



B.E DEGREE EXAMINATIONS: NOV/DEC 2022

(Regulation 2018)

Fifth Semester

INFORMATION SCIENCE AND ENGINEERING

U18ISE0006: Cloud Architecture and Computing

COURSE OUTCOMES

CO1: Understand fundamental distributed computing concepts for cloud computing.[K2]

CO2: Differentiate between different cloud deployment and service models.[K4]

CO3: Identify appropriate virtualization technology [K3]

CO4: Select suitable architecture for an application context. [K3]

CO5: Understand different technology options for cloud applications. [K2]

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Matching List I with List II

CO2 [K₂]

List I	List II
A. DBaaS	i. Hyper V
B. Virtualization	ii. Service Level Agreements
C. PaaS	iii. Amazon Aurora
D. Auditing	iv. Salesforce.com

- | | A | B | C | D |
|----|-----|----|-----|----|
| a) | ii | i | iii | iv |
| b) | iii | iv | Ii | i |
| c) | iv | i | iii | ii |
| d) | iii | i | Iv | ii |

2. At which layer, multi-tenancy can not be facilitated?

CO1 [K₂]

- | | |
|---------------|----------------|
| a) Hypervisor | b) Application |
| c) Database | d) Firewall |

3. When a Vm is terminated, which of the following resource gets freed up?

CO2 [K₁]

- 1.vCPU
- 2.Storage

- | | |
|-------------------|-----------------------|
| a) Virtual server | b) Proxy server |
| c) Backup server | d) Application server |

PART B (10 x 2 = 20 Marks)
(Answer not more than 40 words)

- | | | |
|---|-----|-------------------|
| 11. List the characteristics of Cloud computing that motivates the industry to migrate. | CO1 | [K ₁] |
| 12. Name the various challenges involved in adopting cloud computing. | CO2 | [K ₁] |
| 13. Recall the purpose of HT Condor Protocol. | CO1 | [K ₁] |
| 14. Differentiate backup and disaster recovery. | CO2 | [K ₂] |
| 15. List the benefits of virtualization. | CO3 | [K ₁] |
| 16. Relate para virtualization with full virtualization. | CO3 | [K ₁] |
| 17. Interpret the need of container. | CO4 | [K ₂] |
| 18. Define Serverless computing. | CO5 | [K ₁] |
| 19. Demonstrate the roles of Elastic load Balancer (ELB) | CO4 | [K ₂] |
| 20. Identify a service in microsoft azure that helps in authentication. | CO5 | [K ₃] |

Answer any FIVE Questions:-
PART C (5 x 14 = 70 Marks)
(Answer not more than 350 words)

- | | | | |
|---|----|-----|-------------------|
| 21. a) Discuss Hadoop map-reduce architecture. | 7 | CO1 | [K ₂] |
| b) Explain the working procedure of Napster peer to peer system in detail. | 7 | CO1 | [K ₂] |
| 22. Summarize the failure detection strategy followed in Gossiping protocol with an example. | 14 | CO1 | [K ₂] |
| 23. a) Demonstrate about cloud deployment model. | 7 | CO2 | [K ₂] |
| b) Illustrate primary cloud service models. | 7 | CO2 | [K ₂] |
| 24. Show different implementation levels of Virtualization and explain. | 14 | CO3 | [K ₂] |
| 25. a) Construct a Workload Distribution Architecture and discuss its components. | 7 | CO4 | [K ₂] |
| b) Discover the additional mechanisms used in resource pooling architecture for managing resources at back end. | 7 | CO4 | [K ₄] |

26. a) Describe any 2 Storage services offered by Amazon. 7 CO5 [K₂]
b) Outline the key components of OpenStack. 7 CO5 [K₂]
