Tribhuvan University
Faculty of Humanities & Social Sciences
OFFICE OF THE DEAN
2025

Bachelor in Computer Applications
Course Title: Cloud Computing
Code No: CACS 402
Semester: VII

Full Marks: 60
Pass Marks: 24
Time: 3 hours

Candidates are required to answer the questions in their own words as far as possible.

Group B

Attempt any SIX questions. [6×5 = 30]

2. Explain the key factors that organizations should consider before adopting cloud computing. [5]

3. Explain the concept of Cloud design and implementation using Service-Oriented Architecture (SOA). What are the benefits of adopting SOA in Cloud computing? [3+2]

4. Explain the benefits of virtualization in cloud computing. How does it improve resource utilization and reduce operational costs? [2+3]

5. How does the Map-Reduce model work, and what are its advantages over traditional methods for processing large data sets? [3+2]

6. Describe the key strategies for ensuring data security in a cloud environment? [5]

7. Describe the role of cloud computing in business and consumer applications. How does cloud technology benefit businesses in terms of scalability and cost-effectiveness? [2+3]

8. How do cloud computing platforms support scientific applications? Discuss the benefits of using the cloud for high-performance computing (HPC) in scientific research. [2+3]

Group C

Attempt any TWO questions. [2×10 = 20]

9. What is thread? Describe how thread programming is done in cloud. Discuss how virtualization is transforming the IT industry and its significance in cloud computing. [1+4+5]

10. What are the critical aspects of application security in the cloud? Explain the techniques used to secure applications hosted in the cloud and prevent potential vulnerabilities from exploitation. [3+7]

11. What is a Community Cloud? Discuss how it is different from Public and Private Clouds and explain the situations where Community Cloud deployment is beneficial. [1+9]

- assessment
- planning
- adoptation
- optimization
- computation fast