GSOE 9830 Questions on Week 2 Topics

Dear Students

I invite you to write down your answers to the questions set out below.

Please do not try to submit your answers. They are intended for you to self-assess your understanding of some of the material discussed in the previous lecture.

Regards, Guy

1. What is tax relief?

2. Give a simple hypothetical example

3. What are "sunk costs"?

4. How should we deal with sunk costs when projecting net cash flow to make investment decisions?

5. What words do people use to describe the revenues that we will actually receive and the costs we will actually spend in the future?

6. What words do people use to describe revenues and costs that exclude escalation?

7. What procedure do we go through to project future costs in nominal terms (actual money)?

8. What procedure do we go through to derive future net cash flow in real terms (purchasing power terms)?

9. Why is it not valid to derive future real net cash flow by working entirely with real costs and revenues?

10. Ideally, how would you derive the net cash flow of an investment that is an increment to an existing (base) project or business?

11. Why should we conduct the analysis in this way

12. Quite often, we can conduct short-cut incremental net cash flow analyses. What are these? Under what circumstances can we conduct a short-cut analysis?

13. Apply a short-cut analysis to the incremental investment with the data below.

	Year 1	Year 2	Year 3	Year 4	Year 5
Incremental revenue ($MM)		5	20	16	10
Incremental capex ($MM)	20				
Incremental opex ($MM)		2	2	2	2

Depreciation for tax is straight line over 4 years starting in year 2. Opex is immediately deductible. The tax rate is 40%.

14. What procedure would you adopt to decide between investing in two processes to do the same task? These are mutually exclusive incremental investments (that is, we cannot do both of them). Assume that neither investment changes the timing of tax for the underlying business.

15. Apply a short-cut incremental analysis to the mutually exclusive incremental investments with the data below. Depreciation of capital costs is on a straight-line basis over 3 years starting in Year 2. Opex and Abex are immediately deductible without any depreciation. Which project gives the lower after-tax total costs?

Project 1	Year 1	Year 2	Year 3	Year 4	Year 5
Incremental revenue ($MM)		0	0	0	0
Incremental capex ($MM))	20				
Incremental opex ($MM))		12	12	12	0
Incremental abex ($MM)					15

Project 2	Year 1	Year 2	Year 3	Year 4	Year 5
Incremental revenue ($MM)		0	0	0	0
Incremental capex ($MM)	29				
Incremental opex ($MM)		7	7	7	0
Incremental abex ($MM)					20