FIN 301 Exam 1 Study Guide

On Tuesday, April 25th, during class time (4pm-6pm), in the regular classroom (PEARL 303)

Material:

- All formulas covered in class
  - PV, FV of single CF
  - PV, FV of annuity
  - PV of growing annuity
  - PV of perpetuity and growing perpetuity
- Must be able to calculate PVs and FVs, even if CFs do not start at t=1 ("two-step" for annuities and perpetuities)
- Must be able to solve single CF formula for r and t
- Must understand the purpose of these formulas
  - How does the FV annuity formula help us with retirement savings?
  - How do the PV formulas help us with tradeoffs? E.g. choosing money now vs. in the future
  - What are the inputs into the formula; how does changing the inputs change the outcome?
  - Money loses value over time, so getting $100,000 in 500 years is worthless

Note:

- There are several versions of the same exam. Focus on your own test, not what others are doing.
- You MUST show your work, especially which formula you used. Even if you have a financial calculator, you cannot just write down the answer, you will not get full credit
- Timelines must show whether there is one single CF or multiple, and whether the CFs go to infinity or not, and must show if there is a growth rate
- No Excel, no phones, no tablets – get a calculator
- No notes. I am giving you all formulas (see below)

There is one long and difficult question. For some versions of the exam, it might be the last question – budget your time accordingly!
It requires understanding, interpretation, and application of what we did in class**. It is related to the PV / FV formulas**! Even if you do not know the answer, just write your thoughts. It is not a trick question.

If you can do the practice problems in class, you will be fine. Do not leave anything blank, always write what you can. If you are unsure about assumptions, write down your own assumptions, and I will take those into account. **There is partial credit!!!** There will be extra credit opportunities. If the exam is too long or too difficult, I will curve. Never panic. 😊

Scheduling notes:

- THERE IS NO CLASS ON THURSDAY 4/20.
- I am leaving on Thursday, 4/20 in the early morning and will not return until Sunday, 4/23. If you have questions, you can contact me via email and we can set up Zoom meetings.
- You must submit 4/20 practice problems on BBLearn by the end of day, 4/24. They will be posted in BBLearn. Doing these practice problems gives you 25 points.
- To make up for the cancelled class, I will host at least one review session. Check your emails for time and date.

Formulas given on the exam:

PV Single CF	FV Single CF	PV Annuity	FV Annuity
$PV = \frac{C}{(1+r)^t}$	$FV = C * (1+r)^t$	$PV = C * [\frac{1 - [\frac{1}{1+r}]^t}{r}]$	$FV = C * [\frac{(1+r)^t - 1}{r}]$
PV Growing Annuity	PV Perpetuity	PV Growing Perpetuity	
$PV = C * [\frac{1-[\frac{1+g}{1+r}]^t}{r-g}]$	$PV = \frac{C}{r}$	$PV = \frac{C}{r-g}$	