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CLOSED BOOK & CLOSED NOTES (except 1 single 8.5"x11" sheet of personal notes)

You may use a calculator & 1 single 8.5"x11" sheet of personal notes.

Please use a bubble answer sheet (if available) for this exam, beginning at #1.

Please use your time efficiently to answer as many problems/questions as possible.

Give the BEST response to each item.

There are 90 multiple choice questions + an additional bonus: 15 questions are associated with the Fundamental Skills Assessment Activity (scored pass/fail, as described in syllabus), while the remaining 75 are associated with the final exam. You should answer all 90 questions.

Although there are 75 questions + an additional bonus associated with the final exam, your score will be based on only 70. Your score will equal the number correct times (100/70). In other words, 6 are automatically bonus questions.

1 Assume a firm has pursued a goal of maximizing accounting profits in a purely literal sense and, as a result, has had positive, as well as growing profits since their inception. Which of the following statements is true?
The firm

- a. is pursuing the primary goal of the organization
- b. is acting in the best interests of all stakeholders
- c. is, by definition, also maximizing shareholders' wealth
- d. may possibly be heading toward insolvency (i.e. bankruptcy) (due to insufficient cash flow)
- e. None of the above or insufficient information

2 If market interest rates are currently 15% and your investment provides you this 15% return, does that imply that you are 15% more wealthy (after vs before this investment return)? Assume wealth is defined as the ability to consume (purchase) goods or services.

- a. Yes, because with inflation you do indeed have 15% more money
- b. Yes, because with inflation 15% more money does imply 15% more wealth.
- c. No, because with inflation 15% more money does not imply 15% more wealth.
- d. No, because with inflation 15% more money means your wealth increased more than 15%.
- e. None of the above or insufficient information

3 The primary goal of a publicly-owned firm interested in serving its stockholders should be to

- a. Maximize expected total corporate profit.
- B. Maximize expected EPS.
- C. Minimize the chances of losses.
- D. Maximize the stock price per share, I.e. owners' wealth.
- e. Maximize expected net income.

4 Which of the following would generally be considered the **most risky** (with respect to volatility of returns)?

- a. An investment in a portfolio of common stocks
- b. An investment in a single common stock randomly selected
- c. An investment in a single corporate bond randomly selected
- d. an investment in a portfolio of corporate bonds
- e. do not know

5 The capital budgeting director of Sparrow Corporation is evaluating a project which costs \$200,000, is expected to last for 10 years and produce net after-tax cash flows of \$44,503 per year. If the firm's cost of capital is 14 percent, what is the project's IRR? (Hint: Is the firm's cost of capital relevant to an IRR calculation?)

- a. 8%
- b. 14%
- c. 18%
- d. -5%
- e. 12%

6 You have just taken out a 30-year mortgage on your new home for \$120,000. This mortgage is to be repaid in 360 equal monthly installments. If the stated (nominal) annual interest rate is 14.75 percent, what is the amount of each of the monthly installments?

- a. \$1,515.00
- b. \$1,472.38
- c. \$1,493.37
- d. \$1,522.85
- e. \$1,440.92

7 As bond market interest rates increase, the value (i.e., price) of a fixed coupon interest rate bond (i.e., a typical corporate bond)

- a. does not change
- b. increases
- c. decreases
- d. insufficient information to answer this question
- e. None of the above or insufficient information

8 In an efficient capital market

- a. studying past prices will help you earn above average returns on stock investments
- b. all security investments are positive NPV investments.
- c. securities are relatively fairly priced based on the information available to all investors
- d. above normal returns can not be earned
- e. None of the above or insufficient information

9 On average, the market compensates investors for taking

- a. Nondiversifiable, aka market risk
- b. diversifiable risk
- c. Firm-specific risk
- d. None of the above

10 A project has an initial investment of \$25,000, with \$6,500 annual inflows for each of the subsequent 5 years. If the required return is 12%, what is the NPV?

