**SANT BABA BHAG SINGH UNIVERSITY**

**Subject Code: CSA304**

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**Assignment: computer peripherals and interface**

**SUBMITTED TO: SUBMITTED BY:**

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BCA 6th Sem(B)

**Q1. Write down the difference between ATA RAID and SCSI RAID.**

**Answer:**

| **Basis For Comparison** | **ATA RAID** | **SCSI RAID** |
| --- | --- | --- |
| Cost | Overall IDE is a much cheaper solution. | When composed with IDE,SCSI is often more expensive to implement and support. |
| Expansion | IDE/EIDE allows 2 devices per channel computer have 2 channel. | SCSI is capable of supporting to 7 or 15 devices. |
|  |  |  |
| Faster | Today, the latest IDE and SCSI devices running at the some RPM are very close .However, 10,000+RAM devices often only available for SCSI. | All the fastest drives are often available for SCSI first and in many cases 10,000+RPM hard drives are only available are SCSI drives. |
| Ease | IDE is commonly a much easier product to set up the SCSI. | Configuring SCSI can be more difficult for must users when composed to IDE. |

|  |  |  |
| --- | --- | --- |
| Resources | All motherboards today have on ATA/IDE interface are unless additional drives are need no additional resources need to be taken. | Unlike ,IDE SCSI requires on interface expansion card in most cases(unless the motherboard already has it. |

**Q2. Explain Video display technology .**

## Answer: Video display technologies

Displays are also categorized by the underlying technology that creates the image. Most of these technologies can be used for either direct-view or projection displays, depending on how they are implemented:

* **CRT:** CRT, or cathode ray tube, is the traditional technology behind TVs and home theater displays (for a long time, CRT was the *only* technology). CRTs can be used in both direct-view and projector applications.
* **Plasma:** Plasma (sometimes called PDP, or *plasma display panel*) displays use a grid of electrical circuits sandwiched between two plates of glass to electrically excite a gas and cause it to put out light. Plasma displays are the thin TVs (often less than 4 inches thick) that everyone’s dying to hang on their walls.
* **LCD:** LCDs do exactly what their name implies — they have liquid crystal particles within them that can be aligned in different ways to create different colors. When a bright light shines through these crystals, you get a video picture.

LCDs can be flat-panel TVs (like a plasma display), or they can be used in projection TVs. If you’ve seen a laptop computer (or a desktop PC with a flat-panel display), you’ve seen an LCD.

* **OLED:** The newest flat panel technology is known as *Organic Light Emitting Diode*, or OLED. OLED displays are built of an organic material that is printed onto the display, and like plasma, OLED creates its own light (so there’s no backlight).

OLED displays are even thinner than plasma or LCD displays and use less electricity than either. They also have extremely high contrast ratios and extraordinary color reproduction. OLED technology is still in its infancy and is mainly used in very small displays for cell phones and similar devices.

* **Micro displays:** Traditionally, projection systems used CRT tubes to create the projected image. Most current projection systems use a micro display technology to do so instead. A micro display is exactly what the name says it is — basically a tiny display that uses some sort of miniaturized display technology to create an image that is then enlarged when it is beamed onto the projection screen.

Several different technologies are within the micro display family:

* + **LCD:** The same LCD technology used for flat-panel screens can be shrunken down and used in a projector.
  + **DLP:** A DLP, or *digital light processor,* uses a special video chip from Texas Instruments that includes millions of microscopic mirrors that are moved by computer command to create an image.
  + **LCoS :** *Liquid Crystal on Silicon* micro displays use a special variant of LCD technology that’s shrunken down to the chip level.

**Q3.Write down the difference between LCD and LED monitor.**

**Answer:**

| **Basis For Comparison** | **LED** | **LCD** |
| --- | --- | --- |
| Definition | PN-Junction device which discharge visible lights when an electrical charge passes through it. | It is an optical device used for displaying the information in the form of text and images. |
| Stand For | Light Emitting Diode | Liquid Crystal Display |
| Backlight | No backlight | Cold cathode fluorescent lamp provides backlight. |
| Resolution | High | Low |
| Power Requirement | More | Less |
| Display Area | Small | Large |
| Cost | High | Low |
| Material | Gallium arsenide phosphide. | Liquid crystals and glass electrodes. |
| Switching Time | Fast | Slow |
| Direct Current | Do not effects. | Reduces Life Span |
| Contrast Ratio | Low | High |
| Mercury | Not used | Used |

**Q4. Discuss about advanced 3D technology.**

**Answer : Advance 3D Technologies**

Below are the commonly used and most popular advanced 3D technologies.

**1. 3D Modeling**

3D modeling is the process of developing a mathematical representation of any three-dimensional surface object via specialized software. The product is called a 3D model. The model can also be physically created using 3D printing devices. This technique is also known as meshing.

**2. 3D rendering**

Rendering is the phenomenon of creating the actual 2D image or animation from the prepared scene. This can be compared to taking a photo or filming the scene after the setup is finished in real life. The 3D rendering is the 3D computer Graphics process of automatically converting 3D wire frame models into 2D images.

**3. Reflection and shading models**

These types of models are used to describe the physical appearance of a surface. In refraction of light, we have studied the term refractive index. In 3D programming, this term  is known as “index of refraction,” generally  abbreviated “IOR.” Shading can be divided into two orthogonal issues, which are normally studied independently:

* Reflection/Scattering – Defines how light interacts with the surface *at a given point.*
* Shading – Defines how material properties vary across the surface

**4. 3D Projection**

3D projection is any method of mapping 3D points to a 2D plane. There are different types of the method used s for displaying graphical data. These methods are based on planar two-dimensional media. The use of this type of projection is widespread, mainly in computer graphics, engineering, and drafting. There are two types of projection:

* Orthographic projection
* Perspective projection:

**5. Morphing**

Morphing is special effects in motion pictures and animations that morph one image into another. it is used to depict one person turning into another either through technological means or through a seamless transition. It is one of the commonly used 3D technologies.

Under this technique, the source image is gradually distorted and is faded out while the target image is faded in. The early images in the sequence are much like the first image. The middle image of the sequence is the average of the first image distorted halfway towards the second one and the second image distorted halfway back towards the first one. The whole process consists of warping two images so that they have the same “shape” and then cross dissolving the resulting images.

**6.** **Texture mapping**

It is a method for adding certain features like detail, surface texture, or color to a computer-generated graphic or 3D model. A texture map mapped to the surface of a shape, or polygon. This process is akin to applying patterned paper to a plain white box.

**7. Anti-aliasing**

 Generally, the image drawn using 3D techniques when viewed on a raster device such as an LCD Display or CRT Television causes aliasing effects mostly along geometric edges and the boundaries of texture. These effects are called “jaggies”. Anti-aliasing methods rectify such problems, resulting in imagery more pleasing to the viewer, but can be somewhat computationally expensive.

**8. Stereoscopic 3D**

Stereoscopy refers to a technique for creating or enhancing the illusion of depth in an image. It is carried out by presenting two offset images separately to the left and right eye of the viewer. Both of these 2D offset images are then combined in the brain to give the perception of 3D depth. It is also called stereoscopic or 3-D imaging.