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**QUESTION**

1. What is colour harmony? Discuss why colour harmony is important in HCI.
2. Explain the following using examples:
3. Components of Colour
4. Primary Colours
5. Secondary Colours
6. Tertiary Colours

**ANSWERS**

1. Colour harmony

Harmony can be defined as a pleasing arrangement of parts, whether it is music, poetry or colour. In visual experiences, harmony is something that is pleasing to the eye. It engages the viewer and it creates an inner sense of order, a balance in the visual experience. When something is not harmonious, it is either boring or chaotic. At one extreme is a visual experience that is so bland that the viewer is not engaged. The human brain will reject under-stimulating information. At the other extreme is a visual experience that is so overdone, so chaotic that the viewer can't stand to look at it. The human brain rejects what it cannot organize, what it cannot understand? The visual task requires that we present a logical structure.

Colour harmony delivers visual interest and a sense of order. It refers to the property that certain aesthetically pleasing colour combinations have. These combinations create pleasing contrasts and consonances that are said to be harmonious. These combinations can be of complementary colours, split-complementary colours, colour triads or analogous colours.

In summary, extreme unity leads to under-stimulation, extreme complexity leads to overstimulation. Harmony is a dynamic equilibrium.

Colour harmony has a large impact on human computer interaction, colour can greatly improve user interfaces if used correctly, but can also reduce the functionality of the interface if used inappropriately. Important factors of designing colour interfaces include simplicity, consistency, and clarity. Firstly, you want to keep the colour scheme fairly simple. Simplicity can be achieved by using the four primary colours, which are red, green, yellow, and blue. Consistency is also another important factor when designing an interface. Colours should be assigned to a particular type of concept or to help classify information. This technique helps users to retain more information in their short term memory. Clarity and the concise use of colour aids in helping users identify items more efficiently.

2. Components of Colour

These are the basic three key components of colour.

1. Hue: Hue is what most people think of when using the term ‘colour.’ It corresponds to its position in the spectrum. Examples of hues are: red, orange, yellow, green, blue, violet.

In scientific terms, hue is the spectral wavelength composition of a colour that produces the perception of being red, yellow, blue, and so on.

1. Value: Value is the relative lightness or darkness of a colour. This is what you see when you take a black and white photograph. Each tube colour has a different value.
2. Saturation: The saturation of a colour is its degree of richness, intensity, purity, or grayness. Other commonly used terms for saturation are intensity or chroma.

For example, cadmium orange and burnt sienna are the same hue (orange), but cadmium orange has a high saturation whereas burnt sienna has a low saturation.

1. Primary Colours

In traditional colour theory, these are the three (3) pigment colours that cannot be mixed or formed by any combination of other colours. All other colours are derived from these three (3) hues. They are red, yellow and blue.

1. Secondary Colours

These are the colours formed by mixing the primary colours. They are green, orange and purple

1. Tertiary Colours

These are the colours formed by mixing one primary and one secondary colour. Examples; Yellow-orange, red-orange, red-purple, blue-purple, blue-green and yellow green.