- a. -\$6,500.00
- b. -\$2,447.02
- c. -\$1,568.95
- d. \$ 215.46
- e. \$1,763.81

11 Since approximately 1900, historical evidence suggests that investing in common stocks has resulted in relatively high average annual returns with

- a. Relatively little annual variation, i.e. low risk
- b. Relatively high annual variation, i.e. high risk
- c. approximately the same annual variation as bonds
- d. no annual variation
- e. none of the above are true

12 Assuming you will leave your money in the bank for the entire year, which of the following interest rate alternatives would you prefer?

- a. 11.75 % compounded semi-annually
- b. 11.75 % compounded quarterly
- c. 11.45 % compounded weekly
- d. 11.45 % compounded annually
- e. None of the above or insufficient information

13 Which of the following assets would be most suitable to financing with relatively larger amounts of long-term debt?

- a. Current assets, such as inventory
- b. Specialized long term assets
- c. Intangible long term assets
- d. Tangible (physical), standardized, and widely tradable fixed assets
- e. This question is irrelevant because firms should avoid using debt whenever possible.

14 Which of the following financial assets would be most susceptible (vulnerable) to a **decline in value if interest rates increased?**

- a. a short term fixed income financial asset (ex. short term bond)
- b. a long term fixed income financial asset (ex. long term bond)
- c. a long term variable interest rate income financial asset
- d. they would all be approximately equally susceptible to a decline in value.
- e. None of the above or insufficient information

15 Assume that you can buy a bond for \$555 **today**. The bond will pay you \$75 in annual coupon payments (i.e. interest payments) at the **end of each** of the next 12 years, **plus** repay the original \$1000 par value of the bond at the end of the 12th year. What annual rate of return would you expect to earn on the investment (i.e., what is the bond's YTM)? (Hint: use your basic TVM keys)

- a. 15.7 %
- b. 16.1 %
- c. 17.6 %
- d. 16.5 %
- e. None of the above or insufficient information

16 All of the following are advantages a corporation may have over a partnership or proprietorship, except which one?

- A. Limited liability.
- B. Ease of transfer of ownership interest.
- C. Unlimited life.
- D. Elimination of double taxation.
- E. Ability to raise capital.

17 If a firm's current ratio is 4, the firm could liquidate its current assets at only _____ percent of their book value and just have enough (nothing extra from current assets) to still pay off the current liabilities in full.

- a. insufficient information to answer; need the inventory amount
- b. insufficient information to answer; need the dollar amounts of CA and CL
- c. 40%
- d. 25%
- e. A current ratio has nothing to do with the question being asked

18 Which of the following would **least** likely be considered as **signaling** a potential problem regarding the "**quality of earnings**" for a firm?

- a. the firm has experienced a significant increase in earnings relative to the industry overall
- b. the firm's accounts receivable account is increasing at a rate faster than the firm's increase in sales.
- c. the firm has announced a delay in their release of financial statements due to a change in auditors
- d. the firm's accounts receivable account is increasing, but at a rate slower than the firm's increase in sales.
- e. all of the above would be considered signals of potential problems regarding the firms' quality of earnings

19 The extended Du Pont equation, a. k. a. the 3 components ROE decomposition equation, (i.e. $ROE = (\text{profit margin}) \times (\text{total asset turnover}) \times (\text{equity multiplier})$) is used to

- a. compute the firm's ROE, as the equation states.
- b. decompose the firm's ROE into sub-components, for a better understanding of the firm's financial health.
- c. determine if the firm is liquid
- d. compute the firm's ROA, as the equation states.

20 Bank A charges 16% APR on auto loans with monthly compounding. What is the Effective Annual Interest Rate (EAR)?

- a. 16%, since $EAR = APR$ for monthly compounding
- b. 13.3%
- c. 1.33%
- d. 17.23%
- e. 18.12%
- f. insufficient information to answer this question (if using bubble sheet just write in "f" to select f)

21 Which of the following is most directly related to value creation?

- a. sales
- b. Cash inflow
- c. Market share
- d. Net income

22 The primary market is defined as

- a. The market for insured securities
- b. The market for new issues
- c. The market for securities of the primary firms in the economy (generally the largest firms)
- d. The over-the-counter market

23 Which of the following assets' book values would, in general, most accurately represent the assets' true market value?

