IT SKILLS IMPORTANT

Q. Explain Refresh Rate, Resolution and Dot Pitch with reference of Computer Monitor & Video Card?

Or Describe various characteristics of display screens?

Ans. The display screens also known as CRTs (Cathode Ray Tubes), Flat Panel Monitors or any other kind of screens are characterized according to their size, color, resolution and video display adapter card.

Size:

The size of the screech is measured diagonally from one corner to the other corner of the screen. Monitors come in different sizes, from small screens built into palmtops and laptops to extra-large monitors used for special purposes. The common sizes are 15, 17 19, 21 and 23 inches.

Color:

There are two types of display screens:

1. Monochrome
2. RGB

Monochrome:

Screens display, information using a single foreground color and one background color.

RGB:

Screens display information in color. RGB stands for Red, Green and Blue. These screens use a combination of Red, Green and Blue colors to display color images on the screen. These RGB

displays can create 256 colors and several thousand variations on them by blending shades of Red, Green, and Blue.

Resolution:

The resolution is measured by the number of columns of pixels or dots and the number of rows of pixels a monitor can display.

For Example:

A screen with a resolution of 640x480 can display 640 columns and 480 rows of pixels.

Explanation:

Resolution is a measure of sharpness and clarity of image displayed on the monitor. The number of dot or pixels per inch determines resolution or the sharpness of the image. A monitor with a higher resolution can display a greater number of pixels, which provides a smoother and clearer image.

Dot Pitch:

The distance between one pixel on the screen and its next nearest pixel is known as dot pitch. The smaller the distance between the pixel, the sharper the displayed image. To minimize eye fatigue, a monitor with a dot pitch of 0.28 millimeters, or smaller should be used.

Refresh Rate:

The images are drawn on the screen as an electron beam moves back and forth across the back of the screen and causes pixels on the screen to glow. However, these pixels glow for only a fraction of a second before beginning to fade. The monitor thus redraws the picture many times per second, so the image does not fade. This process is called refreshing.

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If the screen pixels are not refreshed quickly and rapidly then the screen appears to flicker. The speed with which the monitor redraws images on the screen is called **refresh rate**. A monitor's refresh rate should be fast enough to maintain a constant, flicker free image.

Refresh rate is measured by the number of times per second the screen is redrawn called hertz. A high-quality monitor should at least provide a refresh rate of at least 75 hertz. This means the image on the screen redraws itself 75 times in one second.

Now a day display screens are more efficient and can provide good quality image just on 60 hertz.

“Student Note:

1. Separate colors in this document means that paragraph or heading can be asked as a separate question as a short.

2. This is a very important question that has already appeared in A/2018 and A/2019 do not skip. Very likely to appear again.”