SKILL BASED
IT TRAINING

AS441
ADVANCED SERVER SUPPORT 1
PROFESSIONAL DEGREE IN IT SUPPORT

Total: 44 marks

QUESTION:

1. Brief the difference between RAID 0, RAID 1, RAID 5 and RAID 6 in terms of type of data storage, number of hard disks, usage, and functionality.

   (12 marks)

2. Compare and contrast Network Attached Storage (NAS) and Storage Area Network (SAN) in terms of architecture, use cases, scalability, and performance. Additionally, discuss the advantages and disadvantages of each storage technology and provide examples of scenarios where one would be preferred over the other.

   (12 marks)

3. ABC Corporation is a media production company that deals with large video and audio files daily. They are looking to enhance their data storage capabilities and improve the performance of their editing workstations. The IT team is considering implementing RAID technology, but they are unsure about which RAID level to choose. They want a solution that offers both improved read/write speeds and data redundancy to protect against disk failures. The company has a budget for purchasing up to six identical 2TB hard drives.

   Explain the recommended RAID level for ABC Corporation's scenario and justify your choice, considering the benefits and trade-offs associated with the selected RAID configuration.

   (6 marks)

4. You are a system administrator responsible for setting up a RAID configuration in Windows for a file server. The server has four identical 1TB hard drives, and you want to implement RAID 5 for data redundancy and improved performance. Design and describe the steps you would take to configure RAID 5 on the Windows server.

   (10 marks)