

**My final term paper of CS609 on 13-03-2015**  
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**Which file system keeps the backup of its boot block? 2marks**

Ans:

FAT32 File System keeps the backup of its boot block.

**What are computer viruses? 2marks**

Ans:

A computer virus is a malware program, when it is executed, it replicates by inserting copies of itself into other computer programs, data files, the boot sector of the hard drive. When this replication succeeds the affected areas are then said to be "infected". This small program called computer virus.

**Absread() and abswrite() functions are used for? 2marks**

Ans:

Absread( ) function is used to read a block LSN is given.

Abswrite( ) function is used to write a block given its LSN.

**What is the difference between sectors and tracks? 2marks**

Ans:

The difference between sectors and tracks is that tracks are the circular division of the disk where sectors are longitudinal division of the disk.

It means that the track is a single ring of data on one side of a disk and tracks are divided into several numbered divisions known as sectors.

**Explain the usage of lower three bits (0,1 and 2) in DMA Mask-1 register. 3marks**

Ans:

The lower bits 0 and 1 contain the channel number.

The lower bit 2 is set if the channel to be masked.

**How many maximum root directory entries are possible in FAT12 and FAT16? 3marks**

Ans:

FAT12 and FAT16 media typically uses 512 root directory entries.

**Why it is not feasible to calculate FSInfo block information again and again FAT32? 3marks**

Ans:

FSInfo block is a special reserved block. This block has some information required by OS for cluster allocation and deallocation to files. This calculation is not feasible in FAT 32 because the size of FAT32 is very large. As this calculation will consumes lot of time.

That is why it is not feasible to calculate FSInfo block information again and again FAT32.

**How cross references of clusters can be detected? 3marks**

Ans:

A cluster is called cross reference if it lie in more than one file chain. It can be detected by traversing through out the chain of files and then marking the cluster number while traversal.

Find the root directory sector. Where reserved sectors=1 and sector per FAT=9. Used appropriate assumption where needed. 5marks

Ans:

Root directory sector can find by this formula Reserved Sectors + 2 \* (size of FAT)

So,

Root DIR Sector = Reserved Sectors + 2 \* (size of FAT) = 1 + 2 \* 9 = 19

How can we recover the deleted contents of file? Explain each step of recovery in detail. 5marks

Ans:

\*When a file is deleted it is marked as 0xE5 at the start of file entry, but the contents of file still remain there on the disk.

\*The contents can be recovered by placing a valid file name, the character in place of E5, recovering the chain of file.

\*The clusters which are used by deleted files if over written by other files then it can be recovered.

How descriptor describes a memory segment and what are the attributes of memory segment? 5marks

ANS:

Descriptor describes a memory segment as: The descriptor describes a Memory Segment by storing the attributes related to memory segment.

The attributes of memory segment: The attributes of memory segment are base address, it length and access rights.

Write down the structure of data part of partitioning table? 5marks

Ans:

\*The data part of the partitioning table contains information about four different partitions for different kinds of OS.

\*Every partition information piece is 16 bytes wide.

\*The last two bytes at the end of the partition the data part is the partition table signature.

\*The value of partition table signature should be AA55 indicate that the code part have valid code for execution.

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