- A. Specialized inventory that can only be used for specific projects
- b. Inventory that is widely used in many common manufacturing activities
- c. real estate assets of the firm
- d. equipment assets of the firm used in production activities.

24 The total economic (true, i.e. true financial value) value of the firm is (Please READ ALL alternatives before answering):

- a. Found on the balance sheet
- b. Equal to the total market value of the stockholders' equity
- c. equal to the total market value of all of the firm's assets
- d. Equal to the total market value of the owners and creditors' claim on the firm, by the balance sheet equation (aka accounting equation)
- e. both c and d are correct

25 Stockholders possess several devices which help align management goals with the stockholders' goals. Included among these are all of the following except:

- a. The right to sell their stock back to the company (I.e. the right to demand the company to repurchase their stock).
- b. incentive compensation plans for management
- c. the right to elect directors
- d. the right to replace or fire managers via the board of directors

26 Because of the limited diversification potential of human capital, managers have an incentive to seek:

- a. Higher risk projects because they offer the potential for higher returns (payoffs) for the managers
- b. higher return projects because they are less risky
- c. lower risk projects, because these projects are in the best interest of all stakeholders
- d. lower risk projects, because these projects are in the best interest of stockholders
- e. lower risk projects, because these projects reduce the probability of the firm going bankrupt.

27 In finance time value of money problems, a finite series of equal payments over equal periods is referred to as

- a. An equilibrium cash flow problem
- b. An equal-equal cash flow problem
- c. a perpetuity cash flow problem
- d. an annuity cash flow problem
- e. a growing annuity cash flow problem
- f. none of the above are accurate (if using bubble sheet just write in "f" to select f)

28 Your subscription to Jogger's World is about to run out and you have the choice of renewing it by sending in the \$10 a year regular rate at the end of each year or of getting a lifetime subscription to the magazine by paying \$100 today. Your cost of capital is 7 percent. How many years would you have to live to make the lifetime subscription the better buy? Assume payments for the regular subscription are made at the end of each year. (Round up if necessary to obtain a whole number of years.)

- a. 10 years
- b. 15 years
- c. 18 years
- d. 20 years
- e. 28 years

29 Managerial stock options are an incentive for managers to act in the best interest of:

- a. stockholders
- b. bondholders
- c. employees
- d. government leaders
- e. the public
- f. banker

30 Suppose you deposit \$2000 into an account at the end of each of the next 10 years. If the account earns 12%, how much will be in the account at the end of 30 years?

- A. 35,097
- b. 192,926
- c. 338,560
- d. 482,665
- e. Insufficient information to compute

31 The simple corporation has an outstanding debt obligation (total of principle and interest due) to the Complex Corporation of \$250 (Assume this is Simple's only debt.). It is year end and the total cash flow of Simple from all sources is \$325. The contingent payoff to the debt and equity holders of Simple Corporation is:

- a. \$250; \$75
- b. \$250; \$325
- c. \$75; \$250
- d. \$325; \$250
- e. none of the above

32 According to the financial perspective, value creation is based on (Please READ ALL alternatives before answering):

- a. The cash flows of the firm
- b. the timing & risk of the cash flows
- c. the net income, aka profits, of the firm
- d. both a & c
- e. both a & b

33 Financial markets are generally recognized as being semi-strong form efficient, which means:

- a. All publicly available information is reflected in current prices
- b. All available information, both public and private is reflected in current prices
- c. only all past price information is reflected in current prices
- d. there is no opportunity for consistently earning returns on investments

34 Double taxation refers to:

- a. dividends being paid after corporate taxes are paid, and thus being taxed twice at the corporate level
- b. dividends being paid after corporate taxes are paid, and thus being taxed once at the corporate level and again at the personal level when an investor receives the dividend
- c. interest being paid after corporate taxes are paid, and thus being taxed twice at the corporate level
- d. interest being paid after corporate taxes are paid, and thus being taxed once at the corporate level and again at the personal level when an investor receives the interest
- e. None of the above

35 30 year corporate bonds are an example of a

- a. money market security
- b. capital market security
- c. mutual fund
- d. marketable option

36 The government has issued a bond that will pay \$1000 in 25 years. The bond will pay no interim coupon payment. What is the present value of the bond if the discount rate is 10%

- a. 92.30
- b. 1000
- c. 9077
- d. 9169
- e. 9230

37 Assume that you invested \$5000 in an account that is expected to average 10% return per year for the next 30 years. How much do you expect to have in the account at the end of the 30 years?

