Quiz 1: Kubernets – Part 1

**1. Question:** What is the primary purpose of Kubernetes?

a) Managing virtual machines

b) Container orchestration

c) Database management

**d) Network configuration**

**2. Question:** Which Kubernetes component is responsible for storing cluster configuration details?

a) Kube Proxy

b) Etcd

c) Controller Manager

**d) API Server**

**3. Question:** What is the role of a Kubernetes Control Plane component?

a) Running application containers

b) Managing worker nodes

**c) Making global decisions about the cluster**

d) Managing container runtimes

**4. Question:** In Kubernetes, what is a Pod?

**a) The smallest deployable unit that can contain one or more containers**

b) A virtual machine

c) A Kubernetes worker node

d) A network configuration file

**5. Question**: Which Kubernetes component is responsible for ensuring that the specified number of pod replicas are running at all times?

a) Kubelet

b) Kube Proxy

c) Controller Manager

**d) Scheduler**

**6. Question:** What does a Kubernetes Node represent in the cluster architecture?

a) A physical server

**b) A worker machine where containers are deployed**

c) A database server

d) A master server

**7. Question:** Which of the following is NOT a Control Plane component in Kubernetes?

a) Etcd

b) Controller Manager

c) Scheduler

**d) Kubelet**

**8. Question:** What is the purpose of the Kubernetes API server?

a) Storing configuration data

b) Managing container runtimes

c) Running application containers

**d) Exposing the Kubernetes API**

**9. Question:** What is the primary role of the Kubernetes Scheduler?

a) Managing container networking

b) Scaling pods up and down

**c) Assigning pods to nodes**

d) Managing persistent storage

**10. Question:** Which Kubernetes component is responsible for maintaining network rules on nodes?

a) Kube Proxy

**b) Kubelet**

c) Etcd

d) Controller Manager

**11. Question**: What is the primary function of kubectl in Kubernetes?

a) Running containers

b) Managing worker nodes

c) Creating Kubernetes clusters

**d) Interacting with Kubernetes clusters**

**12. Question:** Which of the following is NOT a basic kubectl command?

a) `kubectl create`

b) `kubectl delete`

c) `kubectl edit`

**d) `kubectl apply-all`**

**13. Question:** What is a Kubernetes namespace used for?

a) To define the network configuration

b) To specify resource limits for pods

c) To group pods and other resources logically

**d) To store database credentials**

**14. Question:** Which Kubernetes distribution is commonly used for setting up a local development cluster?

a) kubeadm

b) Amazon EKS

**c) Minikube**

d) Google Kubernetes Engine (GKE)

**15. Question:** What is the purpose of a Kubernetes context?

a) To specify resource requests for pods

b) To manage container runtimes

**c) To define cluster, user, and namespace information**

d) To store application data

**16. Question:** Which component in Kubernetes is responsible for container runtime management?

a) Kubelet

b) Kube Proxy

c) Scheduler

**d) Container Runtime**

**17. Question:** What is a Kubernetes service used for?

a) To run applications

**b) To expose applications within and outside the cluster**

c) To create containers

d) To store application data

**18. Question:** What is the default container runtime in Kubernetes?

a) Docker

b) containerd

c) rkt

**d) It depends on the Kubernetes distribution.**

**19. Question:** Which Kubernetes component is responsible for load balancing traffic to services?

**a) Kube Proxy**

b) Kubelet

c) Etcd

d) Scheduler

**20. Question:** What does a Kubernetes node agent do?

a) Stores cluster configuration data

b) Manages worker nodes

c) Schedules pods to nodes

**d) Ensures containers are running on the node**