



CBCS SCHEME

18CS643

Sixth Semester B.E. Degree Examination, June/July 2024 Cloud Computing and Its Applications

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain bird's view of cloud computing with a neat diagram. (06 Marks)
- b. What are the characteristics and benefits of cloud computing with respect to CSC and CSP? (06 Marks)
- c. Mention and explain cloud services provided by 4 different computing platforms. (08 Marks)

OR

- 2 a. With neat diagram, explain taxonomy of virtualization techniques. (08 Marks)
- b. With neat diagram, explain Microsoft Hyper V architecture. (08 Marks)
- c. Explain infrastructure management in cloud computing with respect to Hyper V. (04 Marks)

Module-2

- 3 a. Explain IaaS reference implementation with a neat diagram. (08 Marks)
- b. Explain options to implement private clouds with a neat diagram. (08 Marks)
- c. Who are the candidate rectorors for community cloud? Explain how they are related to cloud. (04 Marks)

OR

- 4 a. Explain Aneka Framework overview with a neat diagram. (10 Marks)
- b. Explain logical organization of Aneka clouds with a neat diagram. (10 Marks)

Module-3

- 5 a. What is domain decomposition? Explain domain decomposition technique for parallel computation by taking matrix multiplication example in detail. (10 Marks)
- b. What is context switching? Explain the relationship between thread and processes with a neat diagram. (10 Marks)

OR

- 6 a. List the frameworks used to support the execution of task-based applications. Explain in detail. (08 Marks)
- b. With a neat diagram explain abstract model of a workflow system. Briefly explain technologies used for designing workflow based applications. (08 Marks)
- c. Mention and explain different types of parameters specified in parameter sweep applications. (04 Marks)

Module-4

- 7 a. What is the role of Data grid in the evolution of data intensive computing? Explain with reference scenario. (10 Marks)
- b. Explain how below mentioned file systems provide performance and storage for clouds:
i) Lustre ii) GPFS (iii) GFS (iv) Sector (v) Amazon S3 (10 Marks)

OR

- 8 a. With neat diagram explain Google MapReduce infrastructure overview. (08 Marks)
b. Describe the alternatives to MapReduce. (06 Marks)
c. With neat diagram explain Aneka MapReduce infrastructure. (06 Marks)

Module-5

- 9 a. Discuss services used to develop applications in Google AppEngine. (10 Marks)
b. Explain Microsoft Azure platform architecture with a neat diagram. (10 Marks)

OR

- 10 a. Describe how cloud computing can be used to analyze data for cancer diagnostics using gene expression with a neat diagram. (10 Marks)
b. Describe EyeOS architecture with neat diagram. (10 Marks)

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