

EEE311

ELECTRONIC CIRCUITS II

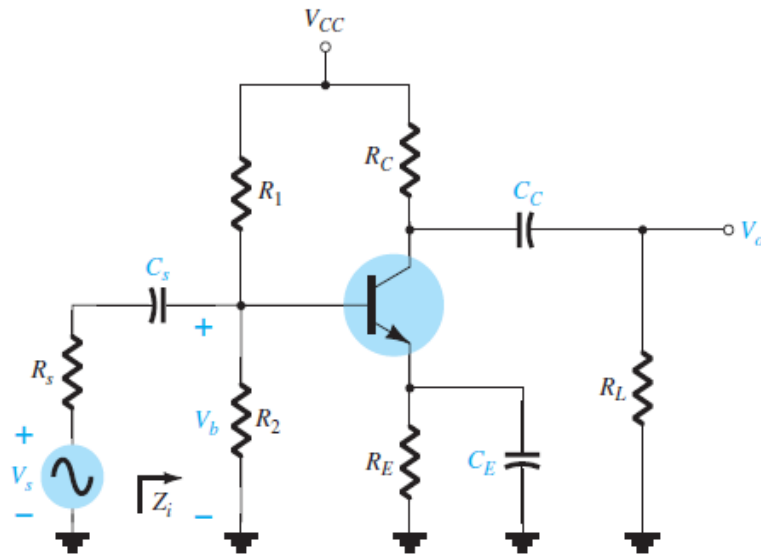
ASSIGNMENT 1

- 1- Assignments must be submitted in hard copy. (Contribution 50%)
- 2- Each student must demonstrate simulations are properly working at his/her own computer. (Contribution 50%)
- 3- Submissions after the deadline will not be accepted.
- 4- **Deadline 12.12.2022**

Submission Rules:

- 1- Submissions must be printed to A4 paper in full range.
- 2- Use both side of the A4 paper.
- 3- If simulation outputs background is black, do not forget to turn it into white.

Group 1



$C_s = 10 \mu\text{F}$, $C_E = 20 \mu\text{F}$, $C_C = 1 \mu\text{F}$

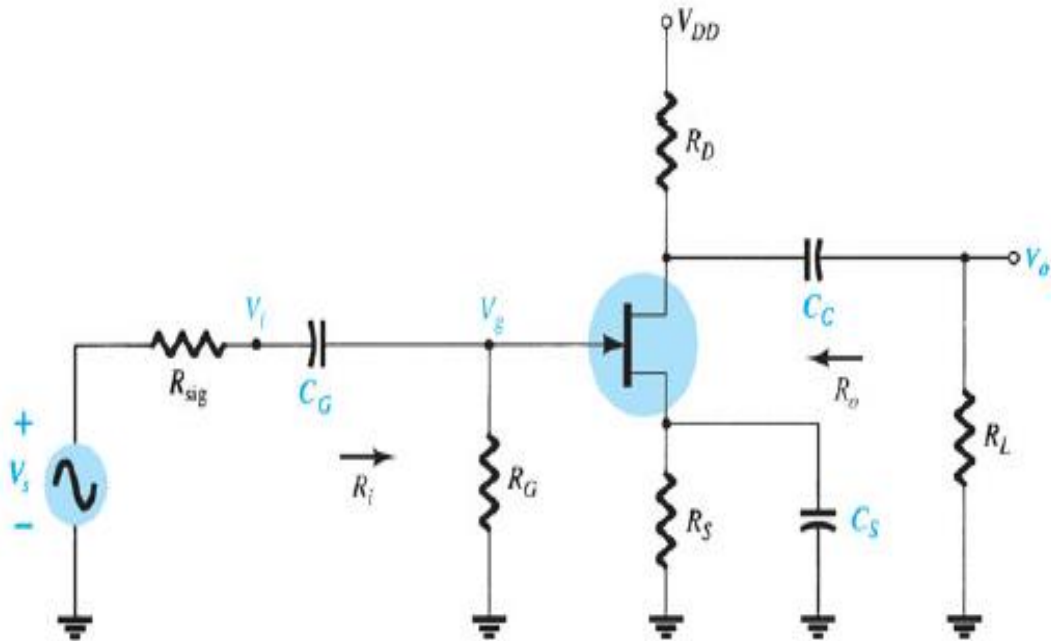
$R_1 = 40 \text{ k}\Omega$, $R_2 = 10 \text{ k}\Omega$, $R_E = 2 \text{ k}\Omega$, $R_C = 4 \text{ k}\Omega$, $R_L = 2.2 \text{ k}\Omega$, $R_s = 1 \text{ k}\Omega$,

$V_{CC} = 20 \text{ V}$.

Using any electronic circuit simulation program and any kind of BJT:

- Print out magnitude bode plot of the circuit.
- Print out phase bode plot of the circuit.
- Determine low cutoff frequency of the circuit.
- Determine high cutoff frequency of the circuit.
- Determine the mid band voltage gain.
- Verify your results with calculations.

