Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code : 40403

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2021.

Seventh/Eighth Semester

Computer Science and Engineering

CS 8791 — CLOUD COMPUTING

(Common to Computer and Communication Engineering/Information Technology)

(Regulations 2017)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define Cloud computing.

2. Depict the importance of on-demand provisioning in e-commerce applications.

3. Define the role and benefit of virtualization in cloud.

4. What is disaster recovery?

5. What is a Hybrid cloud?

6. Outline the key challenges associated in the process of storing images in cloud.

7. What is Inter-cloud?

8. Name any two security challenges associated with cloud in today's digital scenario.

9. What is Hadoop?

10. Write a note on Federated services.

PART B — (5 × 13 = 65 marks)

11. (a) Formulate stage-by-stage evolution of cloud with neat sketch and formulate any three benefits, drawbacks achieved by it in the banking and insurance sectors.

Or

(b) Discuss the underlying parallel and distributed computing principles adopted by cloud in the IT sector and brief the drawbacks incurred.

12. (a) Outline the various levels of virtualization with an example for each category.

Or

(b) Outline the problems in virtualizing in CPU, I/O and memory devices and suggest how it could be overridden for efficient utilization of cloud services.

13. (a) Describe the storage structure of S3 bucket with neat sketch and write rules in order to make the bucket available for public access.

Or

(b) Outline the various deployment models of cloud with neat sketch and identify which among them could be applied to formulate cloud structure for a small firm.

14. (a) Represent the structure of inter-cloud resource management and explain why two or more clouds need to interact with each other. Provide an example for the same.

Or

(b) What is IAM and detail the segregation roles carried out by IAM when services of multiple organizations are maintained within the same geographical location?

15. (a) Detail the structure of Openstack and explain each of its components.

Or

(b) Write detailed steps to set the google app engine environment for executing any program of your choice.

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PART C — (1 × 15 = 15 marks)

16. (a) As a data center administrator, you are responsible to carry out the maintenance, operations, infrastructure design and management. If a primary computer system fails in the data center, elaborate the steps that must be carried out to overcome the failure. illustrate the same with a neat sketch.

Or

(b) Elaborate the working of MapReduce with an example.

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Question Paper Code: X10327

B.E./B.Tech. DEGREE EXAMINATIONS NOVEMBER/DECEMBER 2020

Seventh Semester

Information Technology

CS8791 – CLOUD COMPUTING

(Common to Computer Science and Engineering)

(Regulations 2017)

Time : 3 Hours   Answer ALL Questions   Max. Marks: 100

PART-A (10 x 2 = 20 Marks)

1. List the main characteristics of cloud computing

2. Illustrate the virtual appliances in cloud computing.

3. Differentiate full virtualization and para-virtualization

4. Outline the requirements of VMM.

5. Differentiate Public cloud and Private cloud.

6. Summarize the benefits and drawbacks of using "Platform as a Service".

7. Point out the layers in security architecture design.

8. Identify the uses of application security.

9. Outline the main services that are offered by AWS.

10. Identify the development technologies currently supported by AppEngine.

Part – B (5 x 13 = 65 Marks)

11. a) Explain the following challenges in cloud.
     i) Security.   (5)
     ii) Data lock-in and Standardization.   (5)
     iii) Fault tolerance and Disaster recovery.   (3)

OR

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b) Outline the computing platforms and technologies for the development of cloud computing applications. (13)

12. a) Explain the different phenomenon that has gained an interest towards virtualization technologies. (13)

OR

b) Explain about Virtualization for Linux and Windows and NT Platform. Design the process of Live Migration of VM from one host to another. (13)

13. a) Explain the various Layered Cloud Architectural Development design for effective cloud computing environment. (13)

OR

b) Demonstrate the architectural design of compute and storage clouds. (13)

14. a) Describe the Secure Software Development Life Cycle with neat diagram. (13)

OR

b) Analyze the methods for providing data security and virtual machine security in cloud. (13)

15. a) i. Illustrate the functional Modules of GAE (6)

 ii. Discuss in detail about GAE Applications (7)

OR

b) List the four levels of cloud federation and explain in detail about the four levels of federation levels. (13)

PART C (1 X 15 = 15 Marks)

16. a) Compare and Contrast the Key privacy issues in Cloud and explain the steps to overcome the issues with necessary examples. (15)

OR

b) Combine the role of a distributed file system in a job execution environment such as MapReduce in a large-scale cloud system and explain in detail with suitable illustrations. (15)

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