KUMARAGURU
college of technology
character is life

MCA DEGREE EXAMINATIONS: NOV/ DEC 2024

(Regulation 2024)

First Semester

MASTER OF COMPUTER APPLICATIONS

24CAT505: Cloud Computing

COURSE OUTCOMES

CO1: Apply the fundamentals of cloud computing and deployment models to real-world scenarios

CO2: Analyze cloud service models and explore the basics of virtualization.

CO3: Evaluate hypervisor technologies and cloud scalability solutions.

CO4: Analyze cloud storage solutions and foundational cloud security principles.

CO5: Apply monitoring, encryption, and access management strategies in cloud environments.

Time: Three Hours   **Maximum Marks: 100**

PART A (4*20 = 80 Marks)

1.	a)	What is cloud computing? What are its types? Give examples and their benefits	4	CO1	[K2]
	b)	Discuss briefly about the evolution of cloud computing with examples.	6	CO1	[K2]
	c)	Analyze the NIST's reference architectural model for cloud computing. Co-relate it with the cloud computing facility offered by various vendors.	10	CO1	[K3]
2.	a)	List any four use-cases for PaaS.	4	CO2	[K2]
	b)	What ate the key benefits of elastic computing?	6	CO2	[K2]
	c)	ACME is a toy manufacturing company. It has its own traditional computing facility. As an enterprise systems manager, list out the limitations faced by the company and provide possible solution for each such limitation, so that the company can expand its presence world over and compete with its business competitors.	10	CO2	[K3]
3.	a)	Define Virtualization. List the entities that can be virtualized in a computer.	4	CO3	[K2]
	b)	Analyze the difference between non-virtualized and virtualized machine environment.	6	CO3	[K3]
	c)	ABC is a software development company. It has a wide range of service like	10	CO3	[K3]

product development, testing, hosting and many more. In order to cater the wide range of services to its customers, explore and suggest a suitable virtualization approach.

4.	a)	Discuss about the various types of cloud databases. Give examples	4	CO4	[K2]
	b)	Discuss the importance of load balancing in cloud computing.	6	CO4	[K2]
	c)	ACME is a about to launch a load balancing facility to one of its cloud computing service. Analayze the various prevailing load balancing facility and suggest a best method for a seamless service.	10	CO4	[K3]

Answer any ONE Question
PART B (1*20 = 20 Marks)

5.	a)	What are the various encryption methods practiced in cloud computing to provide data security?	4	CO5	[K2]
	b)	Analyze the difference between Federated Identify Management (FIM) and Single sign -on (SSO)	6	CO5	[K3]
	c)	Assume you are a cloud service provider providing various sensitive services. Your major clients are from health care, insurance, banking and federal agencies. What are the challenges faced by you in provisioning the services to your clients.	10	CO5	[K3]

OR

6.	a)	What is Single sign -on? What are its advantages?	4	CO5	[K2]
	b)	Justify how a cloud firewall is different from a conventional firewall.	6	CO5	[K3]
	c)	ABC banking faces a key issue in providing security to its cloud based customer data. You are recruited by the bank as a cloud security engineer and assigned with a key responsibility to address the bank's security issue. Demonstrate how Cloud Storage Gateway solves this issue.	10	CO5	[K3]

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