



B.TECH DEGREE EXAMINATIONS: APRIL / MAY 2023

(Regulation 2018)

Fifth Semester

ARTIFICIAL INTELLIGENCE & DATA SCIENCE

U18AII5201: Cloud Architecture

COURSE OUTCOMES

CO1: Analyze the main concepts, key technologies, strengths, and limitations of cloud

CO2: Analyze and understand various queuing models

CO3: To understand and use the architecture of compute and storage cloud, service, and delivery models.

CO4: Apply the core issues of cloud computing such as resource management and security

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

(Answer not more than 40 words)

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|--|-----|-------------------|
| 1. List the uses of Cloud Computing. | CO1 | [K ₁] |
| 2. Distinguish between Parallel and Distributed Computing. | CO1 | [K ₂] |
| 3. Outline the Service-Oriented Architecture (SOA). | CO2 | [K ₂] |
| 4. Compare REST Vs Systems of Systems. | CO2 | [K ₁] |
| 5. What is the role of NIST in cloud computing? | CO3 | [K ₁] |
| 6. List the advantages of cloud storage. | CO3 | [K ₂] |
| 7. Identify the challenges in Cloud Security. | CO4 | [K ₂] |
| 8. List some of the key features and functionalities of Virtual Box. | CO4 | [K ₁] |
| 9. What is ballooning in memory management? | CO2 | [K ₁] |
| 10. Outline MapReduce. | CO4 | [K ₁] |

Answer any FIVE Questions:-

PART B (5 x 16 = 80 Marks)

(Answer not more than 400 words)

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|---|---|-----|-------------------|
| 11. a) Discuss Cloud Characteristics. | 8 | CO1 | [K ₃] |
| b) Illustrate the benefits and challenges of Elasticity in Cloud. | 8 | CO1 | [K ₂] |
| 12. a) Classify the various Types of Virtualizations. | 8 | CO1 | [K ₃] |
| b) Importance of Web Services in the Cloud. | 8 | CO2 | [K ₃] |

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|-----|----|---|---|-----|-------------------|
| 13. | a) | Explain in detail - Public, Private and Hybrid Clouds. | 8 | CO3 | [K ₂] |
| | b) | Illustrate about the S3. | 8 | CO3 | [K ₂] |
| 14. | a) | How can virtualization enhance disaster recovery? Explain. | 8 | CO2 | [K ₂] |
| | b) | Identify and explain about the various implementation levels of virtualization. | 8 | CO2 | [K ₂] |
| 15. | a) | Discuss Layered Cloud Architecture Design. | 8 | CO3 | [K ₃] |
| | b) | Explain the various methods of Resource Provisioning and challenges in it. | 8 | CO3 | [K ₂] |
| 16. | a) | List the importance of the OpenStack Federation Services. Explain. | 8 | CO4 | [K ₂] |
| | b) | Elaborate about the challenges in architectural design. | 8 | CO4 | [K ₃] |
