Name: _____ Class: _____ Date: _____ ID: A

Sample Questions for Chapters 10 & 11

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

____ 1. Sacramento Paper is considering two mutually exclusive projects. Project A has an internal rate of return (IRR) of 12 percent, while Project B has an IRR of 14 percent. The two projects have the same risk, and when the cost of capital is 7 percent the projects have the same net present value (NPV). Assume each project has an initial cash outflow followed by a series of inflows. Given this information, which of the following statements is most correct?

a. If the cost of capital is 13 percent, Project B's NPV will be higher than Project A's NPV.
b. If the cost of capital is 9 percent, Project B's NPV will be higher than Project A's NPV.
c. If the cost of capital is 9 percent, Project B's modified internal rate of return (MIRR) will be less than its IRR.
d. Statements a and c are correct.
e. All of the statements above are correct.

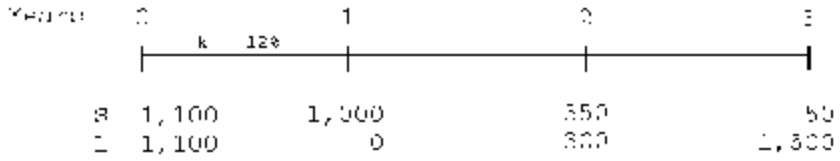
____ 2. Coughlin Motors is considering a project with the following expected cash flows:

Year	Project Cash Flow
0	-$700 million
1	200 million
2	370 million
3	225 million
4	700 million

The project's WACC is 10 percent. What is the project's discounted payback?

a. 3.15 years
b. 4.09 years
c. 1.62 years
d. 2.58 years
e. 3.09 years

____ 3. A company is analyzing two mutually exclusive projects, S and L, whose cash flows are shown below:



The company's cost of capital is 12 percent, and it can obtain an unlimited amount of capital at that cost. What is the regular IRR (not MIRR) of the better project, that is, the project that the company should choose if it wants to maximize its stock price?

a. 12.00%
b. 15.53%
c. 18.62%
d. 19.08%
e. 20.46%

____ 4. Hancock Furniture Inc. is considering new expansion plans for building a new store. In reviewing the proposed new store, several members of the firm's financial staff have made a number of points regarding the proposed project. Which of the following items should the CFO include in the analysis when estimating the project's net present value (NPV)?

a. The new store is expected to take away sales from two of the firm's existing stores located in the same town.
b. The company owns the land that is being considered for use in the proposed project. This land could instead be leased to a local developer.
c. The company spent $2 million two years ago to put together a national advertising campaign. This campaign helped generate the demand for some of its past products, which have helped make it possible for the firm to consider opening a new store.
d. Statements a and b are correct.
e. All of the statements above are correct.

____ 5. Which of the following is not discussed in the text as a method for analyzing risk in capital budgeting?

a. Sensitivity analysis.
b. Beta, or CAPM, analysis.
c. Monte Carlo simulation.
d. Scenario analysis.
e. All of the statements above are discussed in the text as methods for analyzing risk in capital budgeting.

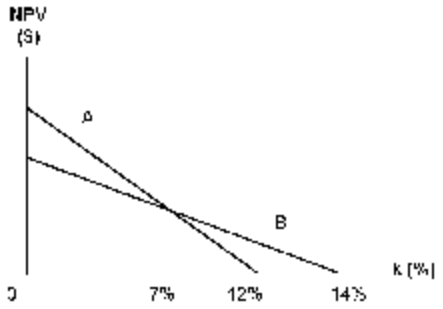
____ 6. Ellison Products is considering a new project that develops a new laundry detergent, WOW. The company has estimated that the project's NPV is $3 million, but this does not consider that the new laundry detergent will reduce the revenues received on its existing laundry detergent products. Specifically, the company estimates that if it develops WOW the company will lose $500,000 in after-tax cash flows during each of the next 10 years because of the cannibalization of its existing products. Ellison's WACC is 10 percent. What is the net present value (NPV) of undertaking WOW after considering externalities?

a. $2,927,716.00
b. $3,000,000.00
c. -$ 72,283.55
d. $2,807,228.00
e. -$3,072,283.55

Sample Questions for Chapters 10 & 11
Answer Section

MULTIPLE CHOICE

1. ANS: E



Statement a is true because at any point to the right of the crossover point B will have a higher NPV than A. Statement b is true for the same reason that statement a is true; at any point to the right of the crossover point, B will have a higher NPV than A. Statement c is true. If B's cost of capital is 9 percent, the MIRR assumes reinvestment of the cash flows at 9 percent. When IRR is used, the IRR calculation assumes that cash flows are reinvested at the IRR (which is higher than the cost of capital). Since statements a, b, and c are true, statement e is the correct choice.

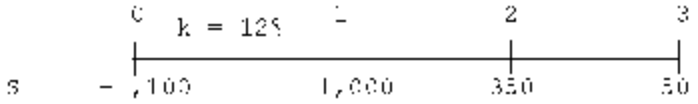
2. ANS: E
The PV of the outflows is -$700 million. To find the discounted payback you need to keep adding cash flows until the cumulative PVs of the cash inflows equal the PV of the outflow:

Year	Cash Flow	Discounted Cash Flow @ 10%	Cumulative PV
0	-$700 million	-$700.0000	-$700.0000
1	200 million	181.8182	-518.1818
2	370 million	305.7851	-212.3967
3	225 million	169.0458	-43.3509
4	700 million	478.1094	434.7585

The payback occurs somewhere in Year 4. To find out exactly where, we calculate $43.3509/$478.1094 = 0.0907 through the year. Therefore, the discounted payback is 3.091 years.

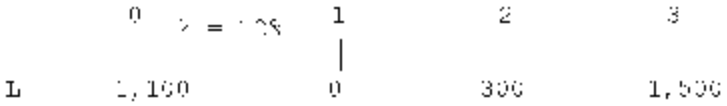
3. ANS: D
Because the two projects are mutually exclusive, the project with the higher positive NPV is the "better" project.

Time line:



Inputs: CF_0 = -1100; CF_1 = 1000; CF_2 = 350; CF_3 = 50; I = 12.
Outputs: NPV = $107.46; IRR = 20.46%.

Time line:



Inputs: CF_0 = -1100; CF_1 = 0; CF_2 = 300; CF_3 = 1500; I = 12.
Outputs: NPV = $206.83; IRR = 19.08%.

Project L is the "better" project because it has the higher NPV; its IRR = 19.08%.

4. ANS: D
The correct answer is statement d. Statement a is correct. This represents a future loss in revenue to the firm. Statement b is also correct because the firm needs to consider the best alternative use of the land. Statement c, on the other hand, is NOT correct since it represents a sunk cost. So, Statement d is the correct choice.

5. ANS: E

6. ANS: C
Step 1: Calculate the NPV of the negative externalities due to the cannibalization of existing projects:
Enter the following input data in the calculator:
CF_0 = 0; CF_{1-10} = -500000; I = 10; and then solve for NPV = $3,072,283.55.

Step 2: Recalculate the new project's NPV after considering externalities: +$3,000,000 - $3,072,283.55 = -$72,283.55.