



SLOT : E2+TE2			
School of Information Technology and Engineering			
Winter Semester 2022-2023		Continuous Assessment Test – I	
Programme Name & Branch		M.C.A & Computer Application	
Course Code:	ITA6009	Course Title:	Cloud Computing
Class Number(s)	VL2022230500276, VL2022230500300, VL2022230500534		
Faculty Name(s)	Benjula Anbu Malar M B, Krishnamoorthy N, Arunkumar A		

Exam Duration: 90 Min.

Maximum Marks: 50

General instruction(s):

Q.No.	Question	Max Marks
1.	ABC curriculum and courseware have an excellent reputation among the educators and students. The company have strong development and operational teams supporting the products. Its sales organization and departments knows as soon as prospects get their hands on the product they want it. a) Suggest a suitable cloud service for the given scenario? Define the service and give the characteristics (4 marks) b) Identify the suitable cloud deployment model and give its benefits (4 marks). c) Justify your answer (2 marks).	10
2.	Elucidate on the storage virtualization in an educational sector. List the various services in the storage virtualization with a neat diagram.	10
3.	Elaborate in detail the NIST cloud computing architecture with a neat diagram.	10
4.	a) Large and small scale business sees the increase the productivity in the cloud. What are the business benefits involved in the cloud architecture b) What are the essential things to be taken in concern by users before migrating to cloud computing environment platform?	10
5.	Identify cloud actor that manages the use, performance and delivery of cloud services, and negotiates relationships between cloud providers and cloud consumers. Explicate with a neat a diagram and with suitable scenario.	10

**VIT'**Vellore Institute of Technology
(Approved by the University under section 3 of U.C.R. Act, 1956)

Slot: E2+TE2

School of Information Technology and Engineering

Winter Semester 2022-2023 (Freshers)

Continuous Assessment Test – II

Programme Name & Branch: M.C.A & Computer Application

Course Name & code: ITA6009 & Cloud Computing

Class Number (s): VL2022230500278, VL2022230500486, VL2022230500534

Faculty Name (s): Benjula Anbu Malar M B (10728), Krishnamoorthy N (19622),
Arun Kumar A (19707)

Exam Duration: 90 Min.

Maximum Marks: 50

General instruction(s):

Q.No.	Question	Max Marks
1.	Assume that a resources are provided under peak demands. Illustrate how intergrid gateway is used to allocate the Virtual machines from a local cluster to interact with the public cloud provider to achieve the scalability in performance by dynamic resource deployment.	10
2.	A private owned Transportation enterprise having different zones for transportation and integrated a various department like workshop, online ticket, job scheduler, accounting, route allocation, purchasing and maintenance. The existing package is deployed in user premises. Now they planned to migrate to own cloud services, In this case help them out in provisioning server model, database model in a multi-tenant deployment model.	10
3.	Let us consider leading organization is providing the cloud services. Now the organization wishes to extend their services. They require your advice to state the differences in cloud perspectives of provider, vendors and users. Explain the extended services of the cloud and elaborate on their providers.	10
4.	Consider that a Amazon EC2 instances works over a 8 weeks timeline has a total uptime of 800 hours and a total downtime of 205 hours with 4 failures in this timeline. a) Calculate the computing availability b) Calculate the failure rate (λ) for the above different scenarios.	6 4
5.	Explain the step by step mapreduce working model for the counting number of words for the following tongue twister. Input1: How much <u>wood</u> would a wøødechuck chuck, <u>if</u> a wøødechuck could chuck-wood? Input 2: He would chuck, he would, as much as he could, and chuck as much <u>wood</u> as a wøødechuck would. If a wøødechuck could chuck wood.	10

How
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**VIT**Vellore Institute of Technology
(Approved by the University Grants Commission, New Delhi, India)**Final Assessment Test – June 2023**

Course: ITAG009 - Cloud Computing

Class NBR(s): 0276 / 0300 / 0534

Slot: E2+TE2

Time: Three Hours

Max. Marks: 100

Faculty Name : Prof. BENJULA ANBU MALAR M B / Prof. KRISHNAMOORTHY N
Prof. ARUNKUMAR A**KEEPING MOBILE PHONE/SMART WATCH, EVEN IN "OFF" POSITION IS TREATED AS EXAM MALPRACTICE****Answer any TEN Questions****(10 X 10 = 100 Marks)**

