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END TERM EXAMINATION – May 2022

SEMESTER –VI

(B.Tech. CSE with Des Ops- 2019)

Subject Code: CDV 3006

Duration: 3 hours

Subject: Application Containerization

Max. Marks: 100

Instructions

- All Questions are compulsory
- The Question paper consists of 2 sections - Part A contains 10 questions of 2 marks each. Part B consists of 5 questions of 16 marks each.
- There is no overall choice. Only Part B question include internal choice.

PART – A

(2 * 10 = 20 Marks)

1. Explain how containers solve the problem of shipping different types of goods together and use this analogy to explain shipping off different application stacks.
2. Discuss the chroot system call.
3. Identify the journey of container technology.
4. What is the functionality of a hypervisor?
5. On what circumstances will you lose data stored in a container?
6. What are the basic requirements for the docker to run on any system?
7. Explain application performance monitoring.
8. What is openshift?
9. Explain about the Docker Swarm.
10. Name some tools to monitor the containers.

PART – B

(16 * 5 = 80 Marks)

11. a) What are environment in software industry? Discuss the different types of environment in software industry.

OR

b) How Docker use client-server architecture. Also, discuss the components of Docker and what role they play in the Docker lifecycle.

12. a) Discuss the various issues in the software industry.

OR

b) Explain virtualization and comparison with virtual machines.

13. a) Describe containerization platform, images and runtime.

OR

b) Explain FreeBSD Jails, Linux Containers (LXC) and Docker.

14. a) Discuss why the container orchestration is important with the help of a Case Study.

OR

b) Why we need orchestration to manage containers. Discuss that why everyone is moving to Microservice architecture and majorly containers?

15. a) Describe the Kubernetes and its architecture. Also, discuss the components of Kubernetes.

OR

b) Explain about AWS ECS with the help of its architecture.