

[Time:2.30 Hrs]

[Marks:75]

Please check whether you have got the right question paper.

- N.B:**
1. All question are compulsory.
 2. Figures to the right indicate full marks.

- Q.1 Attempt any four of the following: 20**
- a. Define cloud computing and explain its significance in modern IT infrastructure.
 - b. What are the advantages of using IaaS for businesses?
 - c. Explain the significance of social media platforms in the context of Web 2.0.
 - d. Explain the role of hypervisors in cloud computing.
 - e. What are the different types of parallelism in computing?
 - f. Explain the concept of "pay-as-you-go" pricing in cloud services.
- Q.2 Attempt any four of the following: 20**
- a. Define virtualization in the context of cloud computing.
 - b. Discuss the relationship between virtualization and cloud service models.
 - c. Discuss the role of virtualization in enhancing disaster recovery processes.
 - d. Discuss the challenges related to data security and privacy in cloud computing.
 - e. What are the challenges in achieving interoperability between different cloud platforms?
 - f. What are the potential security risks associated with virtualization?
- Q.3 Attempt any four of the following: 20**
- a. Explain the modular architecture of OpenStack and its core components.
 - b. Explain the steps to create and manage networks within OpenStack.
 - c. What is Cinder, and how does it provide block storage in OpenStack?
 - d. Discuss the integration of Cinder with backend storage solutions.
 - e. Describe the steps to configure and deploy block storage services.
 - f. Discuss the architecture of over and its components.
- Q.4 Attempt any three of the following: 15**
- a. Explain the concept of virtualization in IaaS.
 - b. What is the cloud reference model, and why is it important?
 - c. What is the difference between full virtualization and para-virtualization?
 - d. What is Kernel-based Virtual Machine (KVM), and how does it function?
 - e. What is the role of the controller node in an OpenStack deployment?
 - f. Explain the controller node.
