

data is stored in a chain of clusters, with the last cluster marked with an end-of-file identifier. The FAT table stores the name and attributes of the files and folders on the disk, their starting cluster, and which clusters link to the next. The number of addressable clusters determines the size of the FAT table. The limit for how many addressable clusters exist is based on the size of the binary number used to address each cluster. The number of bits used for the cluster address distinguishes the different versions of FAT. The common versions of FAT include FAT16 and FAT32.

**File extension** Typically a three-character name at the end of a file name that is used to indicate the type of data contained in the file. Common extension examples include DOC for documents and EXE for executable programs.

**Long file names** File names that can be a maximum of 255 characters in length.

**New Technology File System (NTFS)** A file system introduced with Windows NT. NTFS supports advanced features to add reliability, security, and flexibility that file systems such as FAT and FAT32 do not have. NTFS is the preferred file system for use with Windows 7.

**Shadow copy** A snapshot of the file system that tracks changes to files and allows the restoration of previous file versions.

**Terabyte** A unit of data that consists of 1024 gigabytes. Commonly abbreviated as TB.

## Review Questions

1. A user would like to secure files stored on a floppy disk. Which file system should they select to format the disk?
  - a. NTFS
  - b. UDF
  - c. FAT
  - d. CDFS
2. A hard link can point to a folder on a different computer. True or False?
3. When assigning NTFS permissions, an ACE entry can explicitly define who is denied access to a resource. True or False?
4. A user would like to secure files stored on a hard disk. Which file system should they select to format the disk?
  - a. NTFS
  - b. UDF
  - c. FAT16
  - d. FAT32
  - e. SECF
5. A user is given Read permission to a file stored on an NTFS-formatted volume. The file is then copied to a folder on the same NTFS-formatted volume where the user has been given Full Control permission for that folder. When the user logs on to the computer holding the file and accesses its new location via a drive letter, what is the user's effective permission to the file?
  - a. Read
  - b. Full control
  - c. No access
  - d. Modify
  - e. none of the above



6. A user has been granted Full control to an NTFS folder on your computer in which she has created all the documents that exist in it. Another administrator accidentally adds a permission setting denying the Write Permission to her. The next time she logs in, opens the file, and tries to save her changes to it, will she notice?
  - a. The changes to the file are written as expected
  - b. Access to save the changes is denied
  - c. User Access Control will prompt her to allow administrative access
  - d. The permissions will automatically update to allow her access
  - e. A shadow copy is created
7. A user is given Read permission to a file stored on an NTFS-formatted volume. The file is then moved to a folder on the same NTFS-formatted volume where the user has been given Modify permission to that folder. When the user logs on to the computer holding the file and accesses its new location via a drive letter, what is the user's effective permission to the file?
  - a. Read
  - b. Full control
  - c. No access
  - d. Modify
  - e. none of the above
8. A user is given Read permission to a file stored on an NTFS-formatted volume. The file is then moved to a different folder on a different NTFS-formatted volume where the user has been given Full Control permission to that folder. When the user logs on to the computer holding the file and accesses its new location via a drive letter, what is the user's effective permission to the file?
  - a. Read
  - b. Full control
  - c. No access
  - d. Modify
  - e. none of the above
9. A portable flash memory device with 64 GB of storage is attached to a computer through a USB connection. The device allows the user to store music and other media files in its internal memory by presenting it to the user as a hard disk. Which file system would be appropriate when formatting the device?
  - a. NTFS
  - b. CDFS
  - c. WMA
  - d. FAT
  - e. exFAT
10. A large database file containing 100 MB of data is reported as taking up only 64 MB of disk space. The difference in size is likely due to \_\_\_\_\_.
  - a. compression
  - b. encryption
  - c. cluster size
  - d. file corruption



