

MAH-CET 2024 FOR

BCA BBA BBM BMS

DAY - 16

COMPUTER

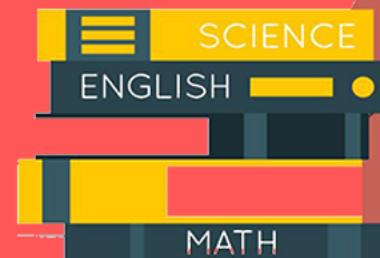
**BACKUP
DEVICES**



**CRASH
COURSE**



simple





**TOTAL
QUESTIONS
TODAY:**

15

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Last Computer Instructions

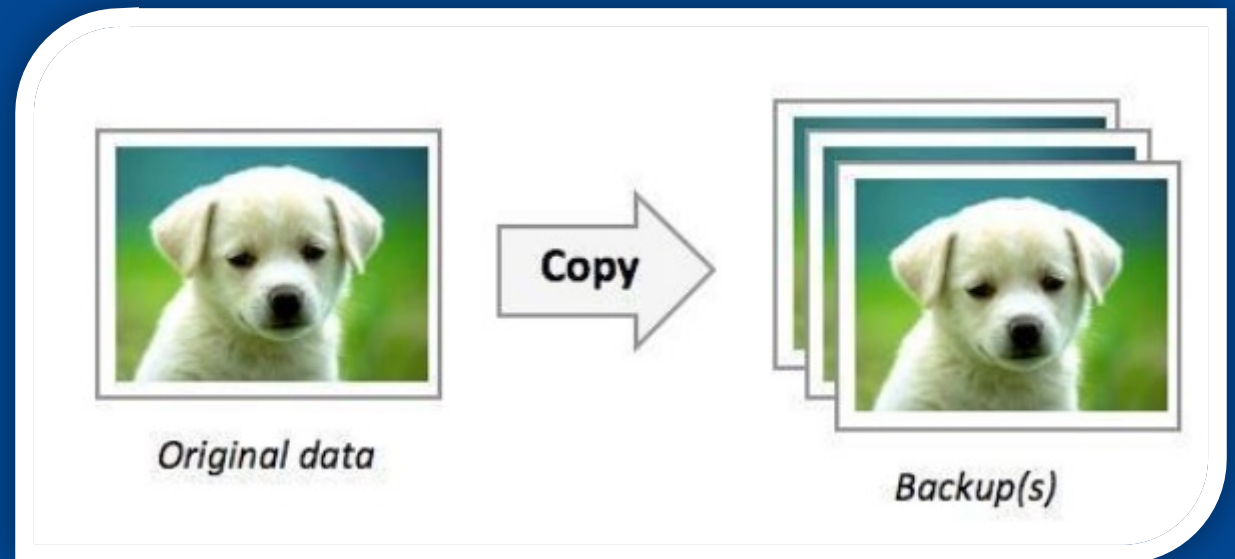
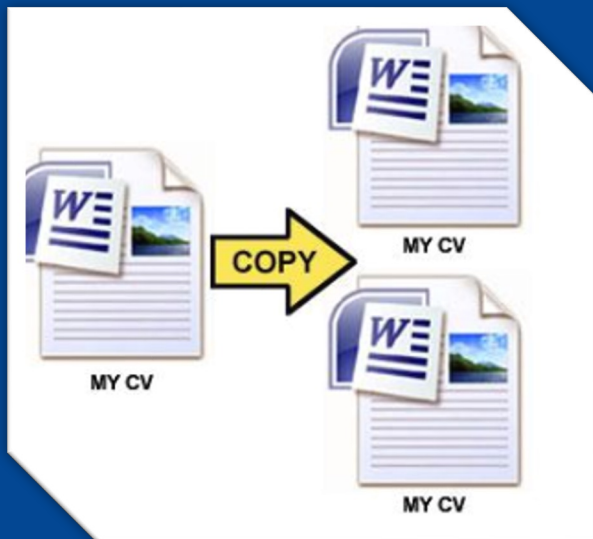
CET

DOUBT

COMPUTER LECTURE IS
DIFFICULT

What is Backup Devices ?

