



P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Fourth Semester, Master of Computer Applications (MCA)

Semester End Examination; May / June - 2019

Cloud Computing

Time: 3 hrs

Max. Marks: 100

Note: Answer FIVE full questions, selecting ONE full question from each unit.

UNIT - I

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| 1 a. | Compare the three cloud computing delivery models SaaS, PaaS and IaaS from the point of view of application developers and users. Analyze the differences between PaaS and IaaS. | 12 |
| | b. List and explain the challenges faced by cloud computing. | 8 |
| 2 a. | Illustrate the cloud computing services offered by Google. | 10 |
| | b. Explain Eucalyptus cloud computing platform. | 6 |
| | c. Write a short note on SLA. | 4 |

UNIT - II

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| 3 a. | What is Task? How it is characterized? Explain its attributes. | 10 |
| | b. Explain the various workflow patterns. | 10 |
| 4 a. | Explain the Zookeeper coordination service model. List the operations of it. | 12 |
| | b. Illustrate the Map-Reduce programming model. | 8 |

UNIT - III

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| 5 a. | Define Virtualization. Illustrate the interfaces between layers in computer system. | 8 |
| | b. What is the importance of virtual machine? Explain its types. | 12 |
| 6 a. | Explain the important aspects of the Xen Para virtualization for virtual memory management, CPU multiplexing and I/O device management. | 12 |
| | b. What is virtual machine monitor? Explain. | 8 |

UNIT - IV

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| 7 a. | Explain policies and mechanisms for resource management. | 12 |
| | b. Explain the structure of an optimal controller. | 8 |
| 8 a. | Explain pricing and allocation algorithms. | 10 |
| | b. Explain start time fair queuing algorithm. | 10 |

UNIT - V

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| 9 a. | What is SAN? Illustrate the working of SAN. | 10 |
| | b. Explain how interactions are happen in NFS client server model? | 10 |
| 10 a. | With neat diagram, explain the Hadoop cluster using HDFS. | 10 |
| | b. Write a short notes on : | |
| | i) NoSQL databases | 10 |
| | ii) Cloud security risks | |