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**Question Paper Code : 80454**

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2024.

Sixth/Seventh/Eighth Semester

Computer Science and Engineering

CS 8791 – CLOUD COMPUTING

(Common to: Computer and Communication Engineering/Artificial Intelligence and Data Science/Computer Science and Business Systems/Information Technology)

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. “Clouds must allow self-service access” – How?
2. What is utility computing?
3. “Web services is the most suitable technology choice for SOA” – Justify
4. What is publish-and-subscribe message model?
5. When a consumer requests services from provider, what is the role played by the broker and auditor?
6. What is Market-Oriented Cloud Architecture?
7. Differentiate between over provisioning and under provisioning.
8. What is the purpose of Open ID?
9. A datanode has failed. How will the Name Node know about this?
10. What is the purpose of Federation in cloud?

PART B — (5 × 13 = 65 marks)

11. (a) Elaborate on the characteristics of a cloud environment. Frame a definition of cloud based on these characteristics.

Or

- (b) (i) Elaborate on the architectural styles on parallel and distributed systems. (6)

- (ii) Compare and contrast parallel and distributed architectures. (7)

12. (a) What is virtualization? List its advantages. Tabulate a comparison on the implementation of virtualization at different levels?

Or

- (b) How is I/O virtualized in cloud environment? Elaborate.

13. (a) Discuss the type of cloud service along with its features provided by Google DOCS with illustrations.

Or

- (b) Explain the type of service provided by S3 in detail.

14. (a) What is intergrid? How is resource allocation done using IGG? Illustrate

Or

- (b) List the challenges for VM security. Elaborate on the approaches to achieve VM security.

15. (a) What is federated cloud? Discuss its architecture and levels of federation.

Or

- (b) Illustrate the architecture of openstack with the functionality of various components

PART C — (1 × 15 = 15 marks)

16. (a) Illustrate the working of Map Reduce Programming Model by considering the count of characters in the following input strings "A B R", "C C R", "A C B".

Or

- (b) XYZs primary mission is to help people hear and be heard. Objectives include:
- (i) Provide informational and personal support for people with hearing problems.
  - (ii) Create a channel to interact with the company.
  - (iii) Build and maintain lifetime relationships with the people who use its implants every where in the world.
  - (iv) Connect people with hearing problems with each other to share their experiences
  - (v) Connect people with hearing problems to doctor's

What type of deployment model for cloud would XYZ prefer? Give your reasons. Illustrate the architecture of your solution.

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