

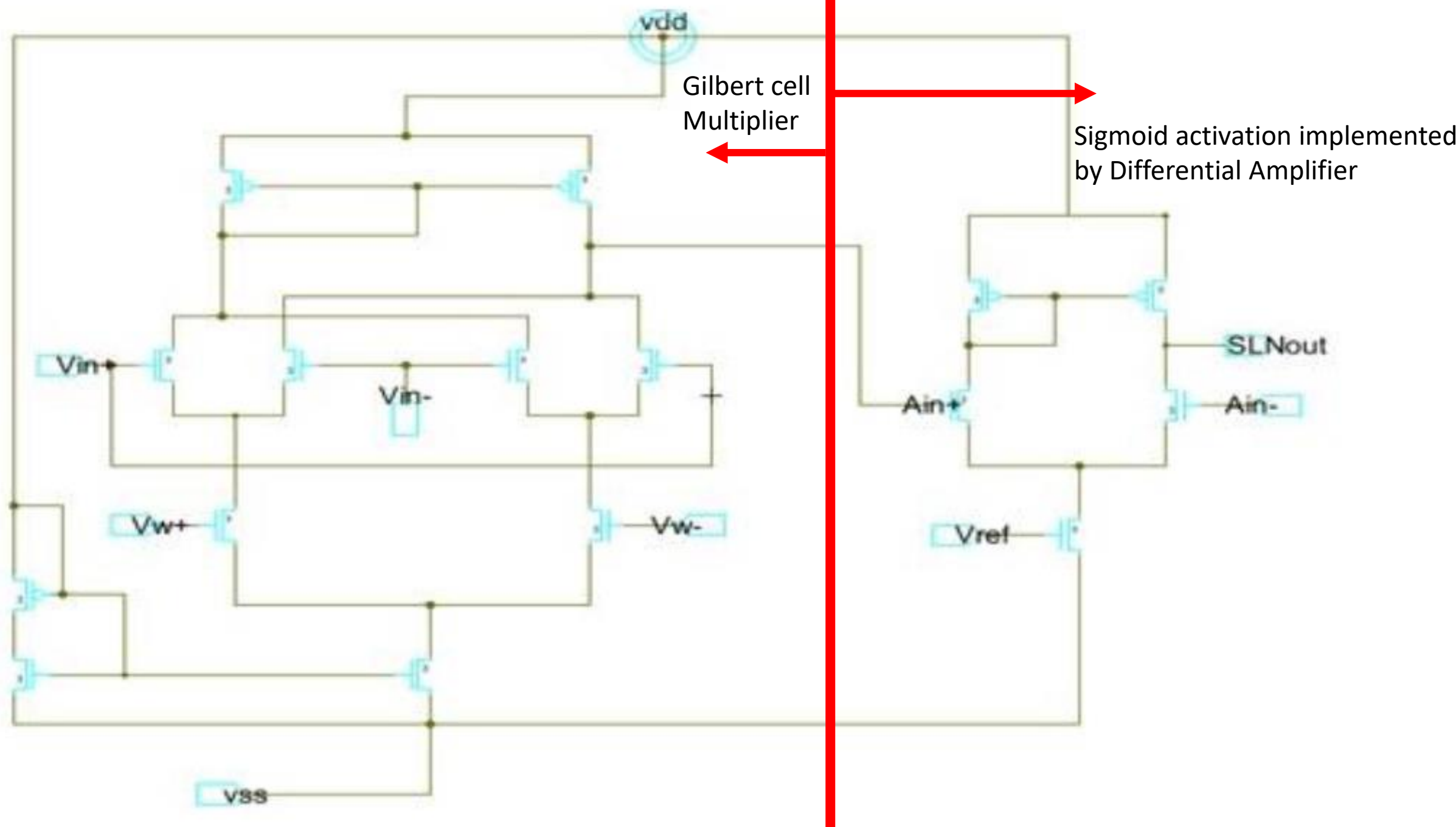
Lab 6

10/10/2022

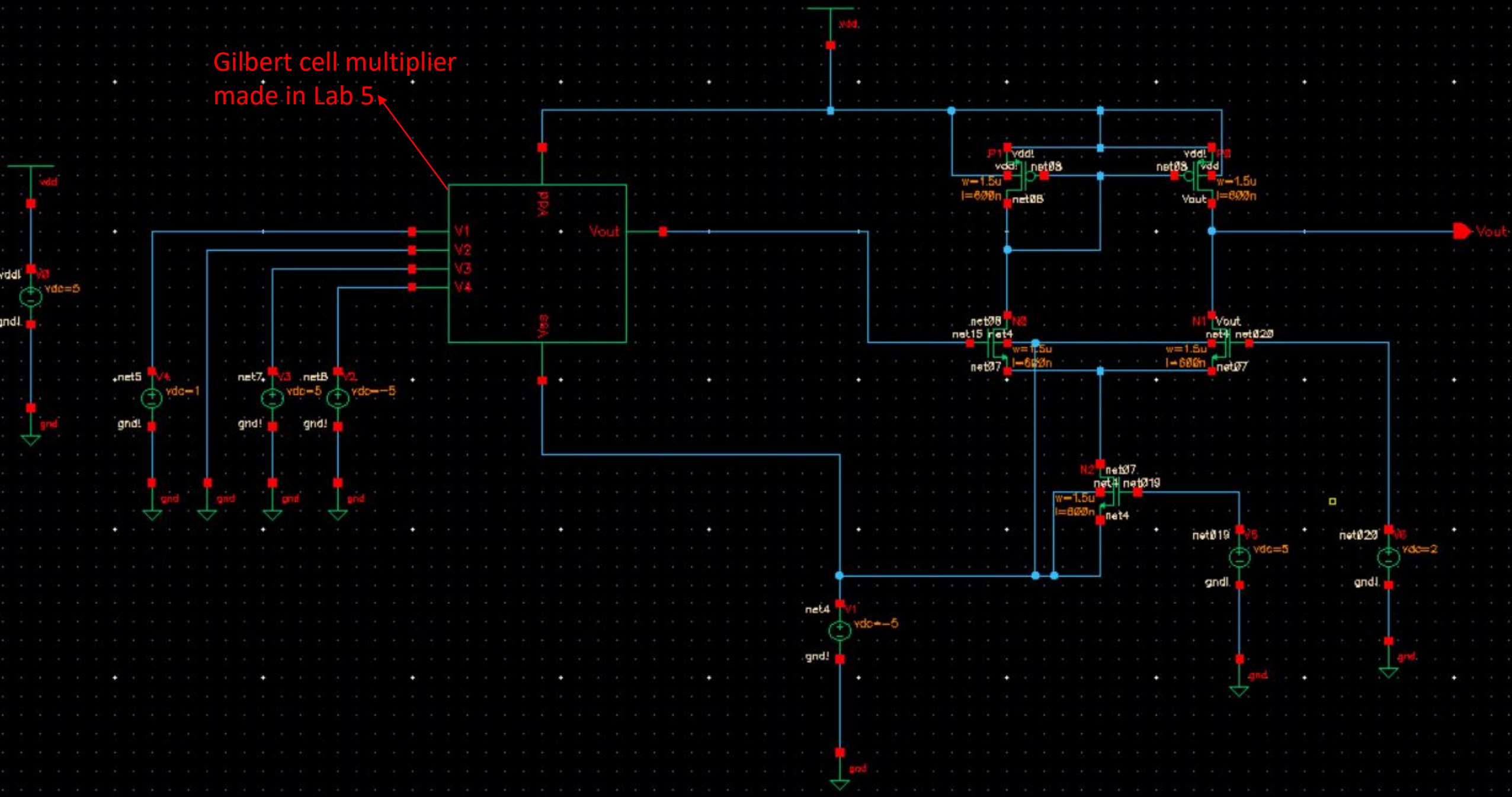
TA: You Zhou

Single layer neuron cell





Gilbert cell multiplier
made in Lab 5



Choosing Analyses -- ADE L (2)

- Analysis
- | | | | |
|------------------------------|-------------------------------------|-------------------------------|-------------------------------|
| <input type="radio"/> tran | <input checked="" type="radio"/> dc | <input type="radio"/> ac | <input type="radio"/> noise |
| <input type="radio"/> xf | <input type="radio"/> sens | <input type="radio"/> dcmatch | <input type="radio"/> acmatch |
| <input type="radio"/> stb | <input type="radio"/> pz | <input type="radio"/> lf | <input type="radio"/> sp |
| <input type="radio"/> envlp | <input type="radio"/> pss | <input type="radio"/> pac | <input type="radio"/> pstb |
| <input type="radio"/> pnoise | <input type="radio"/> pxf | <input type="radio"/> psp | <input type="radio"/> qpss |
| <input type="radio"/> qpac | <input type="radio"/> qpnoise | <input type="radio"/> qpxf | <input type="radio"/> qpsp |
| <input type="radio"/> hb | <input type="radio"/> hbac | <input type="radio"/> hbstb | <input type="radio"/> hbnoise |
| <input type="radio"/> hbsp | <input type="radio"/> hbxf | | |