1. Netflix has been one of the biggest success stories in movies and television. It has revolutionized how people watch TV and the company has been hugely successful at it. In fact, Netflix is now worth more than \$100 billion! But how did Netflix get to this point? How cloud computing changed the face of Netflix and give its uses of cloud services?
2. Summarize about the NIST Cloud Computing Reference Architecture with a suitable diagram with an example.
3. Elucidate on the storage virtualization in the Banking sector. Diagrammatically list the various services in the storage virtualization with a suitable example.
4. Explain the various Layered Cloud Architectural Development design for effective cloud computing environment and elucidate on the design challenges of inter clouds.
5. State the Cloud Differences in Perspectives of Providers, Vendors, and Users. Illustrate on the extended services in cloud computing. List the vendors of the each services.
6. Multiple people can store money in the one same bank. But every customer asset is totally different like one customer cannot have access to the other customer's money and account and different customers are not aware about each other's account balance and details etc. Help them out in provisioning server model, database model, application model etc in a multi-tenant deployment model.
7. List any five security issues in cloud computing. What are the baseline security practices for the SaaS environment and explain any two with the real time examples.
8. Explain the step by step Map Reduce working model for counting the number of words for the following tongue twister.

**DEER BEAR RIVER, CAR CAR RIVER.
DEER CAR BEAR.
DEER BEAR RIVER, CAR CAR RIVER.
DEER CAR BEAR**

9. Suppose the Indian government has assigned you the task to count the population of India. You can demand all the resources you want, but you have to do this task in 4 months. Calculating the population of such a large country is not an easy task for a single person (you). So what will be your approach? Explain with a suitable diagram on a Mapper and Reducer scalable model.
10. In what way the cloud based high performance computing is involved in the AWS and Google cloud's. Give its use-cases and components.
11. Which particular service model defines the boundary between the responsibilities of service provider and customer and show how different functional units are related to each other in cloud security alliances(CSA) stack model. Illustrate on it?
12. Create a successful Google Application and deploy it in Google App Engine along with Google's Cloud data storage facility for App Engine Developers.





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Final Assessment Test – June 2023

Course: ITA6009 - Cloud Computing

Class NBR(s): 0278 / 0486 / 0536

Time: Three Hours

Slot: E1+TE1

Max. Marks: 100

Faculty Name: Prof. BENJULA ANBU MALAR M B / Prof. KRISHNAMOORTHY N
Prof. THANGA MARIAPPAN L

KEEPING MOBILE PHONE/SMART WATCH, EVEN IN 'OFF' POSITION IS TREATED AS EXAM MALPRACTICE

Answer any TEN Questions

(10 X 10 = 100 Marks)

1. Santhosh & Co, small enterprise located in Vellore planned to conduct their export business online, being a start-up they cannot afford much in the IT services except the available thin client. The management started the process of finding the cloud service provider, you as a consultant; narrate the different services needed for running the enterprise and sketch the service model with appropriate service providers.
2. a) Interpret the various Business benefits of Cloud Computing. [5]
b) Summarize the essential characteristics of Cloud Computing. [5]
3. Discuss on the classification or taxonomy of virtualization at different levels with a suitable diagram with an example.
4. Differentiate full virtualization and para- virtualization with a suitable diagram. With a neat sketch explain XEN architecture in detail.
5. Elucidate on cloud storage model with a suitable example. List few cloud storage providers and also explain any two commonly used cloud platform.
6. Outline the different methods and classes of Resource Provisioning with a suitable diagram. Summarize the global exchange of cloud resources with a real time example.
7. Many State Government departments are utilizing standardized set up of payroll packages which are deployed at user locations and It is amounting huge investment on procurement of hardware and software and maintenance for various locations of the organization. With the drawbacks of software maintenance problems, Individual hardware is required, often data loss occurs. Migrating the payroll package, to cloud environment can be worked out without changing business logic. Explain in detail and give an overview architecture of multi-tenancy for the above scenario.

8. Assume that the Indian government has assigned you the task to count the COVID cases of India. You can demand all the resources you want, but you have to do this task in 2 months. Based on the population of a country, analyzing the large dataset with different cases is not an easy task for a single person (you). In what way the Map Reduce model is suitable for the above scenario explain with a suitable diagram model.
9. In a bank management system, a subject may be authorized for both the roles of Cashier and Cashier Supervisor, where the supervisor is allowed to acknowledge corrections to a Cashiers open cash drawer. If the individual acting in the role Cashier attempted to switch to the role of Cashier Supervisor then
- a) Illustrate on the RBAC (role based access control) with a suitable diagram for the above scenario. [5]
- b) Identify the relations in RBAC with a suitable diagram. [5]
10. Name any two security challenges associated with cloud in today's digital scenario. What is IAM and detail the segregation roles carried out by IAM when services of multiple organizations are maintained within the same geographical location?
11. In what way the cloud based big data analytics is applied to achieve high performance computing? Compare and contrast the pros and cons of different HPC cloud vendor solutions.
12. Write detailed steps to set up the Microsoft Azure environment for executing any program of your choice.

