

**Multiple choice – 3 points each – 57 points total – Circle the correct answer**

1. The opportunities that a manager has to modify a project once it has started are called:
  - A. sensitivity choices.
  - B. managerial options.
  - C. scenario adjustments.
  - D. restructuring options.
  - E. erosion control measures.
  
2. 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.
  
3. 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

4. You are using a net present value profile to compare Project A and B, which are mutually exclusive. Which one of the following statements correctly applies to the crossover point between these two?
  - A. The internal rate of return for Project A equals that of Project B, but generally does not equal zero.
  - B. The internal rate of return of each project is equal to zero.
  - C. The net present value of each project is equal to zero.
  - D. The net present value of Project A equals that of Project B, but generally does not equal zero.
  - E. The net present value of each project is equal to the respective project's initial cost.
  
5. You have an investment with conventional 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.
  
6. Two projects are mutually exclusive. Project A has an IRR of 10% and Project B has an IRR of 14%. The cost of capital is 8%. You should accept:
  - A. Project B since the IRR is higher
  - B. both projects since each IRR is greater than the cost of capital
  - C. Project A since the IRR is closer to the cost of capital
  - D. unable to determine from information provided
  
7. The government is trying to decide whether or not to purchase any of the new, advanced missiles it has developed. One of the arguments in favor of purchasing the missiles is that so much money has been spent on their development that it would be a waste of money not to buy any. What is the major problem with this argument?
  - A. It ignores the opportunity cost of the money that has been spent.
  - B. It includes the sunk costs of the decision.
  - C. It includes opportunity costs in the decision.
  - D. It includes changes in net working capital.
  - E. It includes financing costs in the decision.
  
8. The worst capital budgeting technique between the following is:
  - A. net present value.
  - B. internal rate of return.
  - C. payback period.
  - D. profitability index.
  - E. modified internal rate of return.

9. When evaluating a new project, the firm should consider all of the following factors except:
- A. changes in working capital attributable to the project.
  - B. previous expenditures associated with a market test to determine the feasibility of the project.
  - C. the current market value of any equipment to be replaced.
  - D. the resulting difference in depreciation expense if the project involves replacement.
  - E. all of the above should be considered.
10. You purchased a piece of land five years ago for \$150,000 and subsequently added \$175,000 in improvements. The current book value of the property is \$225,000. There are two options for the future use of the land: 1) The land can be sold for \$375,000 on an aftertax basis; 2) Your company can destroy the past improvements and build a factory on the land. In considering the factory project, what amount (if any) should the land be valued at?
- A. The present book value of \$225,000.
  - B. The aftertax salvage value of \$375,000.
  - C. The sales price of \$375,000 less the book value of the improvements.
  - D. The original purchase price of the land.
  - E. The property should be valued at zero since it is a sunk cost.
11. Which of the following statements is correct?
- A. Equipment sold for more than its book value will generate a tax saving benefit.
  - B. Equipment sold for more than its book value at the end of a project's life will generate a smaller net cash flow than if the asset is sold at book value.
  - C. An increase in net working capital required at the start of a project is treated as a cash outlay in the determination of the initial cash outlay of the project.
  - D. All of the above are correct.
  - E. None of the above are correct.
12. Your company currently sells oversized golf clubs and the board of directors wants you to look at replacing them with a line of supersized clubs. Which of the following is not relevant?
- A. A reduction in revenues of \$300,000 from terminating the oversized line of clubs.
  - B. Land you own with a market value of \$750,000 that you will use for the new clubs.
  - C. \$200,000 you spent on the research and development of the new clubs.
  - D. \$350,000 you plan to pay Fred Singles to promote the new clubs.
  - E. \$125,000 you will receive by selling the existing production equipment which must be upgraded if produce the new clubs.

