

Multiple choice – 3 points each – 48 points total – Circle the correct answer

1. An analysis of what happens to NPV estimates when one variable is changed is called _____ analysis.
 - A. forecasting
 - B. scenario
 - C. sensitivity
 - D. simulation
 - E. break-even

2. The worst capital budgeting technique between the following is:
 - A. average accounting return.
 - B. internal rate of return.
 - C. payback period.
 - D. profitability index.
 - E. net present value.

3. Project A has conventional cash flows and is acceptable according to the NPV criterion. If the required rate of return is 12 percent, then the project:
 - A. will be acceptable using the IRR criterion.
 - B. will be rejected under the IRR criterion.
 - C. could be accepted or rejected depending on whether the IRR is greater than or less than 12 percent.
 - D. will be accepted only if the IRR is equal to 12 percent.
 - E. must also be acceptable according to the payback method.

4. You feel that your company can sell 100,000 units of a new mid-priced product at \$40 each. You also feel that your company will lose sales of 15,000 units of the expensive model at \$50 each and gain 10,000 units of sales of the cheaper model at \$30 each. What figure should you use for the change in sales when doing the capital budgeting?
 - A. \$3,000,000
 - B. \$3,250,000
 - C. \$3,550,000
 - D. \$4,000,000
 - E. \$5,050,000

5. Which one of the following refers to the option to expand into related businesses in the future?
- A. Strategic option
 - B. Contingency option
 - C. Soft rationing
 - D. Hard rationing
 - E. Capital rationing option
6. A firm's manager reviewing a project is concerned about the level of forecasting risk in a project's estimated cash flows. The manager should use _____ analysis to identify the variable that presents the highest degree of forecasting risk.
- A. scenario
 - B. simulation
 - C. sensitivity
 - D. break-even
 - E. strategic options
7. _____ quantifies, in dollar terms, how stockholder wealth will be affected by undertaking a project.
- A. The discounted payback period
 - B. Net present value
 - C. Internal rate of return
 - D. Payback period
 - E. Average accounting return
8. The most valuable investment given up if an alternative investment is chosen is a(n) _____.
- A. salvage value
 - B. net working capital expense
 - C. sunk cost
 - D. erosion cost
 - E. opportunity cost
9. The Shoe Box is considering adding a new line of winter footwear to its product lineup. Which of the following are relevant cash flows for this project?
- I. Decreased revenue from products currently being offered if this new footwear is added to the lineup
 - II. Revenue from the new line of footwear
 - III. Money spent to date looking for a new product line to add to the store's offerings
 - IV. Cost of new counters to display the new line of footwear
- A. I and IV only
 - B. II and IV only
 - C. II and III only
 - D. I, II, and IV only
 - E. II, III, and IV only

10. Weston Steel purchased a new coal furnace six years ago at a cost of \$2.2 million. Last year, the government changed the emission requirements and this furnace cannot meet those standards. Thus, Weston can no longer use the furnace, nor has it been able to locate anyone willing to purchase the furnace. Given the current situation, the furnace is best described as which type of cost?
- A. Erosion
 - B. Book
 - C. Sunk
 - D. Market
 - E. Opportunity
11. What is the term for borrowing a stock to sell today and agreeing to replace the stock at some point in the future?
- A. IRA sale
 - B. Short sale
 - C. Margin purchase
 - D. Long sale
 - E. 401k transaction
12. The managers of H.R Construction are considering remodeling plans for an old building the firm currently owns. The building was purchased eight years ago for \$689,000. Over the past eight years, the firm rented out the building and used the rent to pay off the mortgage. The building is now owned free and clear and has a current market value of \$898,000. The firm is considering remodeling the building into a conference center and sandwich bar at an estimated cost of \$1.7 million. The estimated present value of the future income from this center is \$2.9 million. Which one of the following defines the opportunity cost of the remodeling project?
- A. Initial cost of the building
 - B. Cost of the remodeling
 - C. Current market value of the building
 - D. Initial cost of the building plus the remodeling costs
 - E. Current market value of the building plus the remodeling costs
13. Which of the following retirement plans does not allow for contributions to be listed as a tax deduction?
- A. 401k
 - B. Traditional IRA
 - C. 403b
 - D. Roth IRA
 - E. Keogh

