Module 4 questions:

1- What is virtualization?

Refers to the logical abstraction of physical resources, such as compute, network, and storage that enables a single hardware resource to support multiple concurrent instances of systems or multiple hardware resources to support single instance of system.

2- Tell me about benefits of virtualization?

1-Optimizes utilization of IT resources.

2-Reduces cost and management complexity.

3-Reduces deployment time.

4-Increases flexibility.

3- What are the fulfilling two characteristics of cloud infrastructure that virtual layer enable?

1- Resource pooling.

2-Rapid elasticity.

4- Tell me about 3 steps of virtualization process ?

1-Virtualization software.

2-Resource pools.

3-Virtual resources.

Same question with another format.
What is the steps that made virtual resources are packaged and offered as a service?

1-deploy Virtualization software.

2-Creat Resource pools.

3- Creat Virtual resources

5- What is Hypervisor?

Software that is installed on a compute system and enables multiple OSs to run concurrently on a physical compute system.

Hypervisor kernel designed to …run multiple VMs concurrently.

6- Compare between bare metal hypervisor and hosted hypervisor

1-bare metal: is an operating system
2-Hypervisor: is installed as an application os

7- ……..Abstracts physical network resources to create virtual resources.
8- Network virtualization software……..Abstracts physical storage resources to create virtual resources.
9- Resource pool……A logical abstraction of the aggregated computing resources, such as processing power, memory capacity, storage, and network bandwidth that are managed collectively.
10-Identity pool…… Specifies a range of identifiers (IDs) , Such as virtual network IDs and MAC addresses.
11- Pooling Storage in a Cross block-based Storage System consumer connect with ……. Directly
12-Virtual machine…….. A logical compute system that, like a physical compute system, runs an OS and applications.

13-From a hypervisor's perspective, a VM is a discrete set of files such as:

•Keeps a log of the VM's activity and is used in troubleshooting…log file….

•Stores the memory contents of a VM in a suspended state…memory state file…..

•Stores the VM settings and virtual disk of a VM…snapshot file…
•Stores information, such as VM name, BIOS information, guest OS type, memory size…configuration file….

•Stores the contents of the VM's disk drive…virtual disk file……
14-Vm console……an interface to view and manage the VMs on a compute system or a cluster.
15-What is VM console used to ?

1-Installing a guest OS and accessing VM BIOS

2-Powering a VM on or off

3-Configuring virtual hardware and troubleshooting

16-Vm templet…….. master copy of a VM with standardized virtual hardware and software configuration that is used to create new VMs.

17-How to create a vm template in two ways ?

1-converting a vm into templet
2-Cloning a vm to templet

18-What is Steps involved in updating a VM template are?

1-convert the templet into a vm
2-Install no software or os/software patch
3-Convert the vm back to templet

19-…vm network……A logical network that provides Ethernet connectivity and enables communication between VMs within a compute system.
20- Virtual NIC…….. Connects a VM to a virtual switch and functions like a physical NIC Has unique MAC and IP addresses
21-…virtual switch…... Connects VMs locally and also directs VM traffic to a physical network Forwards frames to a virtual switch port based on destination address
22-LUN……..Abstracts the identity and internal functions of storage system(s) and appear as physical storage to the compute system.
23-LUN Can be created from 1- RAID set (traditional approach)… 2-…storage pool..
24-Compare between thin LUN and think LUN.

Thin LUN:Does not require physical storage to be completely allocated

at the time of creation.

Thick LUN:Physical storage is completely allocated at the time of creation

25-Tell me what is need to use thin LUN ?

Thin LUNs are appropriate for applications that can tolerate performance variations

26-…virtual network…… A software-based logical network that is either a segment of a physical network or spans across multiple physical networks.

27-PVLAN……. A sub-VLAN that segregates the nodes within a standard VLAN, called as primary VLAN. A PVLAN can be configured as either isolated or community.

28-…stretched VLAN…. A VLAN that spans multiple sites and enables Layer 2 communication between a group of nodes over a Layer 3 WAN infrastructure, independent of their physical location.

29-…VSAN….. A logical fabric, enable communication between a group of nodes with a common set of requirements, independent of their physical location in the fabric.

30-12.Mapping between VLANs and VSANs in an FCoE SAN , Mapping considerations is

-Configure a dedicated VLAN for each VSAN

-VLANs configured for VSANs should not carry regular LAN traffic