Name: Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2020

Course: Introduction to Virtualization & Cloud Computing   **Semester: VIII**
Program: B.Tech OGI, IT   **Time 03 hrs.**
Course Code: CSIB274   **Max. Marks: 100**

Instructions:

SECTION A (Marks 60)

S. No.		Marks	CO
Q 1	Which of the following type of virtualization is also characteristic of cloud computing? a. Storage b. Application c.CPU d. All of the Above	**2**	

Q 2	Point out the correct statement:
	    a) A client can request access to a cloud service from any location
	    b) A cloud has multiple application instances and directs requests to an instance based on conditions
	    c) Computers can be partitioned into a set of virtual machines with each machine being assigned a workload
	    d) All of the mentioned
		2	

Q 3	Which of the following software can be used to implement load balancing?
	    a) Apache mod_balancer
	    b) Apache mod_proxy_balancer
	    c) F6's BigIP
	    d) All of the mentioned
		2	

Q 4	A _____ is a combination load balancer and application server that is a server placed between a firewall or router. a. ABC b. ACD c. ADC d. None of the above	**2**	
Q 5	Which of the following service provider provides the least amount of built-in security? a.SaaS b. PaaS c. IaaS d. All the above	**2**	

Q 6	Point out the correct statement:
	    a) Different types of cloud computing service models provide different levels of security services
	    b) Adapting your on-premises systems to a cloud model requires that you determine what security mechanisms are required and mapping those to controls that exist in your chosen cloud service provider
	    c) Data should be transferred and stored in an encrypted format for security purpose
		2	

	d) All of the above*		

Q 7	Point out the wrong statement:
	    a) You can use proxy and brokerage services to separate clients from direct access to shared cloud storage
	    b) Cloud computing doesn't have vulnerabilities associated with Internet applications*
	    c) Any distributed application has a much greater attack surface than an application that is closely held on a Local Area Network
	    d) None of the above
		2	

Q 8	Which of the following area of cloud computing is uniquely troublesome? a. Auditing b. Data Integrity c. E-Discovery for legal compliance d. All of the above	2	
Q 9	Which of the following is the operational domain of CSA? a. Scalability b. Portability and interoperability c. Flexibility d. None of the above	2	
Q 10	Which of the following is considered an essential element in cloud computing by CSA? a. Multi-tenancy b. Identity and access management c. Virtualization d. All the above	2	
Q 11	Which of the following is used for Web performance management and load testing? a. VMware Hyperic b. Web metrics c. Univa UD d. Tap-in Systems	2	
Q 12	Which of the following is the fundamental unit of the virtualized client in an IaaS deployment? a. Work unit b. Workspace c. Workload d. All the above	2	

Q 13	Point out the wrong statement:
	    a) The customer takes no responsibility for maintaining the hardware, the software, or the development of the applications
	    b) The vendor is responsible for all the operational aspects of the service
	    c) Google's App Engine platform is IaaS offering
	    d) All the above
		2	

Q 14	Which of the following can be considered PaaS offering? a. Google Maps b. Gmail c. Google Earth d. None of the above	2	
Q 15	_____ is the most refined and restrictive service model. a. IaaS b. CaaS c. PaaS d. SaaS	2	

Q 16	Point out the wrong statement :
	    a) Abstraction enables the key benefit of cloud computing: shared, ubiquitous access
	    b) Virtualization assigns a logical name for a physical resource and then provides a pointer to that physical resource when a request is made
	    c) All cloud computing applications combine their resources into pools that can be assigned on demand to users
	    d) All of the mentioned
		2	

Q 17	Which of the following type of virtualization is also characteristic of cloud computing ? a) Storage b) Application c) CPU d) All of the mentioned	2	

Q 18	The technology used to distribute service requests to resources is referred to as : a) load performing b) load scheduling c) load balancing d) All of the mentioned	**2**	
Q 19	Point out the correct statement : a) A client can request access to a cloud service from any location b) A cloud has multiple application instances and directs requests to an instance based on conditions c) Computers can be partitioned into a set of virtual machines with each machine being assigned a workload d) All of the mentioned	**2**	
Q 20	Point out the wrong statement : a) Load balancing virtualizes systems and resources by mapping a logical address to a physical address b) Multiple instances of various Google applications are running on different hosts c) Google uses hardware virtualization d) All of the mentioned	**2**	
Q 21	Which of the following is another name for system virtual machine ? a) hardware virtual machine b) software virtual machine c) real machine d) None of the mentioned	**2**	
Q 22	Point out the correct statement : a) A virtual machine is a computer that is walled off from the physical computer that the virtual machine a) is running on b) Virtual machines provide the capability of running multiple machine instances, each with their own operating system c) The downside of virtual machine technologies is that having resources indirectly addressed means there is some level of overhead d) All of the mentioned	**2**	
Q 23	Which of the following is Type 1 Hypervisor ? a) Wind River Simics b) Virtual Server 2005 R2 c) KVM d) LynxSecure	**2**	
Q 24	Which of the following will be host operating system for Windows Server ? a) VirtualLogix VLX b) Microsoft Hyper-V c) Xen d) All of the mentioned	**2**	
Q 25	Which of the following is Type 2 VM ?	**2**	

	a) VirtualLogix VLX b) VMware ESX c) Xen d) LynxSecure		

Q 26	Point out the wrong statement :
	    a) Some hypervisors are installed over an operating system and are referred to as Type 2 or hosted VM
	    b) All CPUs support virtual machines
	    c) On a Type 2 VM, a software interface is created that emulates the devices with which a system would normally interact
	    d) All of the mentioned
		2	

Q 27	In _____, the virtual machine simulates hardware, so it can be independent of the underlying system hardware.
	    a) para-virtualization
	    b) full virtualization
	    c) emulation
	    d) None of the mentioned
		2	

Q 28	Point out the wrong statement :
	    a) Full virtualization requires that the host operating system provide a virtual machine interface for the guest operating system and that the guest access hardware through that host VM
	    b) Guest operating systems in full virtualization systems are generally faster than other virtualization schemes
	    c) A process virtual machine instantiates when a command begins a process
	    d) All of the mentioned
		2	

Q 29	_____ is a service that creates and manages virtual network interfaces.
	    a) VMware vStorage
	    b) VMware vNetwork
	    c) VMware vCompute
	    d) Application services
		2	

Q 30	Which of the following allows a virtual machine to run on two or more physical processors at the same time ? a) Virtual SMP b) Distributed Resource Scheduler c) vNetwork Distributed Switch d) Storage VMotion	2	

SECTION B (Marks 40)

Q 1	Compare process virtual machines and system virtual machines.	10	CO1
Q 2	What are virtual private lan services? What are its scalability limitations?	10	CO3
Q 3	Explain below concepts: (Attempt any 3)	10	CO2

	1. Multi tenancy 2. Resource pooling 3. VLAN 4. PaaS Components 5. Cloud delivery models.		
Q 4	Explain in detail about OpEx and CapEx Or Explain workload characteristics and lifespan preferences.	**10**	**CO4**