

U.S.N.								
--------	--	--	--	--	--	--	--	--

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

February / March 2023 Semester End Main Examinations

Programme: B.E.

Semester: VII

Branch: Computer Science and Engineering

Duration: 3 hrs.

Course Code: 21CS7PECCT

Max Marks: 100

Course: Cloud Computing

Date: 04.03.2023

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

UNIT - I

1	a) Define Cloud Computing. List any six characteristics of cloud computing.	08
	b) List the monitoring service usages and metrics provided by cloud service providers.	04
	c) Demonstrate the usage of cloud-based services in the field of education.	08

UNIT - II

2	a) Define virtualization. With a neat diagram explain the need for virtualization.	08
	b) Bring out the differences between Full Virtualization and Para Virtualization.	06
	c) Highlight the drawbacks of conventional system used for cross platform portability. With a help of a neat diagram, briefly explain how it can overcome in HLL Virtual Machine environment system.	06

OR

3	a) Explain the working of KVM hypervisor with a neat diagram.	08
	b) Demonstrate the working of Xen hypervisor with a neat diagram.	08
	c) List the advantages and disadvantages of Virtual Machines.	04

UNIT - III

4	a) Illustrate with a neat diagram, the stack of six layers of cloud services and its providers.	06
	b) The cloud security is safeguarded by the gateway and firewalls while accessing private cloud. Justify the statement.	06
	c) Trust is a personal opinion, which is very subjective and often biased. Reputation is a public opinion, which is more objective and often relies on a large opinion aggregation process to evaluate. Justify if the cloud providers adopt any reputation system design options to address reputation systems for cloud services.	08

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

OR

5 a) Describe in detail any two data and software protection techniques. **10**

b) Justify how dynamic resource provisioning technique is used in overcoming the problems associated with static cloud resource provisioning policies. **10**

UNIT - IV

6 a) Explain the various components of Hadoop cluster with a neat diagram. **10**

b) Analyze and differentiate between the following: **10**

- (i) Capacity scheduler developed by Yahoo
- (ii) Fair scheduler developed by Facebook

UNIT - V

7 a) Highlight the differences between Dedicated Hosts, Virtual Machines and Docker. **10**

b) Draw the architecture of Kubernetes architecture diagram and explain the following Kubernetes concepts: **10**

- (i) Cluster (ii) Nodes (iii) Pods (iv) The master
