


Name:			
Enrolment No:			
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester Examination, December 2022			
Course: Container Orchestration and Infrastructure Automation Program: B.Tech CSE CCVT Course Code: CSVT 3009		Semester: V Time : 03 hrs. Max. Marks: 100	
Instructions: Read and follow the instructions written on the answer sheet front page			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q 1	Why developers and organizations embrace Docker containers for building their software applications?	4	CO1
Q 2	Differentiate Virtualization and Containerization.	4	CO1
Q 3	Name the essential Docker commands and define their functionalities.	4	CO1
Q 4	How Docker containers are different from virtual machines in context of memory usage, performance and portability? Explain.	4	CO2
Q 5	Name and explain the commands which can be used to create Dockerfile.	4	CO2
SECTION B (4Qx10M= 40 Marks)			
Q 6	Explain briefly Docker Architecture with its associated components in detail along with its diagrammatical representation.	10	CO1
Q 7	What is Docker Compose? Mention its benefits and name the basic commands along with its functionalities used in Docker Compose. OR What is Docker Swarm? Mention its benefits and name the basic commands along with its functionalities used in Docker Swarm.	10	CO2
Q 8	Explain briefly Kubernetes Architecture with its associated components in detail along with its diagrammatical representation.	10	CO3
Q 9	What is Container orchestration? Where in the system stack does the container orchestration fit? Explain in detail.	10	CO4

SECTION-C
(2Qx20M=40 Marks)

Q 10	Compare IaaS, CaaS and PaaS in context of Container Orchestration. OR Define Bakery as a Foundation model for container images and microservices along with diagrammatical representation.	20	CO3
Q 11	Explain the implementation method of Continuous Integration (CI) and Continues Development (CD) in Docker Containers?	20	CO4