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Pop Quiz [15mins] – 15 pts

1) [1+1+1=3] Following questions are related to bump maps.

a) The basic principal behind bump maps is:

- i. Displacement of vertices
- ii. Displacement of light
- iii. **Perturbation of normal**
- iv. Perturbation of light

b) The normal map for a bump map will always be:

- i. **Blueish**
- ii. Reddish
- iii. Greenish

c) As we move the light, which of the following will change appearance?

- i. **Environment Map**
- ii. **Bump Map**
- iii. Texture Map

2) [2+2+2=6] Consider colors A and B given by XYZ values of (30, 100, 20) and (100, 20, 10) respectively.

a) The chromaticity coordinate of A is given by:

- i. 3/10, 2/10
- ii. **1/5, 2/3**
- iii. 10/13, 2/13

b) The intensity of B is given by:

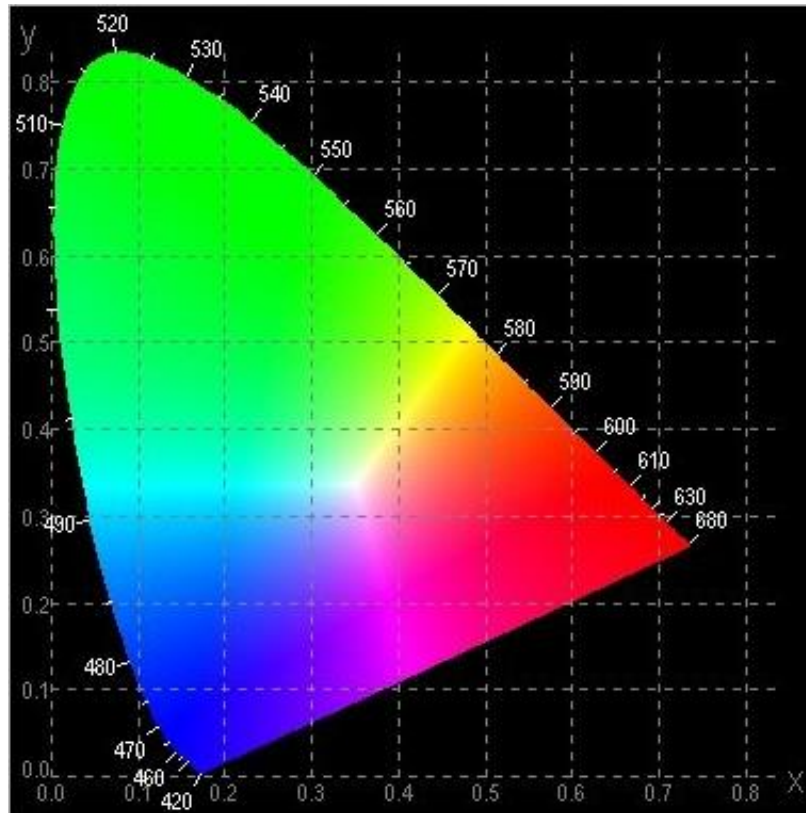
- i. 150
- ii. **130**
- iii. 100
- iv. 20

c) What can you tell about the luminance of the colors?

- i. **Luminance of A > Luminance of B**
- ii. Luminance of A < Luminance of B
- iii. Luminance of A = Luminance of B
- iv. **Luminance of A = 5 times Luminance of B**
- v. Luminance of B \approx Luminance of B

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3) [2+2+2=6] Consider the color with chromaticity coordinate (0.4, 0.5).

a) The most possible estimate of its dominant wavelength is:

- i. 505nm
- ii. **565nm**
- iii. 490nm
- iv. 530nm

b) The most likely saturation of the color is:

- i. 10%
- ii. **50%**
- iii. 90%

c) Consider the color with reversed coordinates (0.5, 0.2). The most possible estimate of its complimentary wavelength is:

- i. **505nm**
- ii. 565nm
- iii. 490nm
- iv. 530nm