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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:

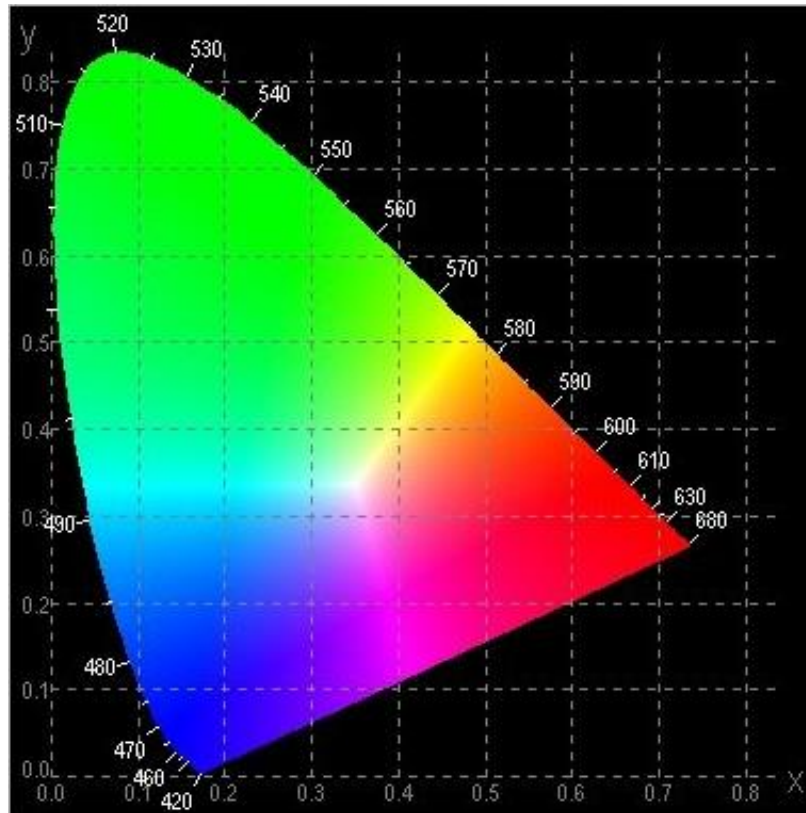
- i. 150
- ii. 130
- iii. 100
- iv. 20

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