Q1) What is RAID?

RAID stands for Redundant Array of Independent Disks this technology is now used in almost all the IT organizations looking for data redundancy and better performance. It combines multiple available disks into 1 or more drives and gives you the ability to survive one or more drive failures depending upon the RAID level used.

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Q2) what are the advantages and disadvantages of having RAID technology?

RAID 0

Advantages	Disadvantages
Data is stripped into multiple drives	No support for Data Redundancy
Disk space is fully utilized	No support for Fault Tolerance
Minimum 2 drives required	No error detection mechanism
High performance	Failure of either disk results in complete data loss in respective array

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RAID 1

Advantages	Disadvantages
Performs mirroring of data i.e identical data from one drive is written to another drive for redundancy.	Expense is higher (1 extra drive required per drive for mirroring)
High read speed as either disk can be used if one disk is busy	Slow write performance as all drives has to be updated
Array will function even if any one of the drive fails	
Minimum 2 drives required	

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RAID 5

Advantages	Disadvantages
Block level stripping with distributed parity	In case of disk failure recovery may take longer time as parity has to be calculated from all available drives
Parity is distributed across the disks in an array	Cannot survive concurrent drive failures
High Performance	
Cost effective	

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RAID 6

Advantages	Disadvantages
Block level stripping with DUAL distributed parity	Cost Expense can become a factor
2 parity blocks are created	Writing data takes longer time due to dual parity
Can survive concurrent 2 drive failures in an array	
Extra Fault Tolerance and Redundancy	
Minimum 4 drives required	

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