VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. (CSE) IV Year II-Semester Main Examinations, May-2019
Cloud Computing

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Q.No.	Stem of the question	M	L	CO	PO
	Part-A (10 × 2 = 20 Marks)				
1.	What is cloud computing? Why it is needed?	2	2	1	1,12
2.	Group of students involved in the video processing research and they need to work on huge high quality video data set. But, they don't have huge power server to perform high quality video data set. They planned to get the services from cloud. Suggest the required services from cloud with justification	2	4	1	2,12
3.	What is a Hypervisor and differentiate the types of hypervisors with a neat diagram	2	2	2	1,2,3
4.	Determine the need of a virtual clusters in a multi core environment?	2	3	2	1,2,3
5.	A datacenter is deployed and maintained in a densely populated region. Analyze and list down the merits and demerits of this situation?	2	3	3	2,3
6.	What are the various compute resource provided by Amazon Web Service?	2	2	3	1,2,5
7.	What are the various phases in data security life cycle?	2	2	4	1,2,3
8.	Differentiate between Homomorphic Encryption and FPE. Justify which onion layers correspond to these	2	3	4	1,2,3
9.	Compare the usage of various Google storage solutions used in GFS?	2	2	5	1,2,3
10.	List the common standards used for messaging in cloud	2	2	5	2,3,12
	Part-B (5 × 10 = 50 Marks)				
11. a)	"Maybach Corp" uses the cloud compute, storage and security service offering given by the service providers. Their e-retail product (www.tripplanner.com) is now online and the purchases done on this website are constantly monitored and maintained on premise. Justify the appropriate Cloud Deployment and Service model this organization has to adopt to ensure i) High Availability ii) Data Privacy iii) Scalability iv) Ownership of Data	5	3	1	1,2,3,12
b)	Determine how Cloud model is unique/related to Cluster, Grid model. Take an example model and determine the evolution of Cloud	5	2	1	1,2,3

		M	L		
12. a)	Explain in detail about the different type and levels of virtualization adopted in cloud.	5	2	2	1,2,3
b)	Determine the best practices adopted in the literature for deploying a Virtual Cluster	5	3	2	1,2,3
13. a)	Cloud market place allows unification of various cloud vendors, through service brokers. Determine how this is possible in the context of cloud resource management?	5	3	3	1,2,3,12
b)	List the steps needed for deploying a web application on a VM (Windows Server) hired on Amazon EC2?	5	3	3	2,3,5
14. a)	Explain the security issues faced across different layers in a Cloud Environment?	5	2	4	1,2,3
b)	Explain the security threats/attacks that correspond to the Virtual Machine that runs over a Hypervisor. Justify your solution assuming that the VM runs a web application with a DB secured CryptDB?	5	3	4	1,2,3,12
15. a)	Write and explain about programming on Amazon AWS and Microsoft Azure?	5	2	5	2,3,4,5
b)	Explain the process involved in computing the average of a large data set of numbers using Map-Reduce model?	5	3	5	2,3,4,5
16. a)	Explain the NIST cloud computing reference architecture?	5	2	1	1,2,3
b)	Elaborate the steps involved for live migration and justify the performance effects by taking an example?	5	4	2	2,3,4,12
17.	Answer any *two* of the following:				
a)	Design a datacenter to handle network workloads in a modularized environment	5	4	3	1,2,3
b)	Discuss adjustable query based encryption for protecting confidentiality in cryptDB with an example.	5	3	4	1,2,3,12
c)	Explain the standards adopted for Application Development in Cloud	5	2	5	1,2,3,13

M: Marks; L: Bloom's Taxonomy Level.

S. No.	Criteria for questions	Percentage
1	Fundamental knowledge (Level-1 & 2)	50
2	Knowledge on application and analysis (Level-3 & 4)	50
3	*Critical thinking and ability to design (Level-5 & 6) (*wherever applicable)	

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