- A backup device is a hardware component for storing copies of files, programs and data to a different storage device for future use. (making of copies of your files, data and information).
- A backup is a copy of your original file or data stored on another storage device.

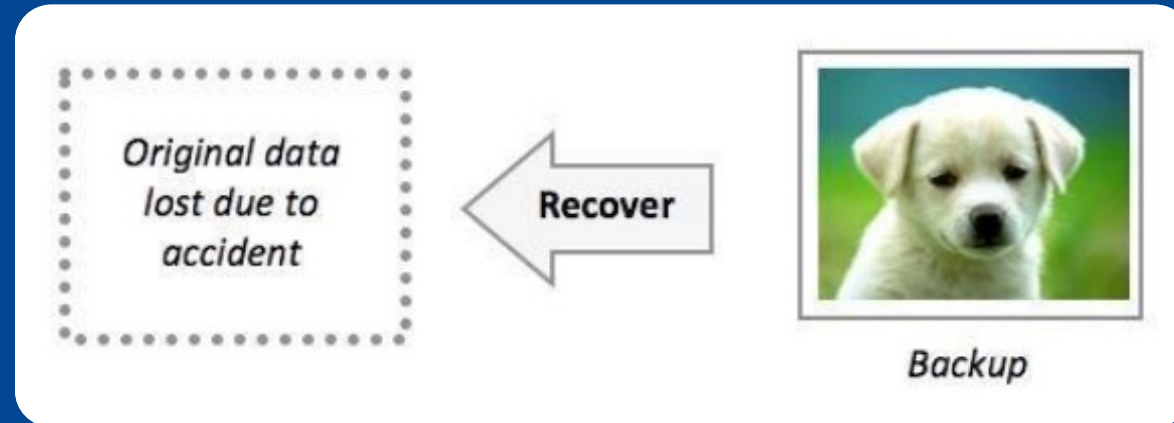




WHY BACK UP DATA?

1. Files can be accidentally deleted
2. Mission-critical data can become corrupt.
3. Natural disasters can leave your office in ruin.
4. Data could be lost due to damage to the original storage device.
5. device.
6. You could lose your original storage device

Photos
Google Photos
Contacts
Google Contacts

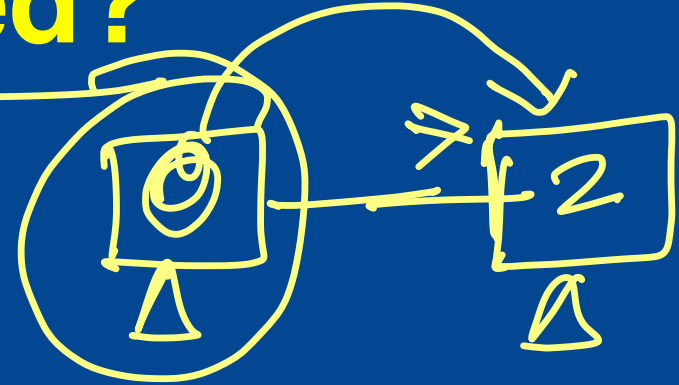


Backup



How Are Backups Created?

- A. Burning files to a CD ←
- B. Copying files to an external hard-drive
- C. Copying the files to another computer on a network





Basic types of backup?

(There are many terms to denote various types of backup, there exist three basic types of backup — full Backup, incremental Backup, and differential Backup)

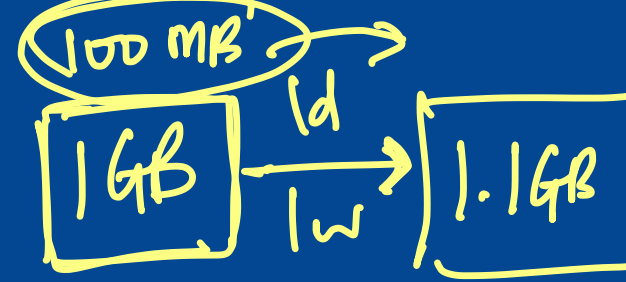
1. Full Backup

Full backups are typically part of an overall backup plan. A full backup creates copies of all data a user has selected for backup. Unless the user chooses to use compression, the backup file size will be equal to that of the original data.

