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**Q1: Mention and explain the functions of 10 important hardware’s of an Editing Machine.**

**Ans:**there are many important hardwares used in editing machines like,

1. Ram
2. SSD Drive
3. Storage
4. Processor
5. Graphics card
6. High Resoloution Monitor
7. Power supply
8. Cooling system
9. Sound card
10. Mother Board

**Ram**

The ram Is a very important part of an Editing machine in editing machine the motslt used Rams are DDR4 16 or 32 GB which helps the editing speed process to work fast and use multiple softwares during editing process.

**SSD Drive**

SSD drive is a very important part of an editing system because their processing speed is in 35-100 microsseconds which helps the editing and rendering fast. And it helps to import large video files withing less time then normal hard drive.

**Storage**The storage is editing machines are mostly 1 Tb or 2 Tb
Because in editing machines the edited data will be exported in large file size for which the storage in Editing machines is important and required after the SSD drive.. SSd can be replaced on the Nornal Storage/hard disk but mostly people use Hard dist as a normal storage.

**Processor**

The processor is the most important part of the Editing machines there are different processor and can be used in editing machines like AMD Ryzen 5 1600 AF/ 5 3600 or Intel i5-10600K or Intel i9-10900K. the function of Processor is that mostly video editing software requires minimum 6 core 8 cores or 12 cores which are provided by the processors. And some softwares works on clock speed which is also provided by the processor.

**Graphics card**

The graphics card is also a most important part of an editing machine and the function of the graphic card is that it helps the cpu to process high resoloution footage and edit in editing softwares and also many editing softwares don’t work without and graphic cards because the graphic card is very bacis and important part of an editing machine.

**High Resoloution Monitor**

The High resoloution Monitor is also one of the important part of an editing machine because it it gives the original and same resoloution while editing footage. Because if we edit 4k or 8k video it supports that resoloution easily and gives the best results.

**Power supply**

The power supply in editing machine gives the power to the other parts of the cpu and the other components of the editing machines like graphics card needs at least 500 wat power supply for the editing machines.

**Cooling system**

If we build the editing machine it is obvious that the machine will be high powerd and will heat up quicky while editing or the graphics card is under load. So for that reason the cooling system is used in editing machies so that it can control the heat and help the system to cool up.

**Sound card**

We can consider the sound card also a important part of editing machine it gives the best sound then the normal casing’s sound while audio editing or even video editing it provides best quality of sound.

**Mother Board**

The mother board is lat part of editing machine but it is important more then any part of editing machine. Themother board should support all the editing parts like graphics card, rams, processor etc. the mother board holds all the important parts together and make them work together.

**What is frame rate or fps? Discuss different types of frame rates.**

**Ans:**

Frame rate is basically a pictures in a video for example. 3o frame rate. it means 30 pictures in a second or 24 fps it means 24 pictures in one second in a video. As the frame rate we increase the more smooth and detailed video will be.

There and many frame rates in a camera like

**24fps**

The 24 frame rate is very basic frame rat and it is not that good in a camera and if we slow the 24fps video it will not a good result because the pictures in a second will be less

**30 fps**

The 30fps video will be a bit good than the 24 fps but still it will also give a very basic and normal smoothness and if we try to slow thw 30fps video we can just slow it to 80%

**50 fps**

The 50 frame rate video will be good enough for the normal recording of an any event but if we try to slow the video of 50 fps we can slow it down to 48% which can work for the basic slow motion and details.

**60fps**

The 60 fps is mostly used and it is good frame rate for recording the video because it gives a best result and it is smooth. Most cameras gives 60 fps for the recording and we can slow the 60 fps video to 40% which can work for the basic cinematic slomowtions.

**120 fps**

If we talk about cinematic editis and cinematic and detailed shooting the 120fps is the best frame rate to record the video and slow it down to from 100 to 20%.

**240 fps**

The 240 frame rate is also used for the high resoloution project and detailed quality projects because it gives the space of slowing it down to the 10%.

**Q3: Mention and discuss different video resolutions in detail.**

**Ans:**

There are many video resoloutions like

240p,480p, 720p

1080p 1K, 2k

**240P**

240p resoloution a very normal and basic vodeo resoloution it is nowadays not very common in use it is mad by (426x240) pixels which helps us understand that the mor pixels will be the more high resoloution we will get.

**480p**

The 480p resoloution is mady by 854x480 pixels which is consider as standard size for the monitor and for the resoloution and this size is used in different channels and on social media aswell.

**720p**

The 720p resoloution is a hd quality video and its file size will must be heave then the 480 or 240p resoloution because it is made by 1280x720 pixels and this is a basic size in the life of High definition resoloutions. It means this is the first size ratio for HD video resoloution.

**1080p**

this is the second high definition resoloution in the line of hd resoloutions because its pixel ratio is size is 1920x1080 this is the mostly piexel size which is used in market.

**1K**

1k means that there is 1000 pixels in the video. It means that its ratio sizeis 2560x1440. The 1 k resoloution gives the high quality result on the screen. It file size will must be larger then the 1080p and 720p.

**2k**

The 2k resoloution is broad term of display or content having horizontal resoloution with approximately 2,000 pixels. The 2k resolution mostly used in cinemas to project the movies because its ratio size is big which is 3840x2160 which gives a high definition even in the big screen.