**1.Name and Explain the State of a Docker Container.**

1. Created-container is created when image is running

2. running-when the image is running automatically container will be running at the backend

3. stop – to stop the container

4.pause- to pause the container

**2.Name and Explain the Components of Docker.**

1. docker Engine—it contain all libraries to run the machine

2.dockerfie – it is the text documents it’s having n number of commands to build image instead on running one by one in hands

3. docker hub -where image will be stored

4. docker container – it is the run time instance of image

5. docker image -it s used to crate containers

**3.Can You tell What is the Functionality of a Hypervisor?**

Hypervisor is similar to the virtualization to create several virtual machine(local machine) on single physical machine(computer)

**4.Difference between Docker and Virtualization?**

Virtualization- it is the process of creating virtual machine (local machine) on physical machine

Docker – it the remote machine, used to pull and push the images

**5.On What Circumstances Will You Lose Data Stored in a Container?**

When we delete the container

**6.What is Docker Hub?**

A repository where Docker images are stored and shared.

**7.Can a Paused Container Be Removed from Docker?**

yes

**8.How Do You get the Number of Containers Running, Paused, and Stopped?**

by using the command **docker ps -a**

**9.How to Start, Stop, and Kill a Container?**

**Start-** Docker start container ID

**Stop- -** Docker stop container ID

**Kill- -** Docker kill container ID

**11.Where are Docker Volumes Stored in Docker?**

/var/lib/docker/volumes/volume\_name/\_data/

**12.Can You Tell the Differences Between a Docker Image and Layer?**

Docker image – it is the template used to create the image

Docker layer -in which each instruction is there to run the image

**13.Name the Essential Docker Commands and What They Do.**

Docker ps – to check the current running container

Docker ps -a – to check the previous and current running container

Docker pull <image>– to download the image

Docker run -itd – to run the image

Docker exec -itd <container id> - to login/inside to the container

Docker image – to check the images

**14.How Do You Check the Versions of Docker Client and Server?**

Docker --version

**15.Can We Use JSON Instead of YAML While Developing a Docker-Compose File in Docker?**

Yes

**16.Describe the Lifecycle of a Docker Container.**

It is the runtime instance of image,it will running at the backend when the image is running

**17.What Is the Purpose of Docker Compose?**

It is used handle the multiple container application

**18.what is yaml , create any sample yaml script and validate?**

Yaml is the formate to crate image like script

**19.How Do You Update a Docker Container Without Losing Data?**

Docker update <container id>

**20.Suppose You Have 3 Containers Running, and Out of These, You Wish to Access One Of Them. How Do You Access a Running Container?**

Docker exec -itd <container id> bash

**21.Considering a Server With 16 GB RAM and a Quad-core CPU, What Factors Determine the Maximum Number of Containers You Can Run on the Host for a Microservices App?**

**22.What is Docker? what are the Features of Docker?**

Docker is the plateform to store data and also shared.

**23.define Docker image and Docker file?**

Docker image – it is the template used to create the image

Docker file – it is the text document where n number of commands are their to create the image

**24.What command is used to list running containers?**

Docker ps -a

**25.What is the syntax to build an image from a Dockerfile?**

Docker commit <container id> username/repo\_name

Docker login

Docker push username/repo name

**27.What is Docker Compose, and how is it different from Dockerfile?**

Docker compose – it is used to handle the multiple Container.

Dockerfile – it is the text document which contains n number of commands to build the image