Mock Exam

Q1) Deploy a **pod** named **cka1** in namespace **cncf** based on the image **nginx:1.16.0**

Q2) a) Create a 5-replica deployment with the name **cache** based on the **memcached** image

b)Expose the deployment as an internal only service using port & target-port of 11211

c) Print the endpoints object associated with that service in json format to a file **q2.json**

d) list all pods in that deployment only, sort the output by pod name, print the output to **q2.txt**

Q3)

a) Create a **deployment** called cka3 that uses **busybox** as an **init container** to write the hostname of that **pod** to a file in a **non-persistent** volume. Then mount this file in a **nginx:latest** container At /usr/share/nginx/html/index.html

b) **Expose** the deployment using service so that it can be accessed via a curl from your machine. Validate your deployment by using curl to access your service. (if Context is docker-for-desktop, then deploy as LoadBalancer, if KTHW, the use NodePort and run the curl from a worker node)

c) **Scale** up the deployment to **5** tracking all changes. Use curl to confirm your service has scaled up

d) Use a **busybox:1.28** pod to do a nslookup of the service using its DNS entry and write the outputs to a file

Q4) Create a yaml file called **db-secret.yaml** for a secret called **db-user-pass**.

The secret should have two fields: a **username** and **password**.

The username should be "**superadmin**" and the password should be "**imamazing**".

Q5) Create a deployment running **nginx**, mount a volume called "**hostvolume**" with a container volume mount at **/tmp** and mounted to the host at **/data (on a mac change this to a directory in your home directory)**. If the directory isn't there make sure it is created in the pod spec at run time.

Go into the container and create an empty file called "**my-doc.txt**" inside the **/tmp** directory. On the worker node

that it was scheduled to, go into the **/data** directory and output a list of the contents to list-output.txt showing

the file exists.

Q6) Create a secret that has the following username password data:

**username=missawesome**

**password=123kube321**

Create a pod running **nginx** that has access to those data items in a volume mount path at **/tmp/secret-volume**

log into the **nginx** pod you created and list the items and cat the output of the data items to a file "**credentials.txt**"

Q7) Create a yaml file called **nginx-deploy.yaml** for a deployment of three replicas of **nginx**, listening on the container's port **80**.

They should have the labels **role=webserver** and **app=nginx**. The deployment should be named **nginx-deploy**.

Expose the deployment with a load balancer and use a curl statement on the IP address of the load balancer

to export the output to a file titled output.txt.

Q8) Perform an etcd backup **ON YOUR GCP CLUSTER** saving the snapshot to ~/mockexamsnapshotdb. Verify the snapshot has saved correctly.