The advantage to this type of backup is that it allows you to easily and quickly restore your data



2. Incremental Backup



An incremental backup starts with a full backup. Incremental backups are generally done periodically according to a schedule. This type backs up only those files that have changed since the last backup of any type, be it full or incremental.

The advantage to incremental backups is that it takes very little time to back up your files after the initial full backup, requiring a smaller backup window. Concerning the archive size, incremental backups are optimal, as they require less disk space.



3. Differential Backup

A differential backup is similar to an incremental backup. They both back up only data that has been changed. The difference is that a differential backup backs up only those files that have been changed after the last full backup.

This offers many users a happy medium between full and incremental backup.

Differential backup offers the user both a reasonably short backup and restoration time. Nevertheless, this option requires more disk space than incremental backups, but less than full backups.

TYPES OF BACKUP: FULL, DIFFERENTIAL, AND INCREMENTAL

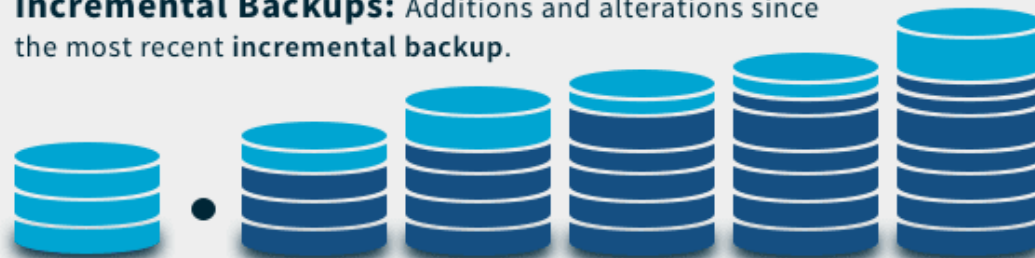
Full Backups: Entire data set, regardless of any previous backups or circumstances.



Differential Backups: Additions and alterations since the most recent full backup.



Incremental Backups: Additions and alterations since the most recent incremental backup.



Initial Full
Backup



1st
Backup

2nd
Backup

3rd
Backup

4th
Backup

5th
Backup



Data subject to backup



There are several types of backup devices commonly used for data storage and backup purposes.

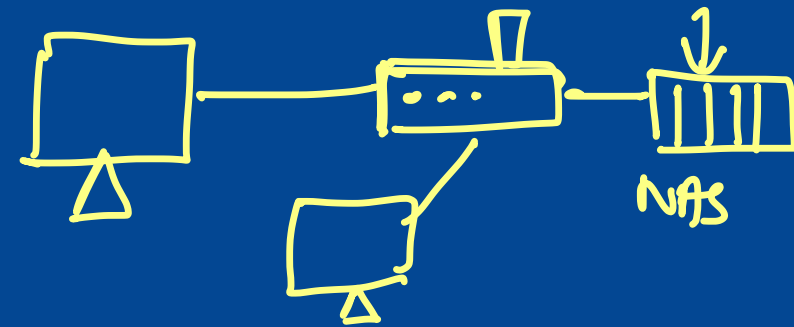
External Hard Drives :

- External hard drives are portable storage devices that connect to a computer or other device via a USB or other interface.
- They offer additional storage capacity and are often used for backup purposes, as they provide a convenient way to store and protect important data.
- They are popular due to their affordability, ease of use, and compatibility with a wide range of devices.





Network Attached Storage (NAS):



Network Attached Storage (NAS) is a type of storage device that is connected to a network and provides storage and file management services to multiple clients (such as computers, servers, or media players) within that network. NAS devices are essentially specialized file servers that are optimized for file storage and sharing.

NAS devices can be used for backup and file synchronization, making it easy to back up data from multiple devices to a central location.

BAY 4 BAY NAS
2 HDD Data
2 HDD-BU





Tape Drives : (Old)



Tape drives are a type of data storage device that use magnetic tape to store and retrieve digital information. They have been used for decades as a reliable and cost-effective method of data backup and archiving.

