

EE 4217 Quiz 3 - Model Examination in EAA [30 marks random selected from 37 questions]

1. What is the most significant advantage of tape as a storage medium?
 - a. Ideally suited for random access
 - b. Fastest way to access and manipulate data
 - c. Can be shared simultaneously among multiple users or applications
 - d. Relatively inexpensive

2. In an order processing system, which data center element manages the order entry process?
 - a. Application
 - b. Operating system
 - c. Network
 - d. Storage array

3. Application response times have become slower. What should you monitor to determine if any component in the I/O chain has reached a saturation point?
 - a. Availability
 - b. Security
 - c. Data Protection
 - d. Utilization

4. What are two key aspects of Monitoring when managing in the data center?
 - a. Scalability and Data Protection
 - b. Data protection and Security
 - c. Manageability and Data Protection
 - d. Security and Scalability

5. Which host software component provides a logical structure for data?
 - a. Device driver
 - b. File system
 - c. Application
 - d. Operating System

6. What is a logical component of a storage environment?
- a. Database
 - b. Memory
 - c. Disk
 - d. Central Processing Unit
7. Which statement is true of the sustained internal transfer rate of disk drives?
- a. It is usually lower than the sustained external transfer rate of the disk
 - b. It is usually higher than the sustained external transfer rate of the disk
 - c. It is usually higher than the burst internal transfer rate of the disk
 - d. It is seldom lower than the burst external transfer rate of the disk
8. Which logical component does partitioning create on a physical disk?
- a. Sector
 - b. Volume
 - c. Platter
 - d. Cylinder
9. What is a benefit of mirroring?
- a. High write performance
 - b. Fast recovery from a failure
 - c. Low cost
 - d. Fast parity calculation
10. Which component provides the communication from the storage system to the host?
- a. Cache
 - b. Back-end
 - c. Front-end
 - d. Physical disks
11. Which element of an intelligent disk system provides the communication with the disks for read and write operations?
- a. Back-end
 - b. Front-end
 - c. Tag RAM
 - d. Operating system

12. What is the order of operations when assigning CLARiiON storage space to a host?
- a. Bind LUNs, create RAID Groups, assign hosts to RAID Group
 - b. Create RAID Groups, bind LUNs, assign LUNs to host
 - c. Add hosts to RAID Group, bind LUNs, create RAID Groups
 - d. Add LUNs to RAID Group, create RAID Groups, Bind LUNs
13. Which I/O operations are serviced by Cache in an EMC Symmetrix Array?
- a. All Reads and Writes
 - b. Only the Read-hits
 - c. Only the Writes
 - d. Only the Writes less than 32kB in size
14. Which functionality can be part of multi-path software?
- a. Path failover
 - b. LUN masking
 - c. Port zoning
 - d. Write coalescing
15. What does a serial ATA cable attach a host to?
- a. SAN Fabric
 - b. DAS Disk
 - c. NAS File system
 - d. CAS Object
16. What is the most mature -- that is, oldest -- technology for host-to-storage connectivity?
- a. DAS
 - b. SAN
 - c. NAS
 - d. CAS
17. Which statement is true about gateway NAS systems?
- a. Gateway NAS system does not require NAS component management
 - b. NAS component and storage array are managed via array management software
 - c. NAS component and storage array are managed via NAS software
 - d. NAS component is managed via NAS management software and storage array is managed via array management software

18. Which component is part of a NAS device?
- a. Printer driver
 - b. Client application
 - c. Optimized Operating System
 - d. Storage application
19. What is a characteristic of an integrated NAS system?
- a. Pooled/centralized storage
 - b. Allows access to underutilized SAN storage
 - c. Offers multiple connectivity options with the backend
 - d. Allows host to connect directly to the storage array
20. Which functionality does Celerra Management Advanced Edition provide?
- a. Ability to simultaneously manage multiple Celerras
 - b. Advanced DART security features
 - c. Support for third-party backend storage arrays
 - d. Integrated Celerra and Centera management
21. What does modal dispersion limit in a Fibre Channel network?
- a. The length of optical cabling used
 - b. The number of nodes that can connect to a switch
 - c. The number of switches
 - d. The I/O queue-depth on any given node
22. Which SAN topology offers the greatest degree of scalability?
- a. Point to Point
 - b. Arbitrated Loop
 - c. Switched Fabric
 - d. Cascaded
23. Which statement best distinguishes between zoning and LUN masking?
- a. Zoning is a fabric function, while LUN masking is a storage array function
 - b. LUN masking is a fabric function, while zoning is a storage array function
 - c. Zoning is relevant to FC SANs only, while LUN masking is relevant to IP SANs only
 - d. Zoning is managed in-band over FC, while LUN masking is managed out-of-band over IP

