



VIT

Vellore Institute of Technology
Approved by the University Grants Commission, New Delhi, India
CHENNAI

Reg. Number: _____

Continuous Assessment Test (CAT) – II - APRIL 2024

Programme	: M.C.A	Semester	: Winter 2023-24
Course Code & Course Title	: PMCA506L Cloud Computing	Class Number	: CH2023240501393
Faculty	: Dr. Gayathri. R	Slot	: F1+TF1
Duration	: 90 minutes	Max. Mark	: 50

Answer all questions

Q. No	Sub Sec.	Description	Marks
1.		<p>i) Depict the key concerns that need to be focussed for moving a Virtual Machine (VM) from one location another. (3 Marks)</p> <p>ii) What is the maximum number of VMs possible in a Quad core processor if each VM requires 2GB? (2 Marks)</p> <p>iii) Will the system related I/O calls be transferred to a cloned VM without installing VMware support tools? (3 Marks)</p> <p>iv) If 2 VM's share the same storage and VM1 is migrated from location A to location B, how could the common storage be accessed by both VM's without any latency? Depict the same with neat architecture. (5 Marks)</p> <p>v) What kind of virtual network should be used if the VM is sharing the internet connection from a LAN connected desktop? (2 Marks).</p>	15
2.		<p>i) If a VM in location A experiences Distributed Denial of Service (DDoS) attack, depict 2 possible solutions (with architecture) that could be carried out without disrupting the normal functioning of the VM. (8 Marks).</p> <p>ii) Will the use of Software-defined networks help in the process of identifying and mitigating DDoS attacks? (2 Marks).</p>	10
3.		Design a MapReduce programming approach to identify the similar contact names of customers at ABC bank. Provide a step-by-step explanation for narrowing down the given problem with intermediate architecture flow diagrams.	10
4.		Person A purchased a trendy model water filter from an e-commerce platform but on unpacking he experienced issues with the working of the water filter. While he tried to return the product, he experienced a long waiting time and difficulty in viewing his payment details. He couldn't reach the customer support team through mail due to the long	15

	<p>waiting queue on the e-commerce platform. Respond to the following questions that pertain to the situation:</p> <ul style="list-style-type: none"> i) How do micro services help in addressing the aforementioned issue? Justify your explanation by mentioning each issue and corresponding solution (5 Marks) ii) What is the role of micro service protocols in reducing latency and customer wait times? (2 Marks) iii) Will a server less architecture be adopted to reduce the associated delays? Provide the solution architecture with a detailed explanation. (5 Marks) iv) Describe the process of achieving application isolation using Dockers. (3 Marks) 	
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*****All the best *****