Sample CIE paper

October 15, 2021

1. (a) Assuming ideal opamp, determine the transfer function of KHN biquad high pass filter. Design a KHN circuit to realize a high pass function with $f_o = 10KHz$ and $Q = 2$, assume the integrators have same resistors and capacitors, with $C = 1nF$. What is the value of high frequency gain obtained? What is the centre frequency gain of bandpass function that is simultaneously available at the output of the first integrator?

(M5:CO1:L1)

Solution:
Hi

   (b) Describe the effect on the balloon industry.

(M5:CO3:L3)

2. What if there were no air?

(M10:CO3:L4)

3. (a) Define the universe. Give three examples.

(M7:CO2:L6)

   (b) If the universe were to end, how would you know?

(M3:CO3:L2)

COs & BTs	CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6	Total
Marks:	5	7	18	0	5	3	5	10	0	7	30
Score:											