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Question Paper Code : 40436

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2024.

Fifth/Sixth Semester

Computer Science and Engineering

CCS 335 — CLOUD COMPUTING

(Common to : Computer Science and Design/Computer Science and Engineering (Artificial Intelligence and Machine Learning)/Computer Science and Engineering (Cyber Security)/Computer and Communication Engineering/Artificial Intelligence and Data Science/Computer Science and Business Systems/Information Technology)

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define distributed computing.
2. Outline the difference between a public cloud and a private cloud.
3. Define a virtual machine.
4. What is a cloud hypervisor?
5. Define a virtual cluster.
6. What is a Docker in cloud computing?
7. Outline elasticity in a cloud computing environment.
8. What is Eucalyptus?
9. Name any two security attacks in a cloud computing environment.
10. Write any two challenges of IAM.

PART B — (5 × 13 = 65 marks)

11. (a) What is cloud computing? Outline the NIST cloud computing reference architecture with a diagram.

Or

- (b) Outline Infrastructure as a Service model, Platform as a Service model and Software as a Service model with an example.
12. (a) What is virtualization? Present an outline of the implementation levels of virtualization.

Or

- (b) Outline virtualization of CPU and I/O devices with an example.
13. (a) Outline desktop virtualization, network virtualization and storage virtualization with an example.

Or

- (b) Outline the components of a Docker with a diagram.
14. (a) Outline the Google App Engine platform for Platform as a Service with a diagram.

Or

- (b) What is OpenStack? How is OpenStack used in a cloud computing environment? What are the components of OpenStack? Outline.
15. (a) Present an outline on data privacy and security concerns in a cloud computing environment with examples.

Or

- (b) What is Identity and Access Management (IAM)? Outline the IAM architecture.

PART C — (1 × 15 = 15 marks)

16. (a) Present an architectural design for a hybrid cloud. State the functional requirements you are considering.

Or

- (b) Present a framework for security in a cloud computing environment. State the requirements you are considering.
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