CSCI 445 — Task-Sheet for Lab 5

Team Members: ───────────────────────────────

Robot ID: ─────────────────────

Question:	2	3.1	3.2	3.3	4.1	4.2	4.3	Total
Points:	20	15	15	10	15	15	10	100
Score:								

NOTE: The points roughly reflect our estimate on how long each task should take.

2. (20 points) (Controller Architecture)

    (a) Current state and how to estimate it:

    ───

    (b) Goal state:

    ───

    (c) Function for right wheel:

    ───

    (d) Function for left wheel:

    ───

3.1 (15 points) (PController class) [TA Signoff]

3.2 (PController Wall-Following in Simulation)

    (a) (10 points) Simulation working [TA Signoff]

    (b) Gain for Plot 1

    (b) ───────────

    (c) Gain for Plot 2

    (c) ───────────

    (d) Gain for Plot 3

    (d) ───────────

    (e) (5 points) Plots (Make sure you save and submit as part of your solution) [TA Signoff]

(f) Best gain

(f) ───────────

3.3 (10 points) (PController Wall-Following on Robot) [TA Signoff]
Gain used:

3.3 ───────────

4.1 (15 points) (PDController class) [TA Signoff]

4.2 (PDController Wall-Following in Simulation)

(a) (10 points) Simulation working [TA Signoff]

(b) Gains for Plot 1

(b) ───────────

(c) Gains for Plot 2

(c) ───────────

(d) Gains for Plot 3

(d) ───────────

(e) (5 points) Plots (Make sure you save and submit as part of your solution) [TA Signoff]

(f) Best gains

(f) ───────────

(g) P vs. PD Controller:

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4.3 (10 points) (PDController Wall-Following on Robot) [TA Signoff]
Gain used:

4.3 ───────────

NOTE: Please zip all your code and plots and have one person in your group upload it on Piazza as **private note to instructors**. You will not receive any marks for this lab should you not submit your code by the end of the session. [TA Signoff]

NOTE: Before you leave, make sure you clean your workstation, return all robots and tools used to the front desk in the same format that you received them. If not done so, 10 points will be deducted. [TA Signoff]