- A. 5000
- b. 87,247
- c. 150,000
- d. 822,470
- e. insufficient information to compute

38 Assuming the current ratio is currently 2.0, which of the following actions will increase the ratio?

- a. purchasing inventory with cash
- b. purchasing inventory with short-term credit
- c. paying off a short-term bank loan with a long-term debt
- d. a customer paying an overdue bill
- e. all of the above will increase the current ratio

39 Assume the following for your corporation:

sales (aka revenue)	\$250
Cost of goods sold	160
depreciation	35
Interest Expense	20

tax rate = 34%

What is the corporation's total after tax net income?

- a. 23.10
- b. 11.90
- c. 35.00
- d. 46.20
- e. 36.30

40 In a reasonably efficient market, at the time of an announcement, market prices react to;

- a. The announcement of new information that was **unanticipated**
- b. The announcement of new information that was previously fully **anticipated**
- c. Both, i. e., both the announcement of new information that was previously fully anticipated, as well as information that was unanticipated
- d. neither, because market price movements are random

Questions 41-43 address a stock valuation problem and are related, though there are assumptions made in sequential questions to avoid an initial error causing all subsequent responses to be in error.

41 Worldwide Inc., a large conglomerate, has decided to acquire another firm by purchasing the firm's outstanding stock from the stockholders. Analysts of the firm to be purchased are forecasting a period of 2 years of extraordinary growth (20 percent), followed by 1 year of unusual growth (10 percent), and finally a normal (sustainable) growth rate of 6.5 percent annually indefinitely. The last dividend was $D_0 = \$1.00$ per share and the required return is 8.6 percent. What is D_4 (i.e., the dividend expected at end of period 4)?

- a. 1.0000
- b. 1.286
- c. 1.584
- d. 1.687
- e. 1.440

42 Assuming D_4 (i.e., the dividend at end of period 4) is expected to be \$2.00 (regardless of your answer above), what is P_3 (i.e., expected price at the end of period 3)?

- A. 0.95
- b. 2.00
- c. 23.26
- d. 30.77
- e. 95.24
- f. Insufficient information to compute (if using bubble sheet, just write "f" in to select f)

43 Regardless of your work above, assume that D_0 , which was just paid, = \$1.00, $D_1 = \$1.20$, $D_2 = \$1.40$, $D_3 = \$1.55$, $D_4 = \$2.00$, $D_5 = \$2.13$, $D_6 = \$2.27$, and $P_3 = \$80.00$. What should be the stock's expected price today, (i.e., P_0)? I encourage you to draw a time line clearly indicating the situation. Again, assume the required return is 8.6 percent.

- a. 87.15
- b. 65.96
- c. 66.96
- d. 79.14
- e. 68.4

44 Assume the following regarding a growing annuity valuation problem:

Your salary at the end of the last year that you work is \$90,000.

You would like your income stream to begin at the end of your first year of retirement with a payment equal to 70% of your last working year's salary. (Assume all amounts are "end-of-year" payments.)

You plan to be retired for 25 years.

You would like your retirement income will grow at a constant rate equal to a 3.5% (to compensate for expected inflation).

Using a discount rate of 8%, what is the present value at the beginning of your first year of retirement, (i.e. one period prior to the first retirement payment) of your projected 25 year retirement income stream?