13. You are advising a friend who is attempting to decide whether or not to drop a class they are registered for. If they drop, they will forfeit the money spent on tuition. Which of the following is consistent with the capital budgeting principles we discussed?
- I. Remaining in class means they must give up their part-time job.
  - II. The tuition cost for the class was \$1,000.
  - III. If they drop the class, they can sell the textbook for \$30
- A. I only.
  - B. I and II only.
  - C. I and III only.
  - D. II and III only.
  - E. I, II and III.
14. Mark is analyzing a proposed project to determine how changes in the variable costs per unit would affect the project's net present value. What type of analysis is Mark conducting?
- A. forecasting
  - B. scenario
  - C. sensitivity
  - D. simulation
  - E. break-even
15. Which of the following is not a type of retirement account?
- A. 401k
  - B. 403b
  - C. IRA
  - D. Mutual fund
  - E. All of the above are retirement accounts.
16. Which of the following is most likely to have a return equal to the return of the market as a whole?
- A. Index fund
  - B. Money market mutual fund
  - C. 401k
  - D. Bond fund
  - E. ETF
17. If you are investing for retirement, which of the following mutual fund expenses should you be most concerned with?
- A. Front end loads
  - B. Management fees
  - C. Back end loads
  - D. CDSCs
  - E. Wrap account fees

18. Which if the following allows you to profit if a stock decreases in price?
- Long investment
  - Margin purchase
  - Covered call
  - Short sale
  - Mutual fund
19. If you have a disagreement with your broker, which is the most likely place to take your case?
- Federal court
  - An arbitration
  - File a lawsuit in your local court
  - A civil lawsuit
  - A class action lawsuit

**Partial Credit - 43 points total – SHOW ALL WORK**

**Problem 1 (11 points)** You are considering a new product launch. The plant and equipment will cost \$1,200,000, have a five year life, and be depreciated on a straight line basis to zero salvage value. Sales are projected at 1,400 units per year, price per unit will be \$9,500, variable cost per unit will be \$6,700, and fixed costs will be \$600,000 per year. The project will require an investment in inventory of \$150,000 to be returned at the end of the project. The require return on the project is 12 percent and the tax rate is 35 percent. Based on your knowledge, you feel that the price and quantity are accurate to within  $\pm 10$  percent and fixed costs and variable costs are accurate to within  $\pm 15$  percent. Show a 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 scenario.

**Problem 2 (11 points)** A four year project has an initial investment in plant and equipment of \$520,000, which will be depreciated on a straight line basis over the four year life of the project. The company will sell 80,000 units at a price of \$74 each and a variable cost of \$36. Fixed costs are \$2,100,000, the tax rate is 35 percent and the cost of capital is 16 percent. How sensitive is NPV to changes in quantity sold? What does this number mean?

**Problem 3 (7 points)** You are deciding between the following two mutually exclusive projects.

<u>Year</u>	<u>Project A</u>	<u>Project B</u>
0	-\$75,000	-\$75,000
1	25,000	50,000
2	30,000	40,000
3	40,000	30,000
4	50,000	20,000

What is the crossover rate for these two projects? Over what range of returns would you prefer Project A? Over what range of returns would you prefer Project B?

**Problem 4 (14 points)** ) RDH, Inc., manufactures high quality ladies boots. The company is considering the launch of a new boot style. The company believes that it would sell 47,000, 45,000, 41,000, and 36,000 pairs per year over the next four years, respectively. The new boots would sell for \$345, with variable costs of \$153 per pair. Fixed production costs are \$3.75 million per year and the equipment necessary for the new line costs \$8.5 million. The equipment will be depreciated on a 5-year MACRS schedule. The line would require an initial investment in NWC of \$2.5 million, which would be returned at the end of the project. The tax rate is 40 percent, and the required return is 9 percent. The company expects that because of changes in styles, the new design can only be sold for the next four years. In four years, the equipment can be sold for \$2.2 million, although the company believes it will keep the machinery for another product line. What is the NPV and IRR of the new pair of boots?