

3509

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- (b) Explain how Map-Reduce works in Hadoop with an example. (8)

(200)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 3509 J
Unique Paper Code : 6202453601
Name of the Paper : Cloud Computing
Name of the Course : B.Voc. (H) Software Development
Semester : VI
Duration : 3 Hours Maximum Marks : 90

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. The paper has two sections. Section A is compulsory. Each question is 5 marks.
3. Attempt any four questions from **Section B**. Each question is of 15 marks.

Section A

1. (a) Explain the significance of trends in computing and how they have contributed to the evolution of cloud computing. (5)
(b) Describe the characteristics of cloud computing that distinguish it from traditional distributed systems. (5)

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- (c) What are the different levels of SLA in cloud services? Give examples to justify their role in service delivery. (5)
- (d) What is Hypervisors? Define types of Hypervisors in Cloud Computing. (5)
- (e) Describe disaster recovery planning and its key metrics. (5)
- (f) Write short notes on the following: (5)
 - (i) MS windows Azure
 - (ii) Google Docs as a Cloud Service

Section B

- 2. (a) Explain the application development approach in cloud computing versus the traditional approach. What are the key properties of cloud computing? (8)
- (b) Explain cloud deployment models with their advantages and disadvantages. (7)
- 3. (a) Define the components of SOA (Service Oriented Architecture) and its characteristics. (8)

- (b) Explain the major challenges organizations face when managing multi-cloud environments. Give suitable examples and discuss possible strategies to address these challenges. (7)
- 4. (a) Explain cloud reference model with architecture. (7)
- (b) Define Virtualization. Explain types of virtualization relevant to cloud computing. (8)
- 5. (a) Explain security threats at Network, Host, and Application levels in the Cloud. (7)
- (b) Describe Encryption techniques used for securing data at rest and in transit. How do cloud providers ensure compliance with data security regulations? (8)
- 6. (a) Described the Data Life-Cycle in the cloud and identified key privacy risks? (7)
- (b) Explain the importance of risk management and compliance in cloud computing. What are the key risks associated with cloud adoption? (8)
- 7. (a) Compare the key features of Amazon EC2 and Google Cloud Storage. (7)