**Docker:**

Note: Question 1 to 9 each question is 1 marks, Question no. 10, 11 is 5 Marks while Question 12 is for 6 marks.

### Write a command to stopping and restarting a Docker container?

### ANS:

### STOP-docker stop CONTAINER\_ID

### RESTART-docker restart CONTAINER\_ID

### Write a command to create a Docker image?

### ANS:docker build -t image\_name

### Write a command to view all the running Docker containers?

### ANS:

### Docker ps -a

### What command is used for running images as a container?

### ANS:docker run -it name/ID

### 

1. What is a cloud-hosted service of Docker providing registry capabilities for public and private content?

ANS:Docker Hub

1. What is a template used for describing a build of an image?

ANS:Dockerfile

### Multiple containers running on a single machine all share the same resources such as the operating system kernel for instant boot and efficient utilization of RAM. True or False?

### ANS:TRUE

1. What command is used for remove all stopped containers, unused networks, build caches, and dangling images?

ANS:

docker system prune

1. What command is used for running images as a container?

ANS:docker run -it name/ID

1. Explain what are Dockerfiles?

ANS:

A Docker File is a simple text file with instructions on how to build your images.

Instructions include tasks such as creating a directory, copying file from host to container etc.

Ex:

FROM centos

RUN yum install -y git \

firefox

docker build -t sakthi .

docker run -it sakthi

### List the most commonly used instructions in Dockerfile?

### ANS:

### FROM- used to specify from which platform it’s running

### RUN - It run as a linux command, it is used to install packages into container

### CMD - it defines a default cmd to run when none is given, it can appear at any point in the file

### ENTRYPOINT - – provides a cmds and args for an executing container, it defines a base command(and its parameter) for the container

### COPY - copies files n directories to the container(Copies files as it is i.e as zipped file

### ADD - copies files and directories to the container. Can unpack compressed files.(Copies files as and extracts the zip file)

### EXPOSE - On which port u want run ur docker container

### VOLUME – create a directory mount point to access and store persistent data

### Explain Docker lifecycle of Docker Container?

### ANS:

### A Docker user first pulls an image from a Docker registry such as Dockerhub. This image can be used as it is or as a base image to build custom Docker images using Dockerfiles Next, you can execute the Docker create command on the image that you have pulled in the previous step. This will create a Docker container associated with that image. The container is now in thecreatedstate. After you have created the Docker container, you can invoke the start command on the container to run the container. Once you have invoked the Docker start command, you will have access to the container’s filesystem and the environment. The container is now in started state. Note that the container has just started and is not actively running.

### You can also directly invoke the Docker run command after pulling the image from Dockerhub or even without pulling the image. When we execute the Docker run command, the daemon first checks for an existing image with the same digest locally. If it finds one, this image is used to run the container. If not, the image is automatically pulled from Dockerhub. Once we invoke the Docker run command, the container comes to therunningstate Now, you can either invoke Docker pause command to transfer the container in thepausedstate or you can use the Docker stop command to stop the container and transfer it toexitedstate. By pausing or stopping containers, we speak in terms of stopping/pausing the processes inside the container. We can use the Docker start command to start a stopped container or the unpause command to unpause the container.docker pscommand is used to list all the containers that are actively running. Thedocker ps -acommand is used to list all the existing containers.

### Kubenetes:

### Each Question is 1 marks.

1. **At its core, Kubernetes is a platform for:**

### Provisioning machines (similar to Puppet, Ansiblee

### Running and scheduling container applications on a cluster.

### Packaging software in containers

**2) Which of the following are core Kubernetes objects ?**

A. Pods

B.Volumes

C.Services

D.All of them

**3)Kubernetes Network proxy runs on which node ?**

A. Master Node

B.Worker Node

C.CIDR Node

D.Both A & B

**4) runs on each node and ensures containers are running in a pod.**

A. Etcd

B.Pod

C.Kubelet

D.Scheduler

**5) Which of them is a Kubernetes Controller ?**

A. ReplicaSet

B.Deployment

C.Rolling Updates

D.Both A & B

**6)....................... are the Kubernetes controllers.**

A. Replicaset

B.Deployment

C.Namespace

D.Both Replicaset & Deployment

**7) Kubernetes is the type of cluster management software.**

A. True

B.False

**8) Which of the following are the components of Kubernetes Master Machine?**

A. Scheduler

B.Controller Manager

C.API Server & etcd

D.All of the above

**9) Kubernetes API currently supports ........... type of selectors.**

A. Set-based selectors

B.Equality-based selectors

C.both Set-based & Equality-based selectors

D.None of the above

**10) What are the some important functionalities of a Namespace in Kubernetes?**

A. Namespaces help pod-to-pod communication using the same namespace.

B.Namespaces provide logical separation between the teams and their environments.

C.Namespaces are virtual clusters that can sit on top of the same physical cluster.

D.All of the above

**11) There are ............ types of Pods in kubernets?**

A. 2

B.3

C.4

D.6

**12) GKE stands for \_\_\_\_.**

A. Google Cluster Engine

B. Google Kubernetes Engine

C. Google Container Engine

D. None of the above

**13) Which of the following commands allow you to validate a cluster created with Kubernetes operations?**

A. kubectl validate cluster

B. kubeadm validate cluster

C. kops validate cluster

D. None of the above

**14) What is the default range of ports used to expose a NodePort service?**

A. 30000-32767

B. 500-1000

C. 60000-65536

D. 1024-32767

**15) Which of the following commands gives you detailed info on a Pod?**

A. kubectl describe pods

B. kubectl get pods -vvv

C. kubectl get pods –detail

D. kubectl pods inspect

**16) What is the default protocol for a Service?**

A. TCP

B. UDP

C. HTTP

D. SSH

**17) Which of the following is true about Pods and IP addressing?**

A. Pods only work with IPv6 addresses

B. All containers in a Pod get unique IP addresses

C. An external DHCP server is required for Pod IP addressing

D. All containers in a Pod share a single IP address

**18) In Kubernetes, a node is:**

A. A tool for starting a kubernetes cluster on a local machine  
B. A worker machine  
C. A machine that coordinates the scheduling and management of application containers on the cluster

**19) What can you deploy on Kubernetes?**

A. Containers  
B. Virtual Machines  
C. System Processes (like sshd, httpd)

20) **We have a node named nodeA, and we want to add a tainting effect to it, which command we will use**

a. kubectl taint nodes nodeA key:=NoSchedule

b. kubectl taint node key:=NoSchedule

c. kubectl taint nodes nodeA

d. All of the Above