Tape drives offer several advantages, including high capacity, long archival life, and low cost per gigabyte compared to other storage technologies. However, they are slower than hard disk drives and have largely been replaced by disk-based backup solutions in many applications.

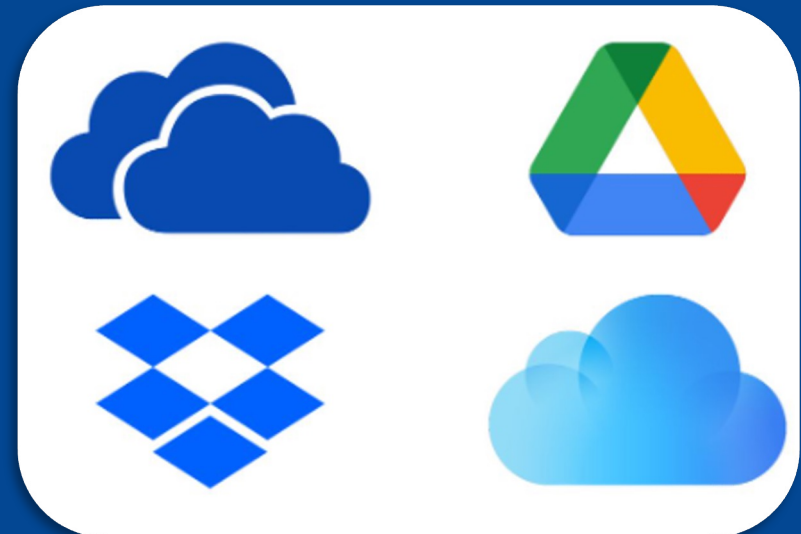




Cloud Storage:

Cloud storage is a service that allows you to store and access data over the internet instead of on your computer's hard drive or a local storage device. Cloud storage providers maintain and manage large data storage servers and make them available to customers over the internet.

Many cloud storage services offer automated backup solutions that can automatically back up your data on a regular schedule, reducing the risk of data loss due to human error or oversight.





200 MB/sec

Solid State Drives (SSDs) :

1 GB / sec

1TB - HDD - 4000

1TB - SSD - 7000

SSDs are similar to traditional hard drives but use flash memory instead of spinning disks. They are faster and more durable than HDDs but tend to be more expensive per gigabyte.

SSDs can improve overall system performance by reducing boot times, speeding up application launches, and improving file transfer speeds.





Optical Discs :

CDs, DVDs, and Blu-ray discs can be used for backup, although their capacity is limited compared to other methods. They are suitable for storing smaller amounts of data or for archival purposes.

CDs typically hold up to 700 MB of data, DVDs can store around 4.7 GB (single-layer) or 8.5 GB (dual-layer), and Blu-ray discs can store 25 GB (single-layer) or 50 GB (dual-layer). This makes them suitable for backing up smaller amounts of data





USB Flash Drives :

These small, portable devices offer a convenient way to back up and transfer files. They are suitable for storing smaller amounts of data but may not be ideal for large-scale backups due to limited capacity.

They are a popular choice for backing up data from an SSD due to their compact size, affordability, and ease of use.





1. What is data backup?

- A. Deleting data permanently
- ☒ B. Copying data to another location for safekeeping
- C. Encrypting data
- D. Corrupting data intentionally

B



2. What is the primary purpose of a backup device?

A) To increase the speed of the computer

✓ B) To store data as a duplicate copy for recovery purposes

C) To improve the performance of the operating system

D) To expand the storage capacity of the computer

B



3. Which of the following is an example of an external backup device?

A) Optical disc

B) USB flash drive

C) NAS (Network Attached Storage)