14. Which of the following fees and expenses is designed to compensate mutual funds for marketing and distribution costs?
- A. Trading expenses
 - B. Front end loads
 - C. 12b-1 fees
 - D. Management fees
 - E. Back end loads
15. Consider an investment with an initial investment and positive future cash flows. As the discount rate increases, the:
- A. IRR remains constant while the NPV increases.
 - B. IRR decreases while the NPV remains constant.
 - C. IRR increases while the NPV remains constant.
 - D. IRR remains constant while the NPV decreases.
 - E. IRR decreases while the NPV decreases.
16. The time you must wait until the money a company deposits into your retirement account is yours if you leave the company is called the _____ period.
- A. accrual
 - B. vesting
 - C. waiting
 - D. sinking
 - E. quiet
17. Isabella is considering three mutually exclusive options for the additional space she just added to her specialty women's store. The cost of the expansion was \$127,000. She can use this additional space to add a fabric and quilting section, add an exclusive gifts department, or expand into imported decorator items for the home. She estimates the net present value of these options at \$114,000 for fabric and quilting, \$163,000 for exclusive gifts, and \$138,000 for decorator items. Which option(s), if any, should Isabella accept?
- A. None of these options.
 - B. Exclusive gifts only.
 - C. Fabric and quilting only.
 - D. Exclusive gifts and decorator items only.
 - E. All three options.

18. Steve owns a store that caters primarily to men and their hobbies. He is contemplating greatly expanding the hunting and fishing section of the store. If he does this, he expects his fishing and hunting sales will increase, his camping gear sales will increase, and his model train sales will decrease. Which of the following should Steve include in his revenue projection for the expansion project?
- I. Increase in fishing and hunting sales
 - II. Increase in camping gear sales
 - III. Decrease in model train sales
- A. I only
 - B. II only
 - C. I and III only
 - D. II and III only
 - E. I, II, and III
19. A proposed project will increase a firm's accounts payables. This increase is generally:
- A. treated as an erosion cost.
 - B. treated as an opportunity cost.
 - C. a sunk cost and should be ignored.
 - D. a cash outflow at time zero and a cash inflow at the end of the project.
 - E. a cash inflow at time zero and a cash outflow at the end of the project
20. Which one of the following will increase the operating cash flow?
- A. Decrease in depreciation.
 - B. Decrease in sales.
 - C. Increase in variable costs.
 - D. Decrease in fixed costs.
 - E. Increase in the tax rate.

Partial Credit - 40 points total – SHOW ALL WORK

Problem 1 (11 points) You are considering a new product launch. The plant and equipment will cost \$650,000, have a four year life, and be depreciated on a straight-line basis to zero salvage value. Sales are projected at 150 units per year, price per unit will be \$18,000, variable cost per unit will be \$13,000, and fixed costs will be \$450,000 per year. The project will require an investment in inventory of \$150,000 to be returned at the end of the project. The required return on the project is 15% and the tax rate is 30%. Based on your knowledge, you feel that the price, variable costs, fixed costs and quantity are accurate to within $\pm 10\%$. Fill in the table with the base case, best case and worst case values for the project. Also, calculate the payback period, NPV and IRR for the best-case and worst-case scenarios.

	Base case	Best case	Worst case
Price			
Quantity			
Variable costs			
Fixed costs			

Problem 2 (11 points) A three year project has an initial investment in plant and equipment of \$375,000 which will be depreciated on a straight-line basis over the three year life of the project. The company will sell 110,000 units at a price of \$26 each and a variable cost of \$15. Fixed costs are \$165,000, the tax rate is 34% and the cost of capital is 14%. How sensitive is NPV to changes in price?

Problem 3 (18 points) Your company is considering a new project. The company has a plant available that it is currently not using. The plant was purchased for \$1,800,000 four years ago, but could be sold for \$1,900,000 after taxes today. In three years, the plant will be able to be sold for \$1,850,000 after taxes. There is no depreciation on the plant. The equipment necessary for the project will cost \$3.5 million and will be depreciated on a 3-year MACRS schedule. The equipment can be sold for \$725,000 in 3 years. The sales projections for each year are \$2.9 million, \$4.8 million and \$3.7 million, respectively, over the 3-year life of the project. Variable costs are 35 percent of sales, and fixed costs are \$750,000 per year. The project will also require an investment of \$125,000 in NWC which will be returned at the end of the project. The company has a tax rate of 40 percent and the required return on the project is 13 percent. Calculate the payback period, profitability index, NPV, and IRR of the project. Should the company accept the project?