Group 2:



$$C_G = 0.01 \mu\text{F}, C_C = 0.5 \mu\text{F}, C_S = 2 \mu\text{F},$$

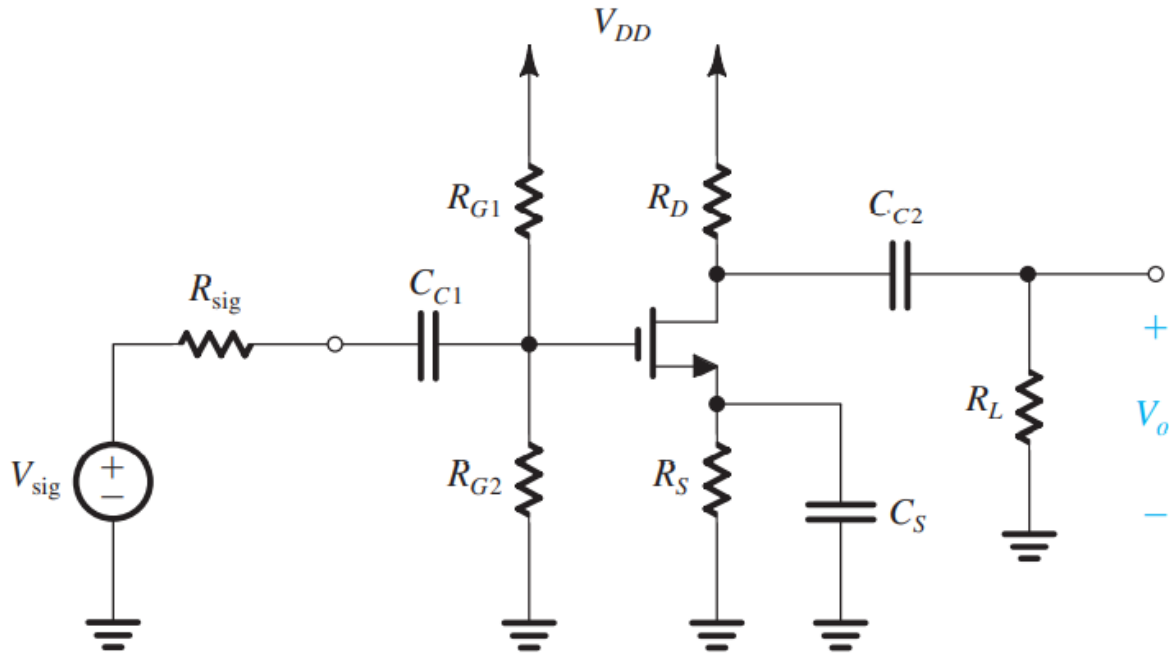
$$R_{sig} = 10 \text{ k}\Omega, R_G = 1 \text{ M}\Omega, R_D = 4.7 \text{ k}\Omega, R_S = 1 \text{ k}\Omega, R_L = 2.2 \text{ k}\Omega$$

$$V_{DD} = 20 \text{ V}$$

Using any electronic circuit simulation program and any kind of **JFET**:

- Print out magnitude bode plot of the circuit.
- Print out phase bode plot of the circuit.
- Determine low cutoff frequency of the circuit.
- Determine high cutoff frequency of the circuit.
- Determine the mid band voltage gain.
- Verify your results with calculations.

Group 3:



$C_{C1} = 100 \text{ nF}$ and $C_{C2} = 0.5 \text{ }\mu\text{F}$ and $C_S = 1.75 \text{ }\mu\text{F}$,

$R_{G1} = R_{G2} = 9.4 \text{ M}\Omega$, $R_D = 10 \text{ k}\Omega$, $R_L = 15 \text{ k}\Omega$, $R_{sig} = 100 \text{ k}\Omega$, $R_S = 8 \text{ k}\Omega$,

$V_{DD} = 20 \text{ V}$

Using any electronic circuit simulation program and any kind of **MOSFET**:

- Print out magnitude bode plot of the circuit.
- Print out phase bode plot of the circuit.
- Determine low cutoff frequency of the circuit.
- Determine high cutoff frequency of the circuit.
- Determine the mid band voltage gain.
- Verify your results with calculations.

Responsibility Table for Assignment 1

	ID	Name	Group 1	Group 2	Group 3
1	200010796	ABDIWELI SAKARIE ISSE	x		
2	200011307	ABDULLAH KÖKER		x	
3	200011045	ABDULLAH İSMAİL ÖZDEMİR			x
4	200016103	ABDURRAHMAN ÇETİN	x		
5	200017746	AHMET ERTUĞ DARENDELİOĞLU		x	
6	200018271	AHMET MÜCAHİT YILMAZ			x
7	200018126	BERKAY ELMACI	x		
8	200019342	BURAK AKBURAK		x	
9	200019121	BURHAN DOĞUHAN LEVENTERLER			x
10	100043308	ENVER KAAAN ARIKAN	x		
11	200022442	EREN KAPLAN		x	
12	200017710	FATMA YAZICI			x
13	200018087	HALİT EMRE ÖZDEMİR	x		
14	200017952	HASAN ARDA TURAN		x	
15	200011388	HASAN ŞABAN ÇALIŞKAN			x
16	200023579	KAOUTHER ACHOURI	x		
17	200017790	KARDELEN DEMİREL		x	
18	200018576	KÜBRA İNAZ			x
19	200017686	MEHMET OSMAN KINACI KARA	x		
20	200018400	MUHAMMED ENES ÇELİK		x	
21	200011383	MUHAMMET ENES YALÇIN			x
22	200019483	MURAT ÇATALBAŞ	x		
23	200017727	NAZLI DAWN MACAHİA YALIM		x	
24	200018147	OSMAN ARDA KAYA			x
25	200021610	ÖYKÜ NAZLI ÇİFLİKLİ	x		
26	200017695	PÜRŞAN ASLAN		x	
27	200011072	RAMAZAN GÖKPINAR			x
28	200018632	RAMAZAN GENÇAĞA SOLAK	x		
29	200011772	RÜÇHAN ŞAHKULUBEY		x	
30	200014710	SAID AHMED SAID			x
31	200018268	SAİD EMİRHAN DÖKE	x		
32	200021857	SELÇUK YİĞİT ESEDOĞLU		x	
33	200018482	TUĞBA MELİSSA ÖZTÜRK			x
34	200019123	ZEYNEP SUDE KILINÇ	x		