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Q no 1:

Solution:

Picture size = $1600 * 1200$

Colour depeth = 8bits

**Totale number of pixcel = $1600 * 1200 = 1920000$
pixels.**

Total no of data = $1920000 * 8 = 15360000$

$15360000 / 8 =$

File size and bits = 1920000 byts

$$1920000 / 1024 = 1875 \text{ k/bytes}$$

$$1875 / 1024 = 1.8 \text{ MB}$$

Size of colored picture = 1.8 MB

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Q no 1 part 2

Solution :

Total pixels = $1600 * 1200 = 1920000$ pixels

Here, sample at each pixel = 1

And 8bit data take 1 byte per sample,

Storage required = $1600 * 1 * 1 = 1920000$ bytes

Q, No: 2

Ans

The color space which the human eye perceives has its upper bound at 10 million colors. Anything beyond that is not really distinguishable to the human eye.

The color bit depth required per channel is 8bits for a total of 24 bits.

And $2^{24} = 16,777,216$ variations,

That variations is much more than the 10 million color the human eye can distinguish , but nonetheless the colors appear much richer and more vibrant .

