UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Online End Semester Examination, May 2021

Course: Application Containerization   **Semester: V**

Program: B.Tech. CS + DevOps   **Time   : 03 hrs.**

Course Code: CSDV3005   **Max. Marks: 100**

Instructions:

SECTION A

1. Each Question will carry 5 Marks
2. Instruction: Complete the statement / Select the correct answer(s)

S. No.			CO
Q1	What is Hypervisor? Explain with example two types of Hypervisor.		CO1
Q2	What is the significance of Docker Volume? Write Docker Command to create a Volume and mapped with a container.		CO2
Q3	What is the Difference between a Docker Image and Docker Container? Write any five Docker commands used for Container.		CO2
Q4	Enlist different network drivers used in Docker? What is the default Docker network driver, and how can you change it when running a Docker image?		CO3
Q5	What is Kubernets? Differentiate between Docker Swarm and Kubernets.		CO4
Q6	What is Container? Write any five major differences between Container and Virtual Machine.		CO1

SECTION B

1. Each question will carry 10 marks
2. Instruction: Write short / brief notes

Q7	Write a short note on following
	    a) Docker Hub
	    b) Vagrant Cloud
			CO1

Q8	What is the significance of Dockerfile? Write a Dockerfile contains Seven Layers and explain each layer in detail.		CO2
Q9	What is Containerization Technology? What is the significance of Containerization in DevOps? Explain with a proper Diagram.		CO2

Q10	What is Orchestration? How does Docker support orchestration? Explain various concepts used in Docker Swarm with some proper Docker commands.		**CO4**

Q11	Explain
	    a) Amazon Web Services Elastic Container Services
	    b) AWS Elastic Kubernetes Services(EKS)
			CO4

SECTION-C

1. Each Question carries 20 Marks.
2. Instruction: Write long answer.

Q 12	What is Docker-compose file? What the significance of this file in Docker Containerization Technology? Write a docker-compose file to start MYSQL and NGINX micro service simultaneously.
	
	OR
	
	Explain the following
	    a) Azure Kubernetes Services
	    b) Monitoring of Containers
			CO3