KUMARAGURU
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B.E/B.TECH DEGREE EXAMINATIONS: NOV/DEC 2023

(Regulation 2018)

Seventh Semester

COMPUTER SCIENCE AND ENGINEERING

U18CSI7201**:** Cloud Computing

COURSE OUTCOMES

CO1:   Demonstrate server virtualization concept and create virtual servers.

CO2:   Apply network virtualization and create virtual private cloud.

CO3:   Design Web Application in public cloud environment.

CO4:   Build databases in public cloud.

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

Answer all the Questions:-
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1.	Differentiate Host OS and guest OS.	CO1	[K$_2$]
2.	Determine the type of cloud that is suitable for the defined scenarios – SWIGGY.IN formed a cloud for all its branches, due to its limited resources it obtained the services of AWS for extended provisioning and modified its cloud.	CO1	[K$_3$]
3.	List the advantages of public cloud.	CO3	[K$_1$]
4.	What is hypervisor? List its types.	CO2	[K$_2$]
5.	List the features of Simple Storage Service.	CO3	[K$_1$]
6.	A company is deploying a new two-tier web application in AWS. The company has limited staff and requires high availability, and the application requires complex queries and table joins. Assess the configuration that provides solution for the company's requirements?	CO4	[K$_3$]
7.	Explain VPC(Virtual private cloud).	CO2	[K$_2$]
8.	"Heartland Data Breach: Heartland's payment processing systems were using known-vulnerable software and actually infected, but Heartland was "willing to do only the bare minimum and comply with state laws instead of taking the extra effort to notify every single customer, regardless of law, about whether their data has been stolen." Determine the type of security threat and remediation?	CO4	[K$_3$]
9.	Explain the approaches in Identity and Access Management.	CO4	[K$_2$]
10.	Enumerate the factors to consider before migrating to Cloud.	CO1	[K$_2$]

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11.	a)	Elaborate the unique features of Cloud Deployment models along with examples of service providers.	(10)	CO2	[K$_2$]
	b)	Elaborate the problems in maintaining IT infrastructure.	(6)	CO2	[K$_2$]
12.	a)	The Springfield Nuclear Power Plant has created an online application teaching nuclear physics. Students in the Springfield Elementary school access this application via the cloud, and teachers can monitor the student's progress. Determine the type of cloud service model and explain its features.	(8)	CO3	[K$_3$]
	b)	Explain the architecture of AWS.	(8)	CO3	[K$_2$]
13.	a)	Explain server virtualization in detail.	(10)	CO1	[K$_2$]
	b)	Classify VM migration techniques with diagrammatic representation	(6)	CO1	[K$_2$]
14.	a)	Explain the architecture of Eucalyptus.	(8)	CO2	[K$_2$]
	b)	Illustrate the building blocks of Private Cloud.	(8)	CO2	[K$_2$]
15.	a)	The Sidekick smartphones were originally produced by Danger, Inc., a company that was bought by Microsoft in February 2007. After the acquisition, the former Danger staff were then absorbed into the Mobile Communications Business (MCB) of the Entertainment and Devices Division at Microsoft, where they worked on a future Microsoft mobile phone platform known as Project Pink. On Friday, October 2, 2009, T-Mobile Sidekick phone users started noticing data service outages occurring. The outages lasted approximately two weeks, and on October 10, 2009, T-Mobile announced that personal information stored on Sidekick phones would be permanently lost, which turned out to be incorrect. The incident caused a public loss of confidence in the concept of cloud computing, which had been plagued by a series of outages and data losses in 2009. It also was problematic for Microsoft, which at the time was trying to convince corporate clients to use its cloud computing services, such as Azure and My Phone. A company statement said the mishap was due to "a confluence of errors from a server failure that hurt its main and backup databases supporting Sidekick users". T-Mobile blamed Microsoft for the loss of data. Identify the Security threat and recommend the remediation.	(8)	CO4	[K$_3$]
	b)	Summarize the security concerns of Cloud Computing	(8)	CO4	[K$_2$]
16.	a)	Elaborate the five-phases of cloud migration process.	(8)	CO1	[K$_2$]
	b)	Explain the six strategies of migrating applications to the cloud.	(8)	CO1	[K$_2$]

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