

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

Autonomous Institute Affiliated to VTU

February / March 2023 Semester End Main Examinations

Programme: B.E.

Branch: Computer Science and Engineering

Course Code: 21CS7PECCT

Course: Cloud Computing

Semester: VII

Duration: 3 hrs.

Max Marks: 100

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

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| 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

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| 6 | <p>a) Explain the various components of Hadoop cluster with a neat diagram.</p> <p>b) Analyze and differentiate between the following:</p> <p style="padding-left: 20px;">(i) Capacity scheduler developed by Yahoo</p> <p style="padding-left: 20px;">(ii) Fair scheduler developed by Facebook</p> | <p>10</p> <p>10</p> |
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UNIT - V

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| 7 | <p>a) Highlight the differences between Dedicated Hosts, Virtual Machines and Docker.</p> <p>b) Draw the architecture of Kubernetes architecture diagram and explain the following Kubernetes concepts:
 (i) Cluster (ii) Nodes (iii) Pods (iv) The master</p> | <p>10</p> <p>10</p> |
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