- a. 960,730
- b. 916,893
- c. 672,511
- d. 211,573
- e. 3,308,543
- f. 483,107 (if using a bubble answer sheet, just write "f" in to select f)

- 45 **** ASSUME** that in 25 years you will need \$500,000 for your retirement (i.e. retirement is actually 25 years away, and you want to have saved \$500,000). How much money would you have to put into a bank today to accumulate this if your money will earn 8% per year (assume annual compounding)?.
- a. 73,009
 - b. 166,365
 - c. 211, 573
 - d. 676,001
 - e. insufficient information to compute
- 46 **** ASSUME** that in 25 years you will need \$500,000 for your retirement (i.e. retirement is actually 25 years away, and you want to have saved \$500,000). If you will make equal **MONTHLY payments** at the end of each MONTH for the next 25 years to fund your retirement, what is the amount of the **MONTHLY payments** required to fund your retirement? Assume the 8% APR discount rate with **monthly compounding** for this question only.
- a. 3859
 - b. 3903
 - c. 570
 - d. 526
 - e. insufficient information to compute
- 47 Consider three investors in Stock A:
Mr. Single invests for 1 year
Ms Double invests for 2 years
Mrs. Triple invests for 3 years
In other words, the 3 investors are all identical, except for how long they plan to hold the stock. Which of the following statements are true? (Hint: Recall what the basic stock valuation principle is.)
- a. Mrs. Triple would place the highest value on Stock A today because she is investing for the longest time.
 - b. Ms. Double would place the second highest value on Stock A today because she is investing for the second longest time.
 - c. Mr. Single would place the lowest value on Stock A today because he is investing for the shortest time.
 - d. all of the above are true
 - e. Mr. Single, Ms. Double, and Mrs. Triple would all place the same value on Stock A since how long they plan to hold the investment is not relevant to the calculation of today's value
 - f. none of the above are true (if using bubble sheet, just write "f" in to select f)
- 48 A practical and prevalent problem in financial management regarding potential conflicts of interests of various parties is known as
- a. ethics
 - b. marginal conflicts
 - c. limited liability
 - d. the options principle
 - e. agency problems
- 49 Fill in the Blank: The tax deductibility of expenses _____ their after tax cost (assume a tax paying firm).
- a. increases
 - b. decreases
 - c. has no effect on
 - d. has an undetermined effect on
 - e. either increases or decreases, depending on whether it is for a sole proprietorship or a corporation
- 50 The _____ is a measure of liquidity which excludes _____, generally the least liquid asset.
- A. current ratio; accounts receivable
 - B. quick ratio; accounts receivable
 - C. current ratio; inventory
 - D. quick ratio; inventory
 - E. none of the above

51 Which of the following would be classified as a use of cash?

- a. An increase in accounts payable.
- b. A decrease in inventories.
- c. A decrease in accounts receivable.
- d. An increase in retained earnings.
- e. An increase in inventories.

52 Santa's shippers Inc. Dividends per share are expected to grow indefinitely by 3 percent a year. Next year's dividend is \$4.50 and the required rate of return (i.e. equity holder's opportunity cost of capital) is 8 percent. Assuming this is the best information available regarding the future of this firm, what would be the most economically rational value of the stock today (i.e. today's "price")?

- a. 56.25
- b. 150.00
- c. 90.00
- d. 92.70
- e. 45.00

53 Empirical evidence shows that financial market price movements are essentially random. This is evidence that:

- a. Financial markets are reasonable efficient markets.
- b. Financial markets are NOT efficient markets.
- c. This is irrelevant evidence, because the randomness of market price movements is NOT related to the efficiency of financial markets.
- d. none of the above.

54 According to the payoff diagram that illustrates the payoff to bondholders and stockholders as a function of the value of the firm,

- a. bondholders would prefer more risk than stockholders, because their payoff is flat as the firm value increases beyond the debt level
- b. stockholders would prefer more risk than bondholders, because their payoff is flat as the firm value increases beyond the debt level
- c. stockholders would prefer more risk than bondholders, because their payoff increases dollar for dollar as the firm value increases beyond the debt level
- d. managers would prefer more risk than stockholders, because their payoff increases dollar for dollar as the firm value increases beyond the debt level

55 You currently earn \$35,000 per year. If your salary grows at an assumed 3.5% average inflation rate, how much will your annual salary be in 25 years?

