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**M.E. / M.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2023**

Second Semester

**M.E. - Computer Science and Engineering**

**20PCSPC203 - CLOUD COMPUTING TECHNOLOGIES**

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

**PART - A (10 × 2 = 20 Marks)**

Answer ALL Questions

- |   | <i>Marks,<br/>K-Level, CO</i> |
|---|-------------------------------|
| 1. What is meant by binary translation?                             | <i>2,K1,CO1</i>               |
| 2. What approach would be used for live VM migration?               | <i>2,K1,CO1</i>               |
| 3. Mention the relative merits of virtualization at various levels. | <i>2,K1,CO2</i>               |
| 4. Differentiate full virtualization and para-virtualization.       | <i>2,K2,CO2</i>               |
| 5. List the main characteristics of cloud computing.                | <i>2,K1,CO3</i>               |
| 6. Differentiate service aggregation and service arbitrage.         | <i>2,K2,CO3</i>               |
| 7. Distinguish traditional RDBMS with Map Reduce.                   | <i>2,K2,CO4</i>               |
| 8. What is Open stack?  | <i>2,K1,CO4</i>               |
| 9. List the security challenges in cloud computing.                 | <i>2,K1,CO6</i>               |
| 10. What is meant by Trust Management?                              | <i>2,K1,CO6</i>               |

**PART - B (5 × 13 = 65 Marks)**

Answer ALL Questions

11. a) Discuss in detail about Virtual Machine taxonomy with a neat diagram. *13,K2,CO1*
- OR**
- b) (i) Define virtualization at OS level. List the pros and cons of OS level virtualization. *7,K2,CO1*  
(ii) Describe middleware support for virtualization. *6,K2,CO1*
12. a) Discuss in detail about Virtualization structure, Tools & Mechanisms. *13,K2,CO2*
- OR**
- b) Explain the Virtualization of CPU, Memory and I/O. *13,K2,CO2*
13. a) Discuss in detail about the Layered Cloud Architecture design with neat diagram. *13,K2,CO3*

**OR**

b) Describe service and deployment models of a cloud computing environment with illustrations. *13,K2,CO3*

14. a) Draw the structure of Nimbus and explain each of its components. *13,K2,CO4*

**OR**

b) Discuss in detail about the Hadoop framework. *13,K2,CO4*

15. a) Illustrate in detail about Cloud Infrastructure Security. *13,K3,CO6*

**OR**

b) Interpret in detail about the Identity Access Management and Trust management. *13,K3,CO6*

**PART - C (1 × 15 = 15 Marks)**

16. a) Elaborate with neat diagram the working of Map Reduce with an example. *15,K3,CO5*

**OR**

b) Illustrate the development of Online Mark Processing System using Google App Engine. *15,K3,CO5*