Module 3 Discussion Post

For this module, read **Chapters 5 and 6**, and watch the lecture videos.

Then **choose three of the seven questions** below and write a discussion post of ~**500 words**. You do not need to answer all seven. Pick the three you find most interesting. Answer in your own words. A good post shows you understand the concept well enough to explain it to someone who has not watched the lecture, and uses an example wherever you can from your own experience or an organization you know.

Questions (pick three)

1. **Why capital assets need their own kind of analysis.** What features make something a capital asset rather than an ordinary purchase? The lecture points to a timing mismatch: the costs come upfront, but the benefits arrive over decades. Using an example of a capital project in a place you know — a school, a bridge, a treatment plant, a building — explain with assumed numbers why that mismatch makes it wrong to judge the project by its first-year cost.

2. **Compound interest.** Explain the difference between simple and compound interest, and why time value of money analysis uses compounding. Then explain discounting in your own words. If discounting is "compounding run backwards," what question is it actually answering for a manager looking at a future cash flow?

3. **The five inputs of a TVM calculation.** Every time value of money problem is built from the same five quantities: present value (PV), future value (FV), the interest or return rate per period (i), the number of periods (N), and the payment (PMT). Explain in your own words what each one represents. Then take a situation you know — a car loan, a savings goal, a mortgage, a lease — and say which of the five you already know and which one you don't.

4. **Net present cost versus annualized cost.** Both methods compare the costs of alternative options. Explain these two cost methods and tell how you use them to make decisions.

5. **What a net present value actually tells you.** NPV is the present value of inflows minus the present value of outflows. Explain what it means for a project to have a positive NPV, and what it means for one to have a negative NPV. Then explain why a government might still proceed with a project whose NPV is negative.

6. **The discount rate.** In a textbook the discount rate is handed to you; in practice someone picks it. Explain how that choice is made and why it matters.

7. **Why a bond sells for more or less than its face value.** A bond's coupon rate is fixed when it is issued, but market interest rates move afterwards. Explain why a bond whose coupon rate falls below the current market rate must sell at a discount, and what that means

for an issuer trying to raise a particular amount of money. What happens to the same bond's price if market rates later fall (i.e. the coupon rate is now higher than the market rate)?

Extra point

As promised in the lecture, there is one extra point available here. Draw a timeline for an **ordinary annuity** and a timeline for an **annuity in advance**, photograph them, and attach the image to your post. Mark the periods and the payments on each so the difference in timing is visible.

This is optional, and it does not count as one of your three questions — it is one point on top of them.

Also include

Close your post by noting, in a sentence or two, which part of the reading or lecture you found most difficult, or what question you still have.

Responding to classmates

After posting, respond to **at least one classmate's post** with a thoughtful reply that adds to the discussion. Where you can, reply to someone who answered a question you did not choose.

A note on AI

These questions check your own understanding of the assigned reading and lecture. Do **not** use AI tools to generate your post. If a concept is not clear after the reading and the videos, say so in your closing note and ask about it.