- a. \$82,713
- b. \$79,916
- c. \$1,363,245
- d. \$1,445,960
- e. Insufficient information to compute

56 Which of the following is an example (or are examples) of a sunk cost in a capital budgeting analysis? (read all alternatives prior to answering)

- A. The amount paid for a building you currently own and intend to utilize for a project
- b. The current market value of a building you own and intend to utilize for a project
- c. the increase in inventory required to begin a new project
- d. the price of a consultant's report that has not yet been paid, but will be paid regardless of whether the project is accepted or rejected
- e. both a and d are examples of sunk costs

57 You are considering the purchase of an investment that would pay your \$5,000 per year for Years 1-5, \$3,000 per year for Years 6-8, and \$2,000 per year for Years 9 and 10. If you require a 14 percent rate of return, and the cash flows occur at the end of each year, then what is the most that you would be willing to pay for this investment?

- a. \$15,819.27
- b. \$21,937.26
- c. \$32,415.85
- d. \$38,000.00
- e. \$52,815.71

58 When evaluating whether to proceed with a project, the firm should consider all of the following factors except which one? (i.e., Which is a "not relevant" versus "relevant" cash flow?)

- 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 sold and replaced.
- d. the resulting difference in depreciation if the project involves a replacement decision.
- e. all of the above should be considered.

59 While doing a capital budgeting analysis you realized that the project would require an increase in inventory of \$8,000. You should

- a. Ignore the inventory requirement because it is not an operating cash flow.
- b. Record the \$8,000 at time zero as an additional benefit of taking the project.
- c. remember to depreciate the \$8,000 over the depreciable life of the project.
- d. record the \$8,000 at time zero as an additional cost of taking the project.
- e. none of the above are accurate.

60 Normal (a.k.a. conventional cash flow, i.e. costs followed by cash inflows) Projects Q and R have the same NPV when the discount rate is zero. However, Project Q has larger early cash flows than R. Therefore, we know that at all discount rates greater than zero Project Q will have a _____ NPV than R. (Hint: With larger early CFs, Q is effectively shorter term than R., Which is more sensitive to changes in interest rate in an NPV profile?)

- a. greater.
- b. smaller.
- c. equal, since they have the same NPV when the discount rate is zero.
- d. you need to know the interest rate to answer this question.
- e. you need to know the actual cash flows to answer this question.

61 A stock repurchase may be a signal that

- a. A firm's stock is overvalued.
- b. A firm's stock is undervalued
- c. A firm is short on funds.
- d. A firm's bonds are overvalued.
- e. none of the above are accurate.

62 A primary advantage associated with holding a diversified portfolio of financial assets is the reduction of risk. The relevant (aka important) risk a particular stock would contribute to a well diversified portfolio is the stock's :

- a. Total risk, as measured by the stock's beta.
- b. nondiversifiable, aka market risk, as measured by the stock's beta.
- c. nondiversifiable, aka market risk, as measured by the stock's standard deviation.
- d. unique risk, as measured by the stock's standard deviation.
- e. unique risk, as measured by the stock's beta.

- 63 Which of the following measures how 2 random variables (e.g., Stock returns) move relative to each other?
- a. Standard deviation
 - b. Variance
 - c. Expected value
 - d. Covariance
 - e. None of the above

- 64 Which of the following would tend to make a financial market more efficient?
- a. Increase in taxes
 - b. Increase in asymmetrical information
 - c. Decrease in asymmetrical information
 - d. Higher transaction costs
 - e. Fewer competitors (participants)

- 65 The pecking order view of capital structure suggests that for financing new projects, firms prefer
- a. borrowing (debt) over issuing more equity.
 - b. Internally generated funds over borrowing.
 - c. Equity over debt.
 - d. Paying out all of the firm's earnings as dividends to existing shareholders to maximize shareholders' wealth.
 - e. Both a & b.

- 66 Efficient portfolios all have
- a. no risk
 - b. Equal risk
 - c. The highest return for a given risk
 - d. The lowest risk for a given return
 - e. Both c & d

For questions 67-68, consider the following information for the BU Scholarship Investment Fund. The total investment in the fund is \$1 million.

