
	<b>TANTA UNIVERSITY</b> <b>FACULTY OF COMPUTERS AND INFORMATICS</b>		
	EXAMINATION FOR (LEVEL 4)		
	COURSE TITLE: CLOUD COMPUTING NETWORKS	COURSE CODE: IT425	
DATE:11/1/2023	TOTAL MARKS: 60	PAGES : 2 TIME ALLOWED: 2HOUR	

**Q1) choose the correct answers**

**1- Which of the following is an open-source virtualization technology?**

- a) Hyper-V                      b) KVM                      c) vSphere                      d) Fusion Compute

**2- IaaS in cloud computing refers to -----**

- a) Information as a Service                      b) Infrastructure as a Service  
c) Industry as a Service                      d) Instruction as a Service

**3- On HUAWEI CLOUD, a user has applied for an ECS that has only the operating system installed. This service mode is ( ). (Single answer)**

- a) IaaS                      b) PaaS                      c) SaaS                      d) NaaS

**4- Which of the following is true about the type II (hosted) virtualization?**

- a) VMM runs on the host OS.                      b) VMM directly runs on the host machine.  
c) VMM runs on the guest OS.                      d) VMM runs on the guest machine

**5- If a VM on a physical host is faulty, other VMs on the physical host are not affected.**

**Which of the following features of the virtualization technology is reflected by the preceding description? (single answer)**

- a) Partition                      b) Isolation                      c) Encapsulation                      d) Independence

**6- Which of the following is not a Kernel-based Virtual Machine (KVM) management tool?**

- a) Libvirt.                      b) Virsh command set.                      c) Virt-Manager.                      d) QEMU.

**7- -----is an example of cloud computing 3**

- a) docker                      b) virtualizations                      c) Xen                      d) KVM

**8- SAAS allows users to access the -----**

- a) hardware                      b) software                      c) OS                      d) all

**9- ----- runs directly on the host hardware.**

- a) Type1 virtualization                      2) type2                      3)KVM                      4)all

**10- Which of the following is not a snapshot management option?**

- A. Create a snapshot                      B. Modify a snapshot                      C. Restore a VM using one of its snapshots

**Q2) Choose true(T) or false(F) for the following**

**1- Cloud computing includes parallel and distributed computing technology**

**2- All open-source virtualization technologies are type 1 virtualization, while all closed-source ones are type 2 virtualization.**

**3- IaaS in cloud computing refers to Information as a Service**

**4- In precopy technique, first transfers all memory pages, and then only copies**

modified pages during the last round iteratively
<b>5- virtualization and non-virtualization resources cannot coexist in one data center</b>
<b>6- Generally, a VM has a configuration file that records the specifications and name of the VM.</b>
<b>7- Multiple VMs running with different OSES can be deployed on the same physical node</b>
<b>8- OS-level virtualization creates isolated containers on a single physical server</b>
<b>9- The main reason for the rapid development of virtualization is that the VM outperforms the physical machine and has a wider application scope.</b>
<b>10- Templates can be used to quickly deploy VMs. At present, templates can be created only by converting or cloning VMs.</b>

**Q3) Answer the following questions**

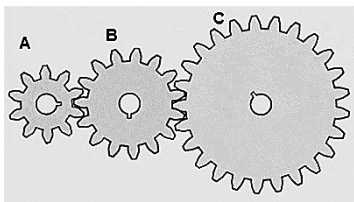
- 1- State three advantages of VLAN**
- 2- State when you should use the access link of VLAN and when you should use the trunk link**
- 3- What is Hypervisor in Cloud Computing and its types?**
- 4- Describe the four characteristics of the virtualization**
- 5- What is the difference between pre-copy and post copy memory migration?**
- 6- Draw the architecture of Xen VMM.**
- 7- How virtual cluster can implement load balancing?**
- 8- State 3 different ways to implement memory overcommitment?**
- 9- Can you implement instructions from various processors on one physical machine? If yes explain how?**
- 10- What is the difference between SAN and NAS storages?**

Good luck

Dr. Aida Nasr

**Q1) Complete the following sentences**

- 1- \_\_\_\_\_ is the name of information sent from robot sensors to robot controllers
- 2- Universal joints have \_\_\_\_\_ DOF while prismatic joints have \_\_\_\_\_ DOF and \_\_\_\_\_ constraints
- 3- ----- is important for defining the possible positions and orientations a robot can reach
- 4- In ant colony algorithm, if the number of ants ----- the performance of the algorithm increases.
- 5- \_\_\_\_\_ algorithm is used for finding a robot shortest path
- 6- Robots can explore surrounding environment using ----- while they can change on it using-----
- 7- \_\_\_\_\_ is a temperature sensor while \_\_\_\_\_ is a light sensor
- 8- If the robot has 3 gears A, B, and C. The motor is connected to gear A. as shown in the figure, the speed of gear C will be \_\_\_\_\_



- 9- Designers can use \_\_\_\_\_ for decreasing mobile robot oscillation.
- 10- Micro-scale robots use ----- as actuator

**Q2) What is the difference between robot and robotics?**

**Q3) what is the difference between Locomotion and Manipulation ?**

**Q4) give examples of internal and external sensors**

**Q5) give examples of 3 types of actuators**