

X1: _____ 80pts

X2: _____ 75pts

X3: _____ 75pts

Total: _____ 230pts

Please *PRINT* your *name* and *ordinal*. Ta:

Ord: _____

Hello. The order of your hand-in should be: PROBLEM SHEET (P-S, this side up), TYPESETTING CONVENTIONS (if any), followed by the write-up to the essay. General instructions are on the **CHECKLIST**, a link on <http://www.math.ufl.edu/~squash/teaching.html>.

Every “if” should have an explicit “then”. Use “ $f(x)$ notation” when writing fncs; E.g, write “ $\sin(x)$ ” rather than $\sin x$ or $[\sin x]$. Remember to use brackets for *grouping*, and parentheses for the *argument to a function*.

X1: *Short answer. Show no work.*

a Let $f(t) := \int_0^t \cos(t-w)e^{5w} dw$. Its Laplace transform is $\mathcal{L}(f)(s) =$ _____.

b Let $g(t) := \int_0^t t \cdot \cos(w) \cdot e^{5[t-w]} dw$. Then $\mathcal{L}(g)(s) =$ _____.

Essay questions. Type your solution, in complete, grammatical English sentences that would make Shakespeare weep with admiration. *Double or triple space!* Draw good, useful **Large** pictures showing your ideas.

X2: Please solve P.428: #30.

X3: Please solve P.435: #30.

A possibility. As requested in class, *if* my time permits, I may make-up a bonus problem and then email you to print up the new version of the test, from <http://www.math.ufl.edu/~squash/course.diffyq.html> if you wish to do the bonus.

HONOR CODE: “I have neither requested nor received help on this exam other than from my professor.”

Signature: _____

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