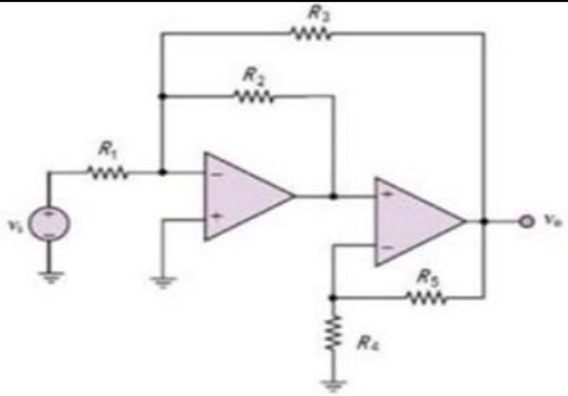


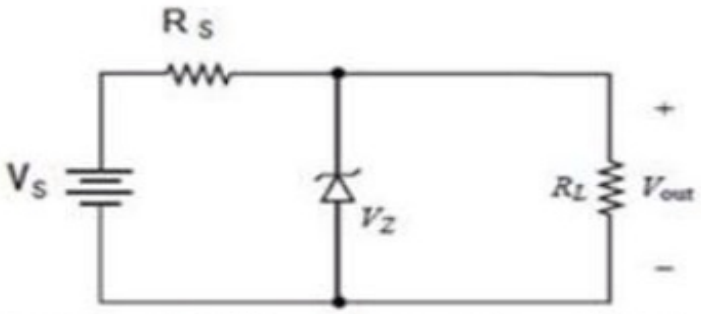
Given R_1=10Ω, R_2=10 Ω, R_3=10 Ω, R_4=10 Ω and R_5= 30 Ω.

- ○ Av= -2.25(V/V)
- ○ Av= 0.80(V/V)
- ◉ Av= -0.80(V/V)
- ○ Av= 2.25(V/V)

Input Values

R1	50
R2	10
R3	10
R4	10
R5	10
Vout	-0.2
Vin	1.5
Av	-0.13333

Find the minimum value of R_L for which the output voltage keeps exactly at V



Given V_S =25 V, V_Z =15V, and Rs = 25 KΩ.

- ○ 35.0 KΩ.
- ○ 20.5 KΩ.
- ◉ 37.5 KΩ.
- ○ 25.0 KΩ.

⚠ Moving to the next question prevents changes to this answer.

Input

Vs	25
Vz	15
Rs	10
RL	15

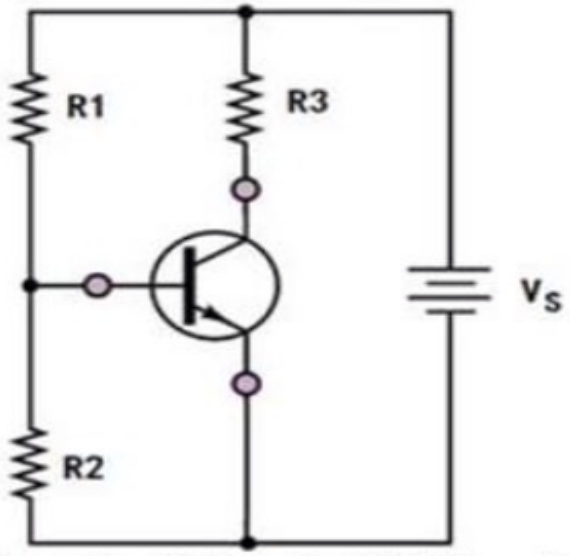
[redacted]

/z.

Question 2 of 5 >

[redacted]

Given the circuit of the figure, determine the base current I_{BQ} and collect v
5 V.



Given R_1=100 kΩ, R_2=200 kΩ, and R_3=500Ω.

- ○ I_{BQ}=0.032mA, V_{CEQ}= 3.350V.
- ◉ I_{BQ}=0.041mA, V_{CEQ}= 3.975V.
- ○ I_{BQ}=0.041mA, V_{CEQ}= 3.350V

Input

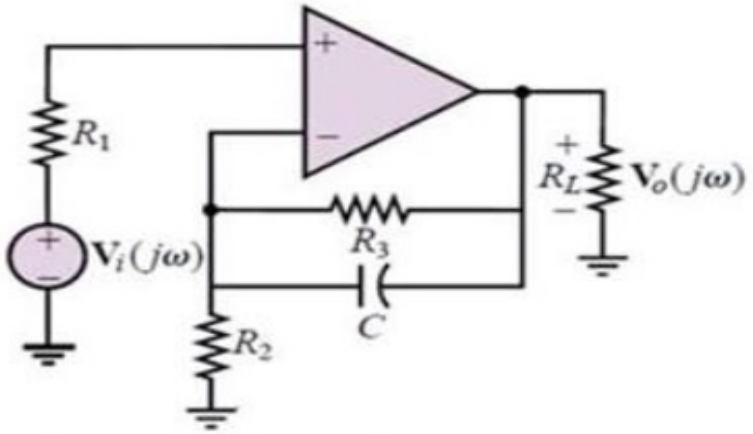
Vs	5	
R1	100	
R2	100	
R3	500	
Vgamma	0.6	
Beta	50	
Ibq	0.038	mA
Ibq (SI unit)	0.000038	
Ic	0.0019	
Vc	4.05	

[redacted]

oltage V_{CEQ}. Assume a 0.6 V offset voltage, $\beta = 50$, and $V_S =$

[redacted]

The circuit shown in the figure is an active filter with. Determine the cutoff frequency (ω_0) and p



Given R_1=2kΩ,R_2=5kΩ,R_3=50kΩ,C=100nF.

- ○ ω_0 = 2000 rad/sec; A_V = 8.22 dB.
- ◉ ω_0 = 200 rad/sec; Av = 20.83 dB.
- ○ ω_0 = 2000 rad/sec; Av = 20.83 dB.
- ○ ω_0 = 200 rad/sec; A_V = 8.22 dB.

Input

R1	2			
R2	5			
R3	10		SI unit (R3, kilo)	1.00E+04
C	25.00		SI Unit C, Nano	0.000000025
Wo	4000.00	rad/s		
Vout/vin	3			
Gain (DB)	9.542425			

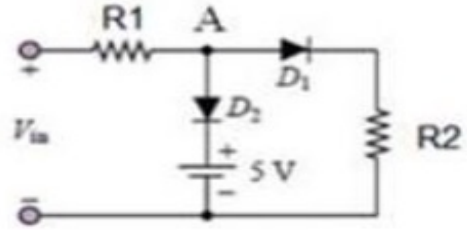
[redacted]

pass-band gain (A_V) of the filter.

[redacted]

Question 1

Two ideal diodes are connected in a circuit shown in the figure. Calculate th



Given R1 = 9 kΩ and R2 = 12 kΩ.

- ○ $0 < V_{in} < 7.75$ V
- ◉ $0 < V_{in} < 8.75$ V
- ○ $0 < V_{in} < 7.25$ V
- ○ $0 < V_{in} < 8.25$ V

⚠ Moving to the next question prevents changes to this answer.

Input

R1	9
R2	12
Vd	5
Vin(v)	8.75

[redacted]

20 points Saved

e voltage range of V_{in} so that D_1 is "ON" but D_2 is "OFF".

Question 1 of 5 >

[redacted]