D) All of the above

D

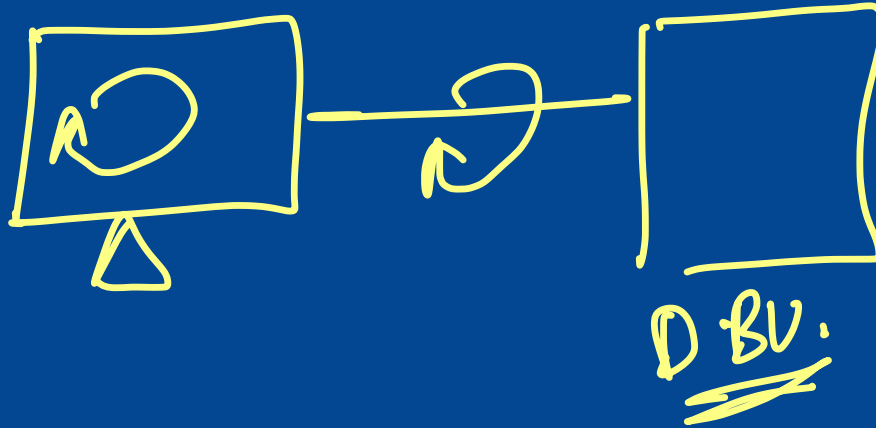


4. What is a hot backup in the context of data backup methods?

- ✓ A. A backup created while the system is running and fully operational
- B. A backup stored in a location with a high temperature
- C. A backup stored in the cloud
- D. A backup created during system downtime

A

Cold Backup
not in use





5. Backup of the source data can be created ?

A. On the same device ✓

B. On another device ✓

C. At some other location ✓

☒ D. All of the mentioned ✓



6. Which of the following statements are true ?

A. Data can be recovered fastest in online backup

B. Tape library is an example of nearline storage

C. Data recovery can take hours for offline backup

☒ D. All of the mentioned



7. Which of the following backup technique is most space efficient?

- A. Full backup ✗
- B. Incremental backup
- C. Differential backup
- D. All of the mentioned

B

last BV.
Last Full



8. Which of the following techniques can be used for optimizing backed up data space?

A. Encryption and Deduplication

☒ B. Compression and Deduplication

C. Authentication and Deduplication

D. Deduplication only



9. What is a full backup ?

- A. Backing up only the most important data
- B. Backing up data to an external hard drive
- ☒ C. Backing up all data in a system regardless of whether it has
changed
- D. Backing up data to the cloud



10. What is an incremental backup?

A. Backing up all data daily

B. Backing up data only when it changes since the last backup

C. Backing up data once a week

D. Backing up data to an external device



RPO

11. What is the term for the time it takes to recover data after a disaster or data loss event?

A. Backup duration ←

B. Recovery point objective (RPO) ←

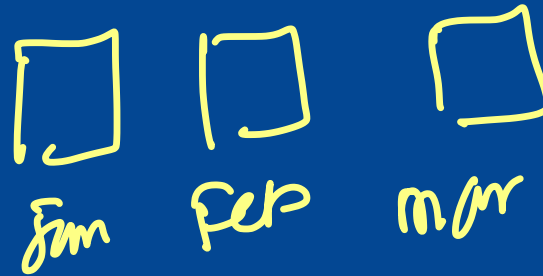
C. Backup frequency ←

D. Data replication ←



12. What is a backup archive?

- A. The process of creating incremental backups
- B. A storage device used for data backup
- C. A collection of older backup copies of data
- D. A full backup





13. Which of the following is a benefit of cloud backup?

- A. Slower data access** ✗
- B. Global availability, ease of use** ✓
- C. Limited data accessibility** ✗
- D. Local data storage only** ✗

B



14. What is the purpose of a backup verification process?

- A. To delete backup copies**
 - B. To ensure that backup copies are accessible**
 - C. To prevent data recovery**
 - D. To test and confirm the integrity of backup copies**
-



15. Which of the following is a characteristic of cold backups?

- A. Backups created during system downtime
- B. Backups stored in a high-temperature environment
- C. Backups created continuously
- D. Backups created while the system is running

A

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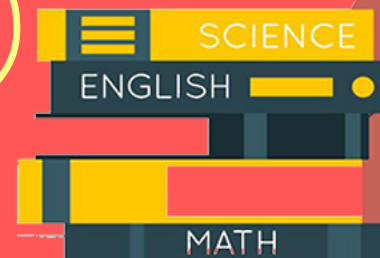
ENGLISH



**CRASH
COURSE**



CLOZE TEST





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