

3/09

11:30 AM

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2026

B.Tech-V Semester (CSE)

COURSE CODE (CREDITS): 20B1WCI532 (2)

MAX. MARKS: 15

COURSE NAME: CLOUD COMPUTING: CONCEPTS, TECHNOLOGY & ARCHITECTURE

COURSE INSTRUCTOR: Ms. Nitika

MAX. TIME: 1 Hour

Note: (a) All questions are compulsory.

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

(c) Use of calculator is not allowed

Q.No	Question	CO	Marks
Q1	Define cloud computing and briefly explain any four essential characteristics of cloud computing as per the NIST definition.	CO1	2
Q2	Explain the concept of Service-Oriented Architecture (SOA) and discuss its relevance as a cloud enabling technology.	CO1	3
Q3	Differentiate between the four cloud deployment models (Public, Private, Community, and Hybrid) with one suitable example of each.	CO1	4
Q4	An organization has 20 physical servers, each currently running at only 15% average CPU utilization. After virtualization, each new physical host can safely support workloads consolidated up to 90% utilization. Calculate the minimum number of physical hosts required after server consolidation.	CO1	4
Q5	Explain the role of the Monitoring Agent, Resource Agent, and Polling Agent in cloud infrastructure management, and discuss why continuous monitoring is important in a cloud datacenter.	CO2	2