THE FOLLOWING ITEMS ARE REQUIRED:

- Student's work reproducible from notebook.
- Title and date for each lab section.
- Written in ink.
- Student signed every page.
- Student dated every page.

50 pts  EXPERTIMENT 1:

25 pts 2.
- 10 pt Estimation of $V_{ip}$.
- 15 pts Calculation of $K_p = k_p'(W/L) = \mu_p C_{oxp}(W/L)$.

25 pts 3.
- 10 pt Estimation of $V_{in}$.
- 15 pts Calculation of $K_n = k_n'(W/L) = \mu_n C_{oxn}(W/L)$.

50 pts  EXPERTIMENT 2:

15 pts 1.
- Values for $I_{REF}$ and $I_O$.

5 pts 2.
- Measured value for $I_{REF}$.

10 pts (2a) Table of measured values for $I_O$.

5 pts (1e) New Value of $I_{REF}$ for $R_{REF} = 500$ Ω.

5 pts (3a) Table of measured values for $I_O$.

10 pts 4.
- Detailed explanation of current mirrors and their use in the amplifier circuit.

100 pts  EXPERTIMENT 3:

10 pts 1.
- Hand calculations for the common-source amplifier. (Rs, RD, RG1, RG2)

10 pts 2.
- Analysis of AC circuit. (table form, 10 values)

15 pts 3.
- PSpice Simulation (schematic, bias, transient, frequency- table form)

5 pts 4a.
- Fig. 5 circuit built

10 pts 4b.
- DC measurements. VG, VD, VS, ID

5 pts 4c.
- Fig. 6 circuit built

10 pts 4d.
- VD and Vsig measurement, Avo, phase, comparison to hand calculations.

10 pts 4e.
- Measurement of distortion.

5 pts 4f.
- Output measurement with bypass capacitor removed. Comments.

10 pts 4g.
- Output measurement with Cs, Cc2. Comments.

10 pts 4h.
- Frequency measurements with comments.