M.E. / M.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2024

Second Semester

M.E. - Computer Science and Engineering

(Common to Computer Science and Engineering (with Specialization in Networks))

20PCSPC203 - CLOUD COMPUTING TECHNOLOGIES

Regulations - 2020

Duration: 3 Hours   Max. Marks: 100

PART - A (10 × 2 = 20 Marks)
Answer ALL Questions

		Marks	K-Level	CO
1.	What is the role of Host OS and Guest OS in cloud computing?	2	K1	CO1
2.	Differentiate physical cluster and virtual cluster.	2	K2	CO1
3.	Mention the steps involved in the process of building the resource pool.	2	K1	CO2
4.	List the relative merits of virtualization at various levels.	2	K1	CO2
5.	Differentiate Cloud computing and Distributed computing.	2	K2	CO3
6.	Enumerate the benefits of using Cloud carrier.	2	K2	CO3
7.	Define Open stack.	2	K1	CO4
8.	Outline the functions of Job Tracker in Hadoop.	2	K2	CO4
9.	What is meant by Vulnerability assessment?	2	K2	CO6
10.	List the security issues in the cloud.	2	K1	CO6

PART - B (5 × 13 = 65 Marks)
Answer ALL Questions

			Marks	K-Level	CO
11.	a) i)	Discuss the architecture of a computer system before and after virtualization.	7	K2	CO1
	ii)	How would you describe virtualization implemented at different levels?	6	K2	CO1

OR

			Marks	K-Level	CO
	b)	Explain in detail about the taxonomy of Virtual Machines.	13	K2	CO1
12.	a)	Interpret in detail about the Virtualization of CPU, Memory and I/O with neat diagram.	13	K2	CO2

OR

			Marks	K-Level	CO
	b)	Illustrate the concepts of Full and Para virtualization with suitable examples.	13	K2	CO2
13.	a)	Enumerate the service and deployment models of a cloud computing environment and explain them with neat diagram.	13	K2	CO3

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create   **12723**

<div align="center">**OR**</div>

   b)   Demonstrate about the working process of Google App Engine.   *13 K2 CO3*

14.   a)   Write short notes on the cloud software environments Eucalyptus and Nimbus with neat diagram.   *13 K3 CO4*

<div align="center">**OR**</div>

   b)   Illustrate data flow in HDFS during file read/write operation with suitable diagrams.   *13 K3 CO4*

15.   a)   Apply the concept of cloud security in Infrastructure. Illustrate with an example.   *13 K3 CO6*

<div align="center">**OR**</div>

   b)   Identify the methods for providing data security and virtual machine security in the cloud and explain.   *13 K3 CO6*

<div align="center">**PART - C (1 × 15 = 15 Marks)**</div>

16.   a)   Identify how to set up a private cloud for an academic university using any one of the cloud environments and explain it with neat diagram.   *15 K3 CO5*

<div align="center">**OR**</div>

   b)   Interpret the HDFS concepts with suitable illustrations and develop a word count application with Hadoop Map Reduce programming model.   *15 K3 CO5*