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 :**

Git is a **version control system** (VCS) that helps developers track changes in their code over time. It allows multiple developers to collaborate on a project without overwriting each other’s work. It will very useful when code changes or any versions are there it will helpful. It will record the every changes will occur in the project with time and what change is happened in the code.

**GitHub :**

GitHub is a **cloud-based platform** that hosts Git repositories and provides a set of collaborative tools for developers. It is just like online storage space where we can can store the projects and we can access them when ever those are require through internet.

**2.What is CVCS and DVCS ?**

**Ans :**

**Centralized version control system :**

In a Centralized Version Control System, there is a single central repository where all the code or documents are stored. All team members check out code from this central repository to make changes. After changes done they commit the code .

**Distributed version control system :**

In a Distributed Version Control System, every user has a full copy of the repository, including its entire history, on their local machine. This means what ever the project have developer local machine contains everything and also they can do the work offline also. After changes done they will push the code the into the central repoisotpoisory.

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

**Ans :**

1. Firste make a directory :

**mkdir name**

1. Change directory to the current directory :

**cd name**

1. Initialize if ;

**git init**

1. Next we keep our email id :

**git config --global user.email “kandamanibabu1234@gmail.com”**

1. Now add the file what we want to add :

**git add adding.py**

1. For knowing the status:

**git status**

1. Next commit that file and give some messege also :

**git commit -m "I am adding one python file"**

1. Now we give the http url what ever we are creating in the github

**git remote add origin “here we can put the url of github repository of http”**

1. Last step is to push the code into the github

**git push -u origin main**

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

**Ans ;**

The Software Development Life Cycle is a structured process used by software development teams to design, develop, test, and deploy software applications. It provides a systematic approach to software development, ensuring that the project meets the required standards and is completed on time and within budget. The SDLC outlines the stages involved in the creation of software from initial planning to its maintenance after release.

1. Requirement Gathering and Analysis

2. System design

3. development

4. Testing

5. deployment and monitoring

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

**Ans :**

The requirement gathering is very crutial for project development for understanding the business requirements and gathering detailed information from stakeholders i.e stakeholders is nothing but the client or users who want the projects. Where can gather all the details about the project. This requirement gathering phase place a major role in project development because if our analyst mistakenly understand requirement it will lead to total project problem, because our project is not matching to the client requirement.

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

**Ans :**

Design phase place the major role the development of any software application it consigt of several imformation about the application that is in what time what work we need to do in which time it will be complete not only this it contains imformation of

1. Blueprint for Development
2. Cost Management
3. Detailed Specifications
4. Communication Tool

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

**Ans :**

Testing is a crucial phase in the Software Development Life Cycle. It ensures that the software is of high quality, works as expected, and meets both functional and non-functional requirements.

It will check the total working condition of the project. Every point of client it will check

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

**Ans :**

**Waterfall Methodology:**

Waterfall is a traditional, linear approach to software development. It follows a strict, sequential process where each phase must be completed before the next phase begins.

**Agile Methodology:**

Agile is an iterative and flexible approach to software development. It focuses on continuous collaboration, customer feedback, and iterative releases. Agile methodologies include frameworks like Scrum, Kanban, and Extreme Programming .

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

**Ans :**

a = int(input(“Enter the length “))

b = int(input(“Enter the breath”))

area = a\*b

print(“area of triangle is “,area)

**10.What is devops ?**

**Ans :**

Devops is the process of delivering the application by ensuring the quality in the place and ensuring the automation in the place by continues integration and continues testing.

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

**Ans :**

1. Faster Development is possible by using devops.
2. Deployment is will very effective.
3. Improved Collaboration between the teams we can work where ever.
4. Because of Automation it will improve the repitive tasks.
5. We can give the Better Quality product to the customers.
6. Cost Efficiency is occur due devOps.
7. It will improved Customer Experience

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

**Ans :**

Version control – git

Ci/ cd continues integration and continues delivery – Jenkins

Docker

Ansible

Terraform

Testing – selenium

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

**Ans :**

**Break :**

It is used to stop the iterations in the looping statement when condition is satisfies.

It will keep in the conditional statement.

**Continue :**

It is used to skip one iteration in the looping statement when condition is satisfies.

It will place in the conditional statements.

**Pass :**

it is used for smooth execution of the program when certain conditions are not mentioned in the conditional statements.

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

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

**Ans :**

**remove :** which is used to remove the data present in list. In the method we can place our data what ever we want to remove.

Ex :

List.remove(“apple”)

**delete :** delete method is used to delete the data based on index what we are mentioned in this method.

**Ex :**

**List.delete[1]**

If we want to delete specific index then we go for this method.

**15. D/w append and extend..?**

Append method is used to add the single item to list.

Ex :

List.append(5)

Where as extend method is used to add multiple elements to list

Ex :

List.extend([2,4])