M.C.A. DEGREE EXAMINATION, FEBRUARY/MARCH 2018

Sixth Semester

DMC 7601 — CLOUD SERVICES

(Regulations 2013)

Time : Three hours
Maximum : 100 marks

Answer ALL questions.

PART A — (10 \times 2 = 20 marks)

1. List down the properties of cloud computing.
2. State the advantages of cloud service deployment.
3. Define virtualization.
4. How will you implement storage virtualization at the server level?
5. What is cloud provisioning?
6. List down the risks from multi-tenancy with respect to various cloud environments.
7. What are the issues in parallel and distributed paradigms?
8. Define MapReduce computation.
9. What are the phases in data security life cycle?
10. Write down the risks of storing data in a cloud.

PART B — (5 \times 13 = 65 marks)

11. (a) Explain the service models of distributed and cloud computing in detail. (13)

Or

(b) (i) Briefly discuss the NIST cloud computing reference architecture. (9)
(ii) List the Pros and Cons of cloud computing. (4)
12. (a) Explain the different levels of virtualization implementation. (13)

Or

(b) Write short notes on
(i) Desktop virtualization. (7)
(ii) Server virtualization. (6)

13. (a) Discuss different methods of resource provisioning and platform deployment in detail with a neat diagram. (13)

Or

(b) Explain the various design challenges for effective cloud computing environment. (13)

14. (a) Explain the architecture and working principle of MapReduce. (13)

Or

(b) With a neat diagram, explain the architecture of OpenStack system. (13)

15. (a) (i) Write a note on security challenges in cloud computing. (7)
(ii) Write short notes on risk management in cloud. (6)

Or

(b) Discuss briefly
(i) Security governance. (7)
(ii) Security monitoring. (6)

PART C — (1 × 15 = 15 marks)

16. (a) Explain the Hadoop distributed file system architecture with diagrammatic illustration. (15)

Or

(b) Discuss with example the elastic utility computing architecture for linking your programs to useful systems. (EUCALYPTUS) (15)
M.C.A. DEGREE EXAMINATION, AUGUST/SEPTEMBER 2017

Sixth Semester

DMC 7601 — CLOUD SERVICES

(Regulations 2013)

Time : Three hours
Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is cloud computing?
3. What are the features of virtualization?
4. Write a short note about desktop virtualization.
5. What is resource provisioning?
6. What are the design challenges in cloud architecture?
7. What is the use of Google file system?
8. What are the mapping applications?
10. What is data security?

PART B — (5 × 13 = 65 marks)

11. (a) (i) Explain the system models for distributed and cloud computing. (7)
    (ii) Compare the characteristics of PaaS and SaaS. (6)
    
    Or

   (b) (i) Compare: Public, Private and Hybrid clouds. (7)
    (ii) Explain the NIST cloud computing reference architecture. (6)
12.  (a)  (i) Explain the virtualization structures.  
    (ii) How to virtualize CPU? Explain.  

    Or

    (b)  (i) Describe the different types of virtualization.  
    (ii) What is server virtualization? Explain parallel processing.  

13.  (a)  (i) How to manage resources in inter cloud? Explain.  
    (ii) Write a note about global exchange of cloud resources.  

    Or

    (b) Explain the architectural design of compute and storage clouds.  

14.  (a)  (i) Explain the Iterative MapReduce programming model using Twister.  
    (ii) Compare: Parallel and Distributed Programming paradigms.  

    Or

    (b) Write a note about  
        (i) Google App Engine  
        (ii) Open Nebula.  

15.  (a)  (i) Explain the security architecture design framework.  
    (ii) Write a note on Virtual Machine security.  

    Or

    (b)  (i) What are the cloud security challenges? Explain.  
    (ii) What is security monitoring and incident response? Discuss.  

    PART C — (1 × 15 = 15 marks)

16.  (a) Explain the layered cloud architecture development with its design challenges.  

    Or

    (b) Discuss about Amazon AWS with cloud software environments.  

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M.C.A. DEGREE EXAMINATION, FEBRUARY/MARCH 2017.

Sixth Semester

DMC 7601 — CLOUD SERVICES

(Regulations 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define distributed computing.
2. State the difference between a private cloud and public cloud.
3. List the advantages of virtual machines.
4. Define desktop virtualization.
5. What type of users benefit most from what cloud computing offers?
6. Define resource provisioning.
7. What is a distributed file system?
8. How MapReduce framework executes user jobs?
9. List any two cloud security challenges.
10. Why multi-tenancy is key to successful and sustainable software-as-a-service (SaaS)?

PART B — (5 × 16 = 80 marks)

11. (a) (i) What is cloud computing? What cloud computing isn’t? Discuss. (8)
    (ii) “Cloud computing has as its antecedents both client/server computing and peer-to-peer distributed computing”. Discuss (8)

    Or
    
(b) (i) List the pros and cons of cloud computing. (4)
    (ii) Explain with diagrammatic illustration the NIST cloud computing reference architecture. (12)
12. (a) What is virtualization? Discuss the evolution of virtualization. (16)

Or

(b) Discuss with examples the impact of virtualization on cloud services and Information technology infrastructure. (16)

13. (a) List and discuss the principles for designing private, public and hybrid clouds. (16)

Or

(b) List and discuss the issues related to global exchange of cloud resources. (16)

14. (a) Explain the Hadoop distributed file system architecture with diagrammatic illustration. (16)

Or

(b) Discuss with example the elastic utility computing architecture for linking your programs to useful systems (EUCALYPTUS). (16)

15. (a) Are clouds secured? List and discuss the security and privacy implications of cloud computing. (16)

Or

(b) List and discuss virtualization and cloud computing security best practices. (16)