

COURSE CODE(CREDITS): L-20B1WCI53 (2)

MAX. MARKS: 15

COURSE NAME: Cloud Computing: Concepts, Technology & Architecture

COURSE INSTRUCTORS: Aayush Sharma and Ms. Nitika Rattan

MAX. TIME: 1 Hour

*Note: (a) All questions are compulsory.*

*(b) Marks are indicated against each question in square brackets.*

*(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems*

- Q1. Describe the NIST Cloud Computing Architecture. How do the defined roles and Boundaries help in understanding cloud service models and deployment models? [Marks: 3] [CO1]
- Q2. What are the key risks and challenges associated with cloud computing, and how can they be mitigated? Provide examples related to data security, compliance, and service availability. [Marks: 3] [CO1]
- Q3. Explain the differences between Cluster Computing and Grid Computing. How do these concepts relate to the characteristics of cloud computing? [Marks: 3] [CO1] [CO4]
- Q4. Explain Virtualization? Why is virtualization needed in cloud computing? Explain virtualization of a simple cloud system using diagram. [Marks: 3] [CO1] [CO2]
- Q5. A company is considering moving to the cloud. The on-premise infrastructure costs Rs.500,000 to set up and Rs.150,000 annually for maintenance. The cloud service charges Rs.0.10 per hour for compute resources. If the company needs 10,000 hours of compute time per year, how much would they save annually by moving to the cloud? [Marks: 3] [CO1]