DC Analysis

Save DC Operating Point ☒

Hysteresis Sweep ☐

Sweep Variable

- ☐ Temperature
- ☐ Design Variable
- ☒ Component Parameter
- ☐ Model Parameter

Component Name /V4

Select Component

Parameter Name dc

Sweep Range

- ☒ Start-Stop
- ☐ Center-Span

Start

0

Stop

1

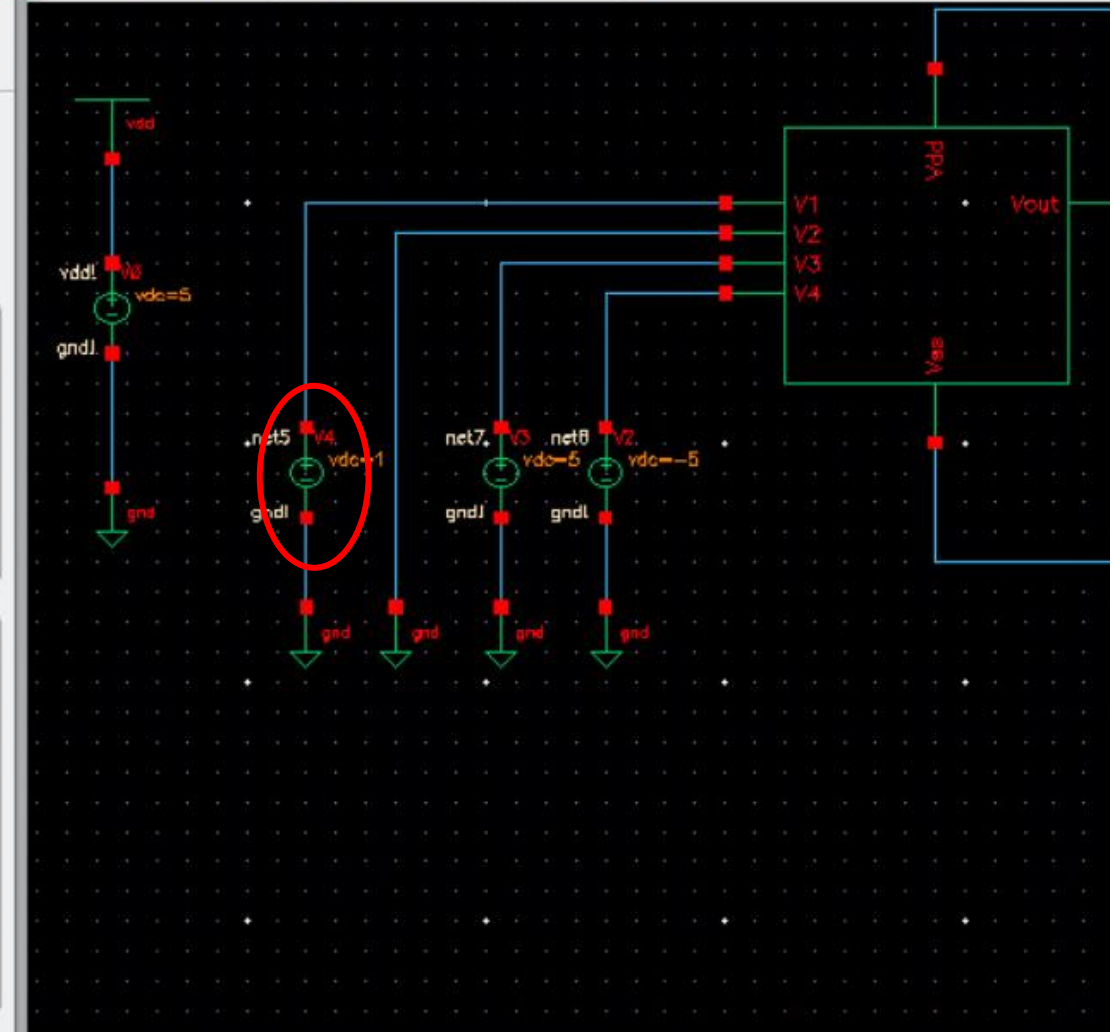
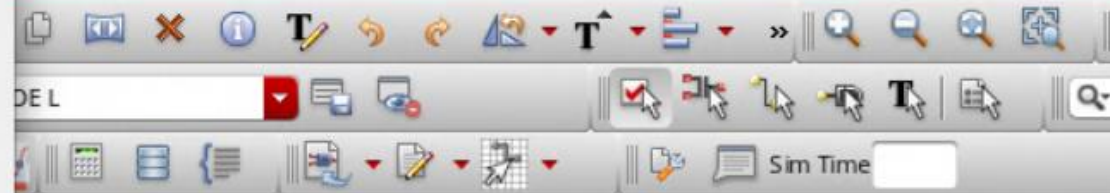
Sweep Type

Automatic

Add Specific Points

☐

File Edit View Options Window NCSU IBM_PDK Help



Select the input voltage, Gilbert multiplier output, Differential Amplifier output to be plotted

ADE L (1) - ECE6217_lab Single_neuron schematic

Session Setup Analyses Variables Outputs Simulation Results Tools Help

cadence

27

Design Variables

Name	Value
1 p5vonly	0

Analyses

Type	Enable	Arguments
1 dc	<input checked="" type="checkbox"/>	t 0 1 Automatic Start-Stop /V4

Outputs

Name/Signal/Expr	Value	Plot	Save	Save Options
1 net5		<input checked="" type="checkbox"/>	<input type="checkbox"/>	allv
2 net15		<input checked="" type="checkbox"/>	<input type="checkbox"/>	allv
3 Vout		<input checked="" type="checkbox"/>	<input type="checkbox"/>	allv

Plot after simulation: Auto

Plotting mode: Replace

2(4) Netlist and Run

Status: Ready T=27 C Simulator: spectre

DE L

AC DC Trans

Sim Time

Search



ECE6217_lab Single_neuron schema... x

DC Response

Thu Oct 6 14:25:07 2022 1

