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MCA

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CA213(R20)

II MCA I SEMESTER DEGREE EXAMINATION
APRIL-2022
(Regular)

CLOUD COMPUTING

Time: Three hours

Maximum Marks: 60

Answer Question No.1 compulsorily ($6 \times 2 = 12$ Marks)

Answer one question from each unit ($4 \times 12 = 48$ Marks)

1. Answer the following:

- (a) What is utility computing?
- (b) Discuss the most important model for message-based communication.
- (c) Illustrate the disadvantages of virtualization.
- (d) Define multitasking.
- (e) Identify the characterizing features of so-called Big Data.
- (f) Describe the key features of Google Apps.

UNIT – I

2. (a) Define cloud computing and identify its core features. (6M)
(b) How cloud development is different from traditional software development? (6M)

(OR)

3. (a) List the software architectural styles. (6M)
(b) What is service-oriented computing? (6M)

UNIT – II

4. (a) Discuss the architecture of Hyper-V. Discuss its use in cloud computing. (6M)
(b) Identify the challenges in cloud computing. (6M)

(OR)

5. (a) Classify the types of clouds. (6M)
(b) Elaborate the logical organization of an Aneka Cloud. (6M)

UNIT – III

6. (a) What is multiprocessing? Describe the different techniques for implementing multiprocessing. (6M)
(b) Design a parallel implementation for the tabulation of the Gaussian functions by using simple threads and then convert it to Aneka threads. (6M)

(OR)

7. (a) Explain the components of the Scheduling and Execution Services that constitute the runtime infrastructure supporting MapReduce. (6M)
(b) Describe the characteristics of Amazon Simple Storage Service (S3). (6M)

UNIT – IV

8. (a) Introduce and present the services provided by AWS to support connectivity among applications. (6M)
(b) Demonstrate the architecture of SQL Azure. (6M)

(OR)

9. (a) Illustrate the advantages of cloud technologies for social networking applications. (6M)
(b) Summarize the characteristics of the RESERVOIR project. (6M)

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(b) What is fragmentation and how we can overcome it in android application?

ADD Note

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CA213 (R21)

**MCA, II YEAR I SEMESTER DEGREE EXAMINATION
DECEMBER-2023
(Regular & Supplementary)**

CLOUD COMPUTING

Time: Three hours

Maximum Marks: 60

Answer one question from each unit ($5 \times 12 = 60$ Marks)

UNIT – I

1. (a) Provide a brief characterization of a distributed system. (6M)
- (b) Briefly summarize the cloud computing reference model. (6M)

(OR)

2. (a) Describe the different levels of parallelism that can be obtained in a computing system. (6M)
- (b) List the major categories of parallel computing systems. (6M)

UNIT – II

3. (a) Discuss classification or taxonomy of virtualization at different levels. (6M)
- (b) What are the benefits of virtualization in the context of cloud computing? (6M)

(OR)

4. (a) What are the fundamental components introduced in the cloud reference model? (6M)
- (b) Describe the different categories of options available in a PaaS market. (6M)

UNIT – III

5. (a) Describe in a few words the main characteristics of Aneka. (6M)
(b) Discuss the logical organization of an Aneka cloud. (6M)

(OR)

6. (a) Does parallelism of applications depend on parallel hardware architectures? Justify. (6M)
(b) How does communication impact design and the implementation of parallel or distributed algorithms? (6M)

UNIT – IV

7. (a) List some of the most popular frameworks for task computing. (6M)
(b) Discuss the differences between static and dynamic task submission. (6M)

(OR)

8. (a) Describe the reference model of a workflow management system. (6M)
(b) Describe the kinds of problems MapReduce can solve and give some real examples. (6M)

UNIT – V

9. (a) What are the differences between Amazon SimpleDB and Amazon RDS? (6M)
(b) Discuss the storage services provided by Windows Azure. (6M)

(OR)

10. (a) Describe an application of cloud computing technology in the field of biology. (6M)
(b) Describe some examples of CRM and ERP implementations based on cloud computing technologies. (6M)

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CA213 (R21)

MCA, II YEAR I SEMESTER DEGREE EXAMINATION
APRIL-2023
(Regular)

CLOUD COMPUTING

Time: Three hours

Maximum Marks: 60

Answer one question from each unit ($5 \times 12 = 60$ Marks)

UNIT – I

1. (a) Explain the technologies that the cloud computing relies on. (6M)
- (b) Describe the characterization of distributed systems. (6M)

(OR)

2. (a) Describe the different levels of parallelism that can be obtained in a computing system. (6M)
- (b) Discuss the most important model for message-based communication. (6M)

UNIT – II

3. (a) Discuss the reference model of full virtualization. (6M)
- (b) Discuss the architecture of Hyper-V and discuss its use in cloud computing. (6M)

(OR)

4. (a) Discuss the importance of cloud reference model. (6M)
- (b) Explain the types of cloud with relevant examples. (6M)

UNIT – III

5. (a) Explain the resource provisioning capability of Aneka container. (6M)
(b) Discuss the process involved in building Aneka cloud. (6M)

(OR)

6. (a) Describe the relation between a process and thread. (6M)
(b) Discuss the architecture of multicore system. (6M)

UNIT – IV

7. (a) Explain the major components of task programming model. (6M)
(b) Discuss the facilities and the general architecture provided by Aneka for the movement of data for task-based applications. (6M)

(OR)

8. (a) Illustrate the importance of Data-intensive computing. (6M)
(b) Explain the technologies used for Data-intensive computing. (6M)

UNIT – V

9. (a) Describe Amazon EC2 and its basic features. (6M)
(b) Discuss the compute services offered by Google AppEngine. (6M)

(OR)

10. (a) Describe how cloud computing technology can be applied to scientific applications. (6M)
(b) Illustrate the need for third-party cloud services with examples. (6M)

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