RV College of Engineering
Autonomous Institution Affiliated to Visvesvaraya Technological University, Belagavi
Approved by AICTE, New Delhi, Accredited By NAAC, Bengaluru And NBA, New Delhi

Go, Change the World

Academic Year 2023-24 (ODD Semester)

USN	1	R	V	2	1	A	I			

Department of Artificial Intelligence and Machine Learning

Course Code : 21AI54 **Date : 08/01/2024**

Semester : V Semester **Time :**

Max Marks : 50 **Duration : 90 mins**

CLOUD COMPUTING AND ARCHITECTURES

CIE 1

Note: Answer all the Questions

SL. No		Questions	M	BT	CO
1	a)	Discuss the technologies on which cloud computing relies?	5	2	1
	b)	Describe the characterization of a distributed system.	5	2	1
2	a)	Illustrate How is cloud development different from traditional software development?	5	3	1
	b)	How cloud computing handles the following i. Load balancing ii. Reliability iii. Resource Control	5	3	2
3	a)	Discuss the Candidate sectors for community clouds	5	2	1
	b)	Compare Full and Para Virtualization.	5	3	1
4	a)	Write roles and responsibilities of the following components in implementing virtualization i. ABI ii. VID iii. ISA	6	3	2
	b)	Identify the activities that causes of performance degradation in virtualization.	4	2	
5	a)	Assume that RVCE Server is overloaded, Cloud manager decided to migrate the legacy application to the cloud and this application requires direct access to the underlying hardware. Imagine yourself as a cloud provider, propose good solution to overcome this problem and provide suitable virtualization technology with architecture	10	3	1

M-Marks, BT-Blooms Taxonomy Levels, CO-Course Outcomes

Marks Distribution	Particulars	CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6
	Max Marks CIE	30	20	-	-	5	30	15	-	-	-

Course Outcomes: After completing the course, the students will be able to:-	
CO1	Explain the concepts of cloud computing, cloud models, cloud infrastructure, cloud services, distributed computing, and other related concepts.

CO2	Apply the fundamental concepts in virtualization, virtualization cluster datacentres to understand the efficiency in PAAS, SAAS, IAAS
CO3	Illustrate the fundamental concepts of Multi cloud storage and demonstrate their use in different use cases
CO4	Analyse various cloud programming models and apply them to solve problems on the cloud.
CO5	Demonstrate critical, innovative thinking, and display competence in oral, written, and visual communication.

RV College of Engineering®
Mysore Road, RV Vidyaniketan Post,
Bengaluru - 560059, Karnataka, India

Academic Year 2023-24 (ODD Semester)

USN	1	R	V	2	1	A	I			

Department of Artificial Intelligence and Machine Learning

Course Code: : 21AI54 Date : 22/02/2024

Semester : V Semester Time : 2:30 – 4:00

Max Marks : 50 Duration : 90 mins

CLOUD COMPUTING AND ARCHITECTURES

CIE 2

Note: Answer all the Questions

SL. No		Questions	M	BT	CO
1	a	With diagram discuss Data-intensive research issues	5	2	1
	b	Describe the characteristics of Amazon Simple Storage Service (S3).	5	2	2
2	a	Discuss the different ways to address the bucket in Amazon Cloud with an example	5	2	2
	b	What is a role? What types of roles can be used in Microsoft Azure?	5	2	2
3	a	Illustrate the ADM cycle in the TOGAF	5	3	3
	b	Discuss the five most important data principles in Multicloud.	5	2	3
4	a	Illustrate how the Intelligent layer used to manage the big data	6	3	3
	b	Explain the below quality attributes used in Architecture Principle i. Configurability ii. Scalability	4	2	3
5		Assume the friends are stored as Person->[List of Friends], our friends list is then: A -> B C D B -> A C D C -> A B D D -> A B C Each line will be an argument to a mapper. For every friend in the list of friends, the mapper will output a key-value pair. The key will be a friend along with the person. The value will be the list of friends. The key will be sorted so that the friends are in order, causing all pairs of friends to go to the same reducer. Apply map reduce to find the common friend of D and A (Write the map reduce function, Write both the map set and reducer set, and conclude)	10	3	4

M-Marks, BT-Blooms Taxonomy Levels, CO-Course Outcomes

Marks Distribution	Particulars	CO1	CO2	CO3	CO4	CO5	L1	L2	L3	L4	L5	L6
	Max Marks CIE	5	15	20	10	-	-	29	21	-	-	-

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Academic Year 2023-24 (ODD Semester)

USN	1	R	V	2	1	A	I			

Department of Artificial Intelligence and Machine Learning

Course Code : 21AI54 Date : 20/03/2024
Semester : V Semester Time : 2:30 – 4:00
Max Marks : 50 Duration : 90 mins

CLOUD COMPUTING AND ARCHITECTURES

CIE 3 / Improvement Test

Note: Answer all the Questions

SL. No		Questions	M	BT	CO
1	a	Define RAID? Compare Stripping and Mirroring in RAID	1+3+3	3	2
	b	Write any three advantages of using RAID in cloud storage	3	1	2
2	a	Briefly explain the DevOps Agile Skills Association (DASA) principles (Explain Any Five Principles)	5	2	3
	b	What is forking? With a suitable diagram explain the concept of pushing code to the main branch using a fork	1+2+2	2	3
3	a	What is AIOps? Explain the Components used in AIOps	1+4	2	3
	b	Illustrate how to optimize the cloud environments using AIOps	5	3	3
4	a	Discuss the following cloud tools i. AWS Cloud Watch ii. GCP iii. OCI	6	2	1
	b	What do you mean by GreenOps? Discuss its advantages	4	1	3
5	a	Illustrate in detail the Build and Release pipeline used in DevOps	6	3	3
	b	Identify the various steps involved in successful implementation of DevOps	4	3	3

M-Marks, BT-Blooms Taxonomy Levels, CO-Course Outcomes

Marks Distribution	Particulars	CO1	CO2	CO3	CO4	CO5	L1	L2	L3	L4	L5	L6
	Max Marks CIE	6	10	34	-	-	7	21	22	-	-	-

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