STOCK	INVESTMENT	BETA	EXPECTED RETURN
A	\$200,000	1.5	25%
B	\$300,000	-0.5	4%
C	\$500,000	1.25	15%

- 67 Based on the allocation of dollars among the three stocks and their expected return, calculate the expected rate of return for the BU Scholarship Investment Fund.

- a. 14.67%
- b. 18.8
- c. 13.7
- d. 44.0
- e. Insufficient information to compute

- 68 Based on the allocation of dollars among the three stocks and their respective betas, calculate the beta for the BU Scholarship Investment Fund.

- a. 3.25
- b. 1.08
- c. 2.25
- d. 0.75
- e. 0.775
- f. Insufficient information to compute. (if using bubble sheet, just write "f" in to select f)

- 69 The existence of a risk-less security in the risk & return trade-off
- a. Does NOT influence investors preferences regarding which risky portfolio to hold.
 - b. Results in investors all holding different portfolios of risky assets, depending on their individual risk preferences.
 - c. Results in investors all holding the same portfolio of risky assets, which corresponds to the tangency point of the efficient portfolio frontier of risky assets and a line through the risk-less asset's return.
 - d. None of the above.
 - e. none of the above.
- 70 Assume the risk free rate is 4.5% and the expected return on the market is 14% . Based on the CAPM, what should be the rate of return for security having a beta of 1.25?
- A. 11.88%
 - b. 16.38
 - c. 18.5
 - d. 17.5
 - e. 22
- 71 How many different portfolios could be formed with only 2 assets?
- a. 1
 - b. 2
 - c. 4
 - d. 16
 - e. An infinite number

Questions 72-76 address a capital budgeting problem and are related, though there are assumptions made in sequential questions to avoid an initial error causing all subsequent responses to be in error.

Consider the following for questions 72-76: A new product is being considered by Stanton Corp. An outlay of \$40,000 is required for equipment and an additional net working capital investment of \$1000 is required. The project is expected to have a 4 year life and the equipment will be depreciated on a straight line basis (equal annual amount) to a \$4,000 book value.

Producing the new product will **reduce** current manufacturing expenses by \$5,000 annually and **increase** earnings (revenue) before depreciation and taxes by \$6,000 annually. Stanton's marginal tax rate is 40 percent. Stanton expects the equipment will have a market salvage value of \$10,000 at the end of 4 years.

72 What is the total cost at time zero of accepting this project?

- a. 40,000
- b. 41,000
- c. 30,000
- d. 31,000
- e. Insufficient information to answer

73 What is the depreciation each year over the machine's 4 year life?

- a. 9,000
- b. 9,250
- c. 10,000
- d. 10,250
- e. Insufficient information to answer.

74 Regardless of your answer to number 73 above, **ASSUME DEPRECIATION = \$8,000 per year**. What is the project's after-tax operating cash flow during years 1-4 from the machine?

- A. 11,000
- b. 3,000
- c. 6,600
- d. 14,600
- e. 9,800

75 Assuming the equipment is sold for the expected \$10,000 market salvage value at the end of its 4 year life, compute the after tax salvage value of the equipment. Note: this question addresses ONLY the after-tax salvage value, i.e., the after-tax cash flow from the sale of the equipment. This question does NOT address any other terminal year cash flows.

- a. 4,000
- b. 6,000
- c. 7,600
- d. 10,000
- e. none of the above

76 Regardless of your answer to number 74 & 75 above, **ASSUME the project's after-tax operating cash flow during years 1-4 from the machine = \$8,000 and the after tax salvage value = \$7,000**. What is the TOTAL cash flow expected from this project in the terminal year, including any initial investment amounts assumed to be recovered? Include all terminal year flows as well as the terminal year operating cash flow of 8,000 assumed.

- a. 7,000
- b. 8,000
- c. 15,000
- d. 16,000
- e. none of the above

For questions 77-78, assume the following for a project under evaluation:

- ** The project's life is 4 years.
- ** The total time zero, initial cost of \$55,000.
- ** The total net operating cash flow each year is \$15,000.
- ** In addition to the terminal year operating cash flow, there is a non-operating, terminal year cash flow of \$8,000.

