


Name:			
Enrolment No:			
<b>UNIVERSITY OF PETROLEUM AND ENERGY STUDIES</b> <b>End Semester Examination, December 2022</b>			
<b>Course: Application Containerization</b> <b>Program: B.Tech-CSE-Big Data</b> <b>Course Code: CSDV3004P</b>		<b>Semester: 7<sup>th</sup></b> <b>Time : 03 hrs.</b> <b>Max. Marks: 100</b>	
<b>Instructions: All questions are compulsory.</b>			
<b>SECTION A</b> <b>(5Qx4M=20Marks)</b>			
S. No.		Marks	CO
Q 1	List out the shipping industry challenges with possible solutions.	4	CO1
Q 2	Elaborate the characteristics of containers.	4	CO1
Q 3	Discuss the use of containers runtime in perspective of virtualization.	4	CO2
Q 4	Discuss the architectural diagram of containers for dev/ deployment.	4	CO3
Q 5	Elaborate the need of orchestration containers and microservices.	4	CO4
<b>SECTION B</b> <b>(4Qx10M= 40 Marks)</b>			
Q 1	Explain the different execution environment such as developers, QA and production. How to overcome the different issues faced by these environments.	10	CO3
Q 2	Write short note on containers images, Chroot system and Free BSD jails.	10	CO1
Q 3	Explain and differentiate Docker's Rest APIs and Docker's CLI with suitable architectural diagram.	10	CO3
Q 4	Define containerization and also explain its advantages and disadvantages.	10	CO1
<b>SECTION-C</b> <b>(2Qx20M=40 Marks)</b>			
Q 1	Elaborate Docker Swarm and Kubernetes with their architectural diagram.	20	CO4
Q 2	A) Draw the architectural diagram of AWS elastic container services and elastic Kubernetes services. B) Explain and differentiate Azure's Kubernetes services and Google Kubernetes services.	20	CO4