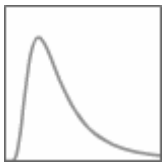
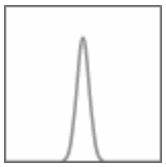
Name: _____

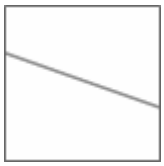
Blackbody Curves & UBV Filters – Pretest

Answer the following questions:

Question 1: Which of the following is a blackbody curve?

a) 

b) 

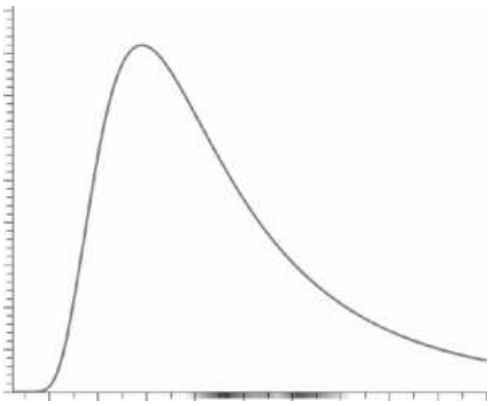
c) 

d) 

Question 2: Which of the following is not part of the electromagnetic spectrum?

a) the light from an incandescent light bulb
b) the radiation produced in a microwave oven
c) the heat from the heating coils in a conventional oven
d) the radiation used to take an x-ray of bones
e) all of the above are part of the electromagnetic spectrum
f) none of the above are part of the electromagnetic spectrum

Question 3: The blackbody curve for an object at T = 10,000 K is shown in the figure. If the temperature is lowered to 7,500 K…

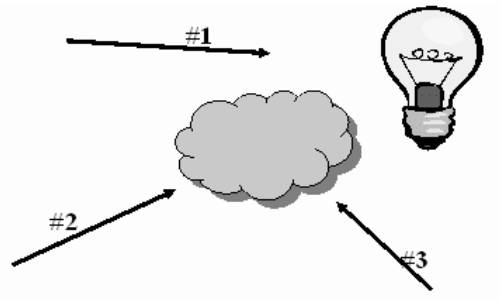


a) the area under the curve decreases and the peak shifts to the right.
b) the area under the curve increases and the peak shifts to the left.
c) the area under the curve increases and the peak shifts to the right.
d) the area under the curve decreases and the peak shifts to the left.

Question 4: How does the color of a star compare to the sun if it is significantly colder than the sun?

a) blue
b) redder
c) basically the same color

Question 5: To the right is a hot blackbody source represented by the light bulb. The cloud is a cool, low density gas. What type of spectra would an observer looking from the perspective labeled #3 see?



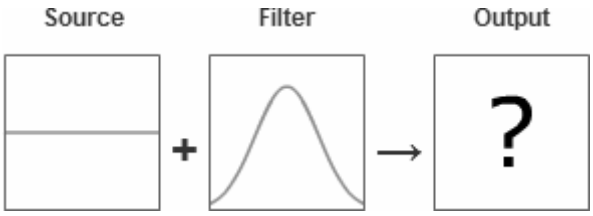
a) continuous
b) emission
c) absorption

Question 6: What is the central wavelength of a red filter?

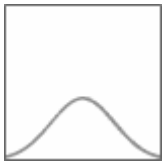
a) 350 nm
b) 440 nm
c) 530 nm
d) 600 nm
e) 750 nm

Question 7: Which of the following is NOT an example of a filter?

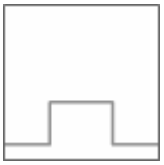
a) suit and tie required for entrance into a restaurant
b) parole board for convicted felons
c) language censor for public broadcast television
d) a measuring cup for cooking

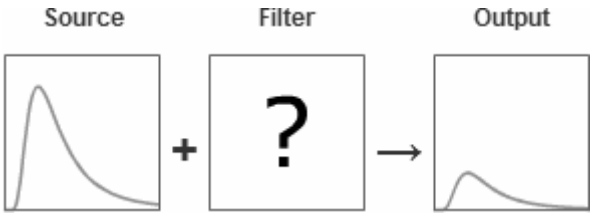


Question 8: Which output below goes with the setup above?

a) 

b) 

c) 



Question 9: Which filtert below goes with the setup above?

a) 

b) 

c)