77 If the cost of capital for a project of this risk is 7%, what is the project's NPV? Accept or reject the project?

- A. 123,000; accept
- b. 13,000; accept
- c. -56,911; reject
- d. 1,911; accept
- e. 13,355; accept

78 What is the project's IRR? Accept or reject the project? Again, assume the cost of capital for a project of this risk is 7%.

- A 7%; indifferent to accept or reject
- b. 8.4%; reject
- c. 8.4%; accept
- d. 15.75%, reject
- e. 15.75%; accept

79 If 2 projects are not mutually exclusive, then they are, by definition, independent projects.

- a. True
- b. False

80 All of the following are advantages of debt financing except which one?

- a. Interest is a tax-deductible expense
- b. It allows for the use of "other people's money" in financing a business
- c. It results in loss of ownership control of the business.
- d. The cost of debt financing is generally cheaper than equity financing.
- e. Owners do not have to share the potential gains of the business, since debt only requires repayment of the amount owed.

81 In 10 years you will begin receiving \$155 dollars per year in perpetuity from your grandparent's family trust fund (first payment is exactly 10 years from today). You consider these payments essentially risk free and have decided to discount them at a constant risk free rate of 6.5%. What is the present value today of these future cash flows? (Hint: draw a time line to illustrate exactly the cash flows for this problem.)

- a. 1353
- b. 2385
- c. 1270
- d. 146
- e. 1550

82 The semi-annual interest payments that corporate bonds in the U.S. typically pay are conventionally referred to as

- a. yield payments
- b. coupon payments
- c. call payments
- d. premium payments
- e. dividends

- 83 In which of the following situations would you get the largest benefit from diversifying your investment across two stocks?
- a. there is perfect positive correlation.
 - b. there is perfect negative correlation.
 - c. there is modest positive correlation.
 - d. there is modest negative correlation.
 - e. there is not correlation.
- 84 While the covariance can vary between vary large positive and negative numbers, the correlation coefficient varies only between
- a. -1 and 0
 - b. 0 and +1
 - c. -1 and +1
 - d. 0 and 10
 - e. None of the above
- 85 Regarding expensing an asset's cost immediately versus capitalizing the cost and depreciating it over time: All else the same, given a choice, a tax paying firm would generally prefer to
- a. Capitalize the cost and depreciate, because this will make the current year's net income higher.
 - b. capitalize the cost and depreciate, because it is best to extend the depreciation tax shield into the future as much as possible.
 - c. expense the asset to capture the tax shield immediately and thereby maximize the present value of the tax shield.
 - d. expense the asset to maximize the current year's net income.
 - e. none of the above.
- 86 If a tax paying firm pays \$100,000 in interest what is the after tax interest cost for firm assuming they are in a 40% tax bracket?
- a. 100,00 since interest is paid after taxes are paid and thus there is no tax shield
 - b. 40,000 since there is a tax shield on interest
 - c. 60,000 since there is a tax shield on interest
 - d. insufficient information to compute
- 87 A capital budgeting decision tool, such as NPV, IRR, etc. should consider (use)
- a. all of the relevant cash flows
 - b. only some of the relevant cash flows
 - c. only the opportunity costs
 - d. only the operating cash flows
- 88 One needs an interest rate to be able to calculate an IRR.
- A. true
 - b. false
- 89 One needs an interest rate to be able to calculate an NPV.
- A. true
 - b. false

- 90 If an investment has an NPV =0, then
- a. this means the investor earned no money
 - b. this means the investor earned more than the required rate of return (i.e., cost of capital)
 - c. this means the investor earned less than the required rate of return (i.e., cost of capital)
 - d. this means the investor earned a return just equal to the required rate of return (i.e. the cost of capital rate at which the NPV was calculated)

91 Additional Bonus: Name 5 of your classmates: You MUST provide your answer somewhere on the BUBBLE sheet answer key to receive credit for this one. Write on the side or near bottom of the bubble sheet with your answers.

END

