

Tribhuvan University
Institute of Science and Technology
2081
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Bachelor Level / Fourth Year/ Eighth Semester/ Science
Computer Science and Information Technology (CSC467)
(Introduction to Cloud Computing)
(NEW COURSE)

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

Candidates are required to give their answers in their own words as far as practicable.
The figures in the margin indicate full marks.

Section A

Long answer questions.

Attempt any TWO questions.

[2×10=20]

1. Define cloud computing service. Describe each of PaaS, SaaS and IaaS with suitable examples. [2+8]
2. What is Map Reduce? Using an example, discuss how Map function, Shuffling and sorting and Reduce function work in Map Reduce. [2+8]
3. Describe the architecture of Aneka. Discuss how application services, foundation services and fabric services are organized in Aneka. [5+5]

Section B

Short answer questions.

Attempt any EIGHT questions.

[8×5=40]

4. Explain the properties of cloud computing [5]
5. What are the challenges while adapting cloud computing environment? [5]
6. When do organizations have to adapt hybrid and community cloud deployment models? [5]
7. How and why cloud applications are designed using loosely coupled components? [5]
8. Discuss the various types of virtualizations. [5]
9. Describe the cloud security threat issues. [5]
10. How security monitoring is done in cloud? [5]
11. What are the various security mechanisms adapted to secure cloud environment. [5]
12. Describe the various scientific applications of cloud computing. [5]