### 1. What is Docker?

[Docker](https://www.simplilearn.com/tutorials/docker-tutorial/getting-started-with-docker) is an open-source containerization platform. It is used to automate the deployment of any application, using lightweight, portable containers.

### 2. What are Docker’s most notable features?

Docker’s most essential features include:

* Application agility
* Developer productivity
* Easy modeling
* Operational efficiencies
* Placement and affinity
* Version control

### 3. Why should anyone use Docker? What does it offer?

Docker gives users many incentives for adoption, such as:

* An efficient and easy initial set up experience
* The means to describe an application lifecycle in detail
* Simple configuration and smooth interaction with [Docker Compose](https://www.simplilearn.com/tutorials/docker-tutorial/docker-compose)
* Complete and well-detailed documentation
* Ability to run on a PC or enterprise IT system with equal ease

### 4. What about the opposite? Does Docker have any downsides?

Docker isn’t perfect. It comes with its share of drawbacks, including:

* Lacks a storage option
* Monitoring options are less than ideal
* You can’t automatically reschedule inactive nodes
* Automatic horizontal scaling set up is complicated

### 5. Name and explain the various Docker components.

The three main [Docker components](https://www.simplilearn.com/tutorials/docker-tutorial/what-is-docker) are:

1. Docker Client. Performs Docker build pull and run operations to open up communication with the Docker Host. The Docker command then employs Docker API to call any queries to run.
2. Docker Host. Contains Docker daemon, containers, and associated images. The Docker daemon establishes a connection with the Registry. The stored images are the type of metadata dedicated to containerized applications.
3. Registry. This is where [Docker images](https://www.simplilearn.com/tutorials/docker-tutorial/docker-images) are stored. There are two of them, a public registry and a private one. [Docker Hub](https://www.simplilearn.com/tutorials/docker-tutorial/docker-hub) and Docker Cloud are two public registries available for use by anyone.

### 6. What is a container?

Containers are deployed applications bundled with all necessary dependencies and configuration files. All of the elements share the same OS kernel. Since the container isn’t tied to any one IT infrastructure, it can run on a different system or the cloud.

### 7. Explain virtualization.

[Virtualization](https://www.simplilearn.com/virtualization-in-cloud-computing-article) is the means of employing software (such as Hypervisor) to create a virtual version of a resource such as a server, [data storage](https://www.simplilearn.com/big-data-era-data-storage-rules-article), or application. Virtualization lets you divide a system into a series of separate sections, each one acting as a distinct individual system. The virtual environment is called a virtual machine.

### 8. What’s the difference between virtualization and containerization?

Virtualization is an abstract version of a physical machine, while containerization is the abstract version of an application.

### 9. Describe a Docker container’s lifecycle.

Although there are several different ways of describing the steps in a Docker container’s lifecycle, the following is the most common:

1. Create container
2. Run container
3. Pause container
4. Unpause container
5. Start container
6. Stop container
7. Restart container
8. Kill container
9. Destroy container

### 10. Name the essential Docker commands and what they do.

The most critical [Docker commands](https://www.simplilearn.com/tutorials/docker-tutorial/docker-commands) are:

* Build. Builds a Docker image file
* Commit. Creates a new image from container changes
* Create. Creates a new container
* Dockerd. Launches Docker daemon
* Kill. Kills a container

### 11. What are Docker object labels?

Labels are the mechanism for applying metadata to Docker objects such as containers, images, local daemons, networks, volumes, and nodes.

### 12. How do you find stored Docker volumes?

Use the command: /var/lib/docker/volumes

### 13. How do you check the versions of Docker Client and Server?

This command gives you all the information you need: $ docker version

### 14. Show how you would create a container from an image.

To create a container, you pull an image from the Docker repository and run it using the following command: $ docker run -it -d <image\_name>

### 15. How about a command to stop the container?

Use the following command: $ sudo docker stop container name

MCQ QUESTIONS-

**1. Which of the following view displays all of your containers and apps in real-time in Docker?**

Container

Hub

Images

Answer: A) Container

**2. \_\_\_\_ is a cloud registry service that allows you to obtain Docker images created by other communities.**

Container

Hub

Images

Answer: B) Hub

**3. Which of the following command displays all of the pictures that are presently installed on the system?**

See images

Docker see images

Docker images

Docker pictures

Answer: C) Docker images

**4. A Container \_\_\_\_.**

Can be run on local machines, virtual machines, or deployed to the cloud.

Is portable

Is a runnable instance of an image

All of the above

Answer: D) All of the above

**5. Which of the following command can run the application in a container?**

Docker run

Run

Docker start

Start

Answer: A) Docker run

**6. Which of the following command you will use to list your containers?**

docker list

docker ps

list

docker\_container\_list

Answer: B) docker ps

**7. Which of the following statement is correct?**

To remove a container, you first need to stop it

You can directly remove a container, without stopping it.

Answer: A) To remove a container, you first need to stop it

**8. To stop the container, which of the following command is used?**

Stop

Docker end

Docker stop

Docker finish

Answer: C) Docker stop

**9. Once the container has stopped, which of the following command you will use to remove a container?**

Docker remove

Docker Destroy

Docker rm

Docker del

Answer: C) Docker rm

**10. Which of the following is the default registry in docker?**

Docker images

Docker hub

Docker container

Answer: B) Docker hub