11. A 40 GB partition can be formatted with which file systems? (Choose all that apply.)
  - a. FAT12
  - b. FAT16
  - c. FAT32
  - d. NTFS
12. A 4 GB partition can be formatted with which file systems? (Choose all that apply.)
  - a. FAT12
  - b. FAT16
  - c. FAT32
  - d. NTFS
13. A volume formatted with NTFS must be converted to FAT32. To preserve the files it currently contains, you must \_\_\_\_\_.
  - a. do nothing at all, volume conversions do not alter volume contents
  - b. run the command `convert <drive letter>/FS:NTFS`
  - c. manually trigger a shadow copy
  - d. run the command `convert <drive letter>/FS:FAT32`
  - e. back up the volume's contents
14. A user is assigned Read permission to the NTFS folder C:\ACCOUNTING. They must not have access to C:\ACCOUNTING\ADMIN. This can be accomplished by \_\_\_\_\_.
  - a. blocking permission inheritance at C:\ACCOUNTING\ADMIN and not assigning the user any permission to C:\ACCOUNTING\ADMIN
  - b. blocking permission inheritance at C:\ACCOUNTING and not assigning the user any permission to C:\ACCOUNTING\ADMIN
  - c. assigning the user deny Read permission to C:\ACCOUNTING\ADMIN
  - d. assigning the user deny Read permission to C:\ACCOUNTING and setting the permission scope to apply to subfolders
  - e. not possible
15. When assigning a new NTFS permission what two factors must first be considered? (Select two.)
  - a. permission
  - b. compression
  - c. inheritance
  - d. permission scope
  - e. ownership
16. A user checks the free space in a folder, Y:\BusReports, and notices that 3 GB of disk space is reported as available. When the user checks free space in Y:\BusReports\Archive, he notices that 5 GB of disk space is reported as available. The difference in available disk space is probably because the folder Y:\BusReports\Archive is \_\_\_\_\_.
  - a. archived
  - b. compressed
  - c. encrypted
  - d. dynamic
  - e. mount point



17. A user is assigned Read permission to the NTFS folder C:\ACCOUNTING. They require full access to C:\ACCOUNTING\FORMS. This can be accomplished by \_\_\_\_\_.  
a. not possible  
b. blocking permission inheritance at C:\ACCOUNTING\FORMS and assigning the user Full control to C:\ACCOUNTING\FORMS  
c. assigning the user Full control to C:\ACCOUNTING  
d. blocking permission inheritance at C:\ACCOUNTING and assigning the user Full control to C:\ACCOUNTING\FORMS  
e. assigning the user Full control to C:\ACCOUNTING\FORMS
18. A user has been granted Read permission to an NTFS folder. It is discovered that they can update a text file in that folder even though they have not been given explicit permission to do so. The reason for this is most likely because \_\_\_\_\_.  
a. the user cannot update the file  
b. the permission is marked as hidden  
c. the user is the owner of the file  
d. the user is the administrator of the local computer
19. You can reliably use shadow copies to replace a system backup. True or False?
20. A computer running Windows 95 cannot access a UDF-formatted DVD disk. This is because \_\_\_\_\_.  
a. compatibility mode was not selected during the creation of the DVD  
b. Windows 95 does not support UDF  
c. the disk is corrupt  
d. the UDF file system must first be converted to CDFS
21. A user is given read permission to a file stored on an NTFS-formatted volume. The file is then moved to a different folder on a different NTFS-formatted volume where the user has been given Modify permission for that folder. The file is then moved to a folder on a FAT32-formatted volume. When the user logs on to the computer holding the file and accesses it via a drive letter, what is the user's effective permission to the file?  
a. Read  
b. Change  
c. Full control  
d. Modify  
e. No permissions apply
22. In addition to shadow copies, previous versions of files can be restored from a \_\_\_\_\_.
23. A file stored on an NTFS-formatted volume is currently compressed. For security reasons, the file is required to be encrypted. The file can be both compressed and encrypted. True or False?
24. A backup program will only back up those files that have recently changed. You do not want a large accounting database to be backed up on the next backup job. What file attribute should you modify?  
a. read only  
b. compress  
c. backup allowed  
d. archive