

ECE 3084  
QUIZ 2  
SCHOOL OF ECE  
GEORGIA INSTITUTE OF TECHNOLOGY

NOVEMBER 12, 2020

NAME: \_\_\_\_\_

PROBLEM	POINTS	SCORE
1	20	
2	20	
3	20	
4	20	
5	20	
<b>TOTAL:</b>	<b>100</b>	

"My signature below attests that I have neither given nor received help during the taking of this exam, and that I am in complete compliance with the Georgia Tech honor code."

\_\_\_\_\_  
(your signature)

- This is a timed quiz: After you start you have 120 minutes to click the "Submit Quiz" button.
- The nominal duration of the quiz itself is 75 minutes; the extra 45 minutes is generously budgeted for scanning and uploading.
- The countdown starts once you begin. It will not pause if you disconnect from the internet, and it will not reset if you log in again.
- It is your responsibility to observe the time.
- You must begin the exam prior to the cutoff time specified.
- Open book, open calculator, open MATLAB. Google and other internet search engines are not recommended.
- No communications (electronic or otherwise) to anyone regarding the quiz, except for one exception:
- Please use Piazza for any questions, or to correct a typo.
- A correct answer without justification will not receive full credit.
- Full credit requires not only a correct answer but also a clear justification, so show your work and explain your thinking.
- Partial credit will be available but limited.
- Before you click "Submit Quiz," be sure to upload a single PDF document that shows your work and answers.
- If you have a printer: Print this PDF, work on it directly, then scan and upload it.
- If you do not have timely access to a printer, you have three other options:
  - You can print the template and work on it,
  - You can work directly on this PDF electronically, using a tablet and stylus.
  - You can start with 7 blank pieces of paper and draw answer boxes that align with those on the template before proceeding.
- Regardless of how you proceed, you should end up with a single PDF document with 7 pages to upload.
- Do not attach extra pages. Only the first 7 pages will be graded.
- Do not "borrow" space from one page to show work about another problem (for example, do not show work for Prob. 1 on page 3).
- Violations of the Georgia Tech honor code will be reported to the Dean of Students for disciplinary action.

**PROBLEM 1.**

(a)

$$= \boxed{\phantom{000}}$$

(b)

$$= \boxed{\phantom{000}}$$

**PROBLEM 2.**

(a)



(b)

$$= \begin{array}{|c|} \hline \text{ } \\ \hline \end{array} \quad = \begin{array}{|c|} \hline \text{ } \\ \hline \end{array}.$$

**PROBLEM 3.**

(a)



(b)

$$= \boxed{\phantom{000}}$$
  
$$= \boxed{\phantom{000}}$$

(c)

$$= \boxed{\phantom{000}}$$
  
$$= \boxed{\phantom{000}}$$
  
$$= \boxed{\phantom{000}}.$$

**PROBLEM 4.**

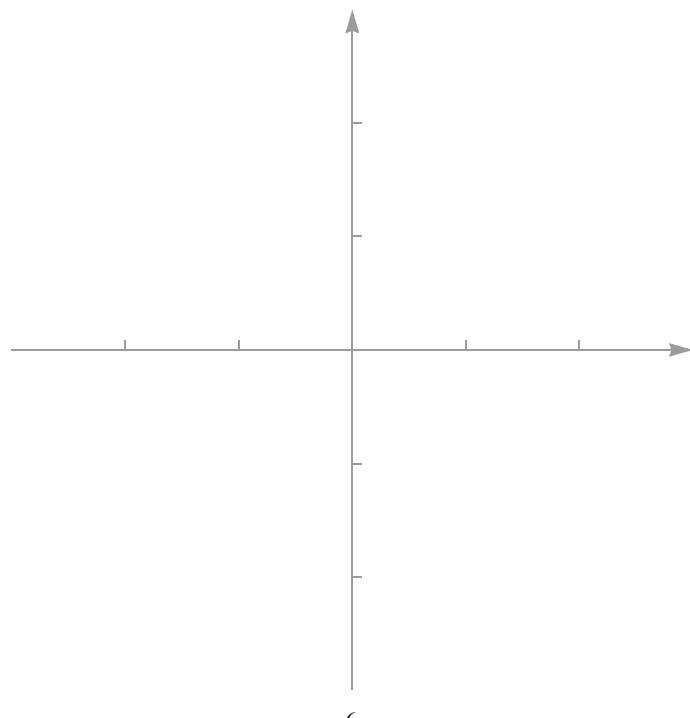
(a)

$$= \boxed{\phantom{000}}, \quad = \boxed{\phantom{000}}.$$

(b)

$$\begin{array}{ccc} = & \boxed{\phantom{000}} & = \boxed{\phantom{000}} \\ & \hline & \\ = & \boxed{\phantom{000}} & = \boxed{\phantom{000}} \end{array}$$

**PROBLEM 5.**



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