24. What are SC and LC connectors?

- a. Standard connectors for fiber optic cables
- b. Extended distance 68-pin SCSI connectors
- c. RJ-45 connectors specified by the IETF
- d. Serial port connectors on FC switches

25. What is a disadvantage of storing fixed content on tape versus CAS?

- a. Data is either offline, or subject to high retrieval time
- b. Write operations incur higher CPU overhead on the host
- c. Adversely impacts I/O throughput for non-fixed content
- d. Requires a Fibre Channel SAN, which can be expensive

26. You are backing up two file systems from two servers over the LAN:

Backup client A with 10 files, 100MB each

Backup client B with 1000 files, 1MB each

What will happen under identical backup infrastructure?

- a. A will take more time to complete
- b. A and B will take the same time to complete
- c. A will generate more catalog entries
- d. B will generate more catalog entries

27. How does metadata travel in a SAN based backup environment?

- a. Over SAN
- b. Over LAN
- c. Over both SAN and LAN
- d. Over the same path as the data

28. You have a backup and recovery environment. What is a benefit of sending multiple streams as opposed to single stream of backup data to a tape?

- a. Reduced catalog size
- b. Improved recovery time objective
- c. Reduced recovery time
- d. Improved write performance

29. What is true about a Logical Volume Manager?

- a. Cannot span physical devices
- b. Requires CPU resources of an intelligent storage array
- c. Offered as part of the operating system or as third party host software
- d. Allows only full volume replicas

30. What is a limitation of host based replicas?

- a. Replicas add overhead on host CPUs
- b. Replicas cannot span storage arrays
- c. Replicas add overhead to the CPU in a storage array
- d. Replicas cannot be used for recovery at the file system level

31. Mean time between failures (MTBF) is the mean (average) time between failures of a system, i.e. the reciprocal of the average failure rate when the failure rate is a constant. What is the MTBF of 1000 samples at failure rate of 1.1×10^{-9} /s and 1000 samples at failure rate of 0.9×10^{-9} /s?

- a. 277 hours
- b. 2,777 hours
- c. 27,777 hours
- d. 277,777 hours

32. What happens when the EMC/TimeFinder Mirror Split operation is performed?

- a. All data from Standard Volume is copied to the BCV
- b. All data from the BCV is copied to the Standard Volume
- c. Data is copied incrementally from the Standard Volume to the BCV
- d. BCV is made independently accessible

33. Which remote replication technology uses data buffers inside the storage array to store and forward data from source to target?

- a. Logical Volume Manager
- b. Log shipping
- c. Asynchronous
- d. Synchronous

34. What is the relationship between the sizes of the primary and the secondary MirrorView/A LUNs in an EMC CLARiiON remote replication solution?

- a. The primary must be smaller than or equal to the secondary

- b. The primary must be smaller than the secondary
- c. The primary must be the same size as the secondary
- d. The primary must be larger than or equal to the secondary

35. What is an advantage of synchronous remote replication compared to asynchronous replication?

- a. Lower network bandwidth requirement
- b. Usable over long distances
- c. Less expensive
- d. Lower data loss in the event of a disaster

36. Which kind of replication requires ongoing involvement of the host to manage the replication?

- a. Log shipping
- b. Synchronous
- c. Asynchronous
- d. Disk buffered

37. Which component of EMC Control Center displays information about Managed Objects?

- a. Server
- b. Store
- c. Console
- d. Repository

EE4217 Quiz3 Ans

Question	Ans
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1	D
2	A
3	D
4	B
5	A
6	A
7	A
8	B
9	B
10	C
11	A
12	B
13	A
14	A
15	B
16	A
17	D
18	C
19	A
20	A
21	A
22	C
23	A
24	A
25	A
26	D
27	B
28	D
29	C
30	A
31	C
32	D
33	C
34	C
35	D
36	A
37	C