of error will cause less amount.

It take months to complete one project.

**Agile model:**

* Agile model is the combination of both incremental model and iterative model.
* It is well suited for large size projects.
* advantages and disadvantages of each.
* We can expect one release in a week.
* We can add requirements at the middle of the project
* Agile means ability to adopt and meet the changes.
* Testing will be done in the middle of the project

**Advantages:**

We can expect a release in every week

Can add requirements at the middle of the project.

Testing will be done in the middle of the development as we know early detection of error will cause less amount.

**Disadvantages:**

Proper documentation will not done before the development of the project.

Continues adding of the changes will take place.

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

Ans:

length = int(input())  
width = int(input())  
print(length\*width)

10.What is devops ?

Ans: devops is the process of development of the project or product. By ensuring the quality in place.by ensuring the continuous testing and monitoring. devops is a culture. Devops is a methodology. Devops is not a tool or programming language.

11.What is need of devOps?

Ans:

Before knowing the need for devops lets have a look on traditional software methodology in traditional software methodology we have to teams development team and operations. there is no proper communication b/w the operations team and development team.so if any error raises it will take more time to fix that error. So devops came into force.

The need to devops is to deliver the quality software on time. And to fix the bug within less time. To ensure collaboration and continuous testing.

12.What are the devOps tools?

ANS:

1. Git
2. Terraform
3. Sonarcubes
4. Docker
5. Ansible
6. Kubernetes
7. Selenium

13.Difference b/w break continue and pass ?

Ans:

**Break:** break will terminate the loop if the given condition is satisfied.

**Continue**: continue will skip only that loop and executes the next loops.

**Pass :** pass does nothing to maintain the syntax we are using pass keyword.

Syntax for pass:

If condition:

Pass

Else:

Print(“print the block of code”)

14. d/w remove , delete, pop and write an example program in python to demonstrate 3 of them.?

Ans:

**Remove:** Remove will remove the first existing of the item.

Example:

**list\_a = [1,"gopi", 2.4, "gopi"]  
list\_a.remove("gopi")  
print(list\_a)**

**output:**

**[1, 2.4, 'gopi']**

**Delete:** delete will delete the specific item

**Example:**

**list\_a = [1,"gopi", 2.4, "gopi"]  
del list\_a[2]  
print(list\_a)**

**output:**

**[1, 'gopi', 'gopi']**

**Pop:** it will remove the item from the end of the list.

**Example:**

**list\_a = [1,"gopi", 2.4, "gopi"]  
list\_a.pop()  
print(list\_a)**

**Output:**

[1, 'gopi', 2.4]

15. D/w append and extend..?

Ans:

Append: append will add only single element at the med of the list.

Extend: extend will add the iterates of the object at the end of the list.