

### Module3 questions.

1. .... execute software of providers and consumers. **compute system**
2. .... store business and application data. **storage system**
3. .... connect compute systems with each other and with storage system **network**
- 4.

#### Key components of a compute system.

5. **RAM** is a volatile data storage device containing the programs for execution and the data used by the processor.
6. **chipset** is a collection of microchips on a motherboard to manage specific functions, such as processor access to RAM and to peripheral ports
7. .... is a PCB that holds the processor, RAM, ROM, network and I/O ports, and other integrated components, such as GPU and NIC
8. **CPU** is an IC that executes software programs by performing arithmetical, logical, and input/output operations.
9. **ROM** is a semiconductor memory containing boot, power management, and other device-specific firmware.

#### Software deployed on compute systems.

10. .... Enables consumers to view and request cloud services Platform software. **self service portal**
11. .... Includes the software that the provider offers through PaaS **platform software**
12. .... Includes the applications that the provider offers through SaaS **Application software**
13. .... Enables resource pooling and creation of virtual resources **virtualization software**
14. .... Enables a provider to manage the cloud infrastructure and services **cloud management software**
15. .... Includes a consumer's platform software and business applications **consumer software**

16. What is the types of compute system ? Compare between these types. **Tower , rack , blade**
17. What is the disadvantages of tower compute system ? **make noise and take floor space**
18. on the rack-mounted compute system what is the device that use to manage the compute systems?....**console mounted**
19. Blades are interconnected via a ..**high speed bus**
20. .... is the repository for saving and retrieving electronic data. **storage system**
21. What is the types of storage devices ? and compare. **magnetic disk , magnetic tape , ssd , optical disk**
22. .... Stores data on a thin plastic film with a magnetic coating, Provides only sequential data access, Low-cost solution for long term data storage **magnetic tape**
23. .... Stores data on a circular disk with a ferromagnetic coating , Provides random read/write access , Most popular storage device with large storage capacity **magnetic disk**
24. .... Stores data on a semiconductor-based memory , Very low latency per I/O, low power requirements, and very high throughput **SSD**
25. .... A storage technology in which data is written in blocks across multiple disk drives that are combined into a logical unit **RAID**
26. .... A RAID technique to store the same data simultaneously on two different drives, yielding two copies of the data **mirroring**

### Stripping

27. .... A RAID technique to spread data across multiple drives in order to use the drives in parallel. **Parity check**
28. .... A RAID technique to protect striped data from drive failure by performing a mathematical operation on individual strips and storing the result on a portion of the RAID group.

RAID types (0 , 1 , 1+0 , 3 , 5, 6 ).

29. ....Nested RAID (striping and mirroring) **1+0**
30. .... Striped set with parallel access and a dedicated parity disk **3**
31. .... Striped set with independent disk access and distributed parity **5**
32. ....Striped set with independent disk access and dual distributed parity **6**
33. ....Disk mirroring **2**
34. ....Striped set with no fault tolerance. **0**
35. Storage system architectures are based on the data access methods . what is this types ?
36. In ..... Enables clients to share files over an IP network. (Block-based ,File-based ,Object-based )
37. In..... Stores file data in the form of objects based on data contents and attributes . (Block-based ,File-based ,Object-based )
38. In ..... Enables creating and assigning storage volumes to compute systems (Block-based ,File-based ,Object-based ) **Data transfer and sharing**
39. Networking enables ..... and .....of IT resources between nodes across geographic regions.
40. What is the types of network communication ? **compute to compute , compute to storage , inter cloud**
41. Compute-to-compute communication typically uses **ip-based protocol**
42. ....A network that interconnects storage systems with compute systems, enabling the compute systems to access and share the storage systems. **compute to storage**
43. In storage area network , Based on the protocols they support, SANs can be classified as:
- 1- 2- 3- **fc san , fcoe san , ip san**
44. A SAN that uses ..... protocol to transport data, commands, and status information between compute and storage systems (**FC SAN**-IP SAN-FCoE SAN)
45. ....provides block-level access to storage. (**FC SAN**-IP SAN-FCoE SAN)
46. What is Fiber Channel SAN (FC SAN) components ? **network adapter , cabling , intermediate device**
47. In Fiber Channel SAN (FC SAN) Each switch in a fabric contains a ....**ID,unique, domain identifier**
48. A SAN that uses Internet Protocol (IP) for the transport of storage traffic. It transports block I/O over an IP-based network. Why ? **matssure security option and tightly and legacy network**
49. Network that uses the FCoE protocol to transport FC data along with regular Ethernet traffic over high speed Ethernet links. FCoE encapsulates FC frames into Ethernet frames. Why ? **reduce complexity and number of cables and switch**
50. In .....Converged network adapter (CNA) Provides functionality of both NIC and FC HBA in a single device Encapsulates FC traffic onto Ethernet frames(**FC SAN**-IP SAN-**FCoE SAN**).
51. Choose from 1 to 4 about these products is example of
- VMAX: ... VNX: ... Isilon: ... XtremIO:...
- 1-Scale-out NAS storage platform
- 2-Family of unified storage platforms
- 3-All-flash, block-based, scale-out enterprise storage array
- 4-Block-based storage systems

