Name _____ **Section** _____ **ID #** _____

Professor Alagurajah's Section M (Thursdays, 4-7 pm), Professor Ho's Sections R (Fridays, 2:30-5:30 pm) and S (Mondays, 2:30-5:30 pm), Professor King's Sections P (Mondays, 7- 10 pm) and O (Internet), Professor Kohen's Section T (Wednesdays, 7-10 pm), Professor Pestano's Section Q (Wednesdays, 4-7 pm), and Professor Tahani's Section N (Tuesdays, 7-10 pm).

AP/ADMS 3530.03 Finance

Final Exam

Winter 2010

April 11, 2010

Exam - Solution

This exam consists of 50 multiple choice questions. 2 points each for a total of 100 points. Choose the response which best answers each question. Circle your answers below, and fill in your answers on the bubble sheet. **Only the bubble sheet is used to determine your exam score**. BE SURE TO BLACKEN THE BUBBLES CORRESPONDING TO YOUR STUDENT NUMBER.

Please note the following eight points:

1) Please use your time efficiently and start with the questions that you are most comfortable with first. *Remember*: every question carries the same weight, so please do NOT spend too much time on one particular question;
2) Read the exam questions carefully;
3) Choose the answers that are **closest** to yours, because of possible rounding;
4) Keep at least 2 decimal places in your calculations and final answers, and at least 4 decimal places for interest rates;
5) Interest rates are annual unless otherwise stated;
6) Bonds pay semi-annual coupons unless otherwise stated;
7) Bonds have a par value (or face value) of $1,000;
8) Assume cash flows or payments occur at the end of a period or year, unless otherwise stated; and
9) You may use the back of the exam paper as your scrap paper.
10) Non-programmable financial and/or scientific calculators are allowed.

Numerical Questions

1. How much would you have in eight years if you deposit $5,000 at the beginning of each year for eight years and the interest rate is 4% compounded annually?

   A) $36,842.84
   B) $42,491.47
   C) $46,071.13
   D) $47,913.98
   E) $51,375.02

   Solution D
   Note that we are dealing with an annuity due.

   Option 1: Use calculator and set **BGN** mode
   PMT=5000, n= 8, i = 4, PV = 0,
   Comp FV → **47,913.98**

   Option 2: Find FV of ordinary annuity and adjust by 1 period:
   PMT=5000, n= 8, i = 4, PV=0,
   Comp FV → 46,071.13 x 1.04 = **47,913.98**

2. You are planning on taking out a $200,000 mortgage to purchase a condo in Newmarket and the posted mortgage rate is 3.50% (APR compounded semiannually). Assuming that monthly payments begin in one month, how much interest will you save by choosing a 20 year amortization period versus a 30 year amortization period (assume that rates do not change over the life of the loan).

   A) $12,408
   B) $24,776
   C) $44,546
   D) $52,319
   E) $77,769

   Solution C
   Find the semi-annual rate: $i_s = 3.50/2 = .0175$
   Find EAR: $EAR = (1.0175)^2 - 1 = .035306$
   Find the monthly rate: $i_m = (1+ 0.035306)^{1/12} - 1 = 0.002896$

   Option 1: 20 year mortgage
   n = 20yrs x 12mths/yr = 240 months
   Find the monthly payment using your calculator:
   PV= -200,000, n=240, i=0.2896%, FV=0, Comp PMT
   → PMT = 1157.37
   Amount of interest paid over the 20 year mortgage:
   (240 payments x 1157.37) – $200,000 = $77,768.80

Option 2: 30 year mortgage
n = 30yrs x 12mths/yr = 360 months
Find the monthly payment using your calculator:
PV= -200,000, n=360, i=0.2896%, FV=0, Comp PMT
→ PMT = 895.32

Amount of interest paid over the 30 year mortgage:
(360 payments x 895.32) – $200,000 = 122,315.20

Interest difference: 122,315.20 – 77,768.80 = **$44,546.40**

3. A 10-year Canada bond has a coupon rate of 4%, a face value of $1,000 and pays semi-annual coupons. What is the yield to maturity if the bond sells at a current price of $925?

   A) 2.48%
   B) 3.15%
   C) 4.32%
   D) 4.96%
   E) 5.02%

   Solution D
   Using your calculator:
   PV= -925, FV=1,000, n=10 x 2 = 20, PMT=40/2 =20, COMP i
   → i= 2.48% => YTM = 2 x i = **4.96%**

4. What is the rate of return for an investor who pays $1,050 for a three-year bond with a 6% coupon and sells the bond two years later for $1,025? Interest is paid semi-annually and coupons are not re-invested.

   A) -2.38%
   B) -1.20%
   C) +3.41%
   D) +4.43%
   E) +4.52%

   Solution D
   2-y Rate of Return = (Coupon Interest + Price Change) / Initial Price
   = [4 x 30 + (1,025-1,050)] / 1,050 = 9.0476%

   Annual Rate of Return = $(1 + 9.0476\%)^{1/2} - 1 = 4.43\%$

5. Alto stock is expected to sell for $22 two years from now. The stock is expected to experience a normal growth rate of 5% for year 1 and year 2, and a supernormal growth rate, g, beginning in year 3. The most recent dividend was $1 and the required rate of return is 15%. What is the value of g?

A) 6.50%
B) 8.15%
C) 9.51%
D) 9.76%
E) 9.99%

Solution C

$P_2 = 22$; $g_1, g_2 = 5\%$; $r = 15$; $Div_0 = 1.00$; Find g

Constant Growth DDM: $P_2 = \frac{Div_3}{r-g} = \frac{Div_2(1+g)}{r-g}$

First, Find DIV_3

$DIV_1 = 1.00\ (1.05) = 1.05$

$DIV_2 = 1.05\ (1.05) = 1.1025$

$DIV_3 = 1.1025 \times (1+g)$

➔ $22 = \frac{1.1025 \times (1+g)}{15\% - g}$ ➔ g = **9.51%**

6. What is the most likely value of the PVGO for a stock with a current price of $38, expected earnings of $3 per share, and a required rate of return of 12%?

A) $4
B) $13
C) $25
D) $30
E) $38

Solution B

With 100% payout ratio, the stock would be valued at $25 ($3/0.12 = $25).
Thus, the **$13** ($38-$25) of additional price must represent the PVGO.

7. What is the discounted payback of a project with a cost of capital of 14% and the following cash flows:

Year	Cash flows
0	-$100,000
1	-$20,000
2	$40,000
3	$60,000
4	$120,000

A) 3 years
B) 3.17 years
C) 3.35 years

D) 3.65 years
E) 4 years

Solution D

Year	Cash flows	DCF	Cumulative DCF
0	-$100,000	-$100,000	-$100,000
1	-$20,000	-$17,543.86	-$117,543.86
2	$40,000	$30,778.70	-$86,765.16
3	$60,000	$40,498.29	-$46,266.87
4	$120,000	$71,049.63	$24,782.77

Therefore the payback is between 3 and 4 years. It is equal to:
3 + (46,266.87/71,049.63) = **3.65 years**.

8. The LNG Company is looking at a project with the following cash flows. It will receive $25,000 per year for the next 5 years. Costs due to the investment are $10,000 per year. The company can recover $7,500 at the end of the fifth year by selling the old machine. The initial outlay is $60,000. If the discount rate is 14%, should the company accept the project?

A) Yes, the NPV is $6,909
B) Yes, the NPV is $17,136
C) Yes, the NPV is $29,722
D) No, the NPV is -$1,004
E) No, the NPV is -$4,609

Solution E
NPV = -60,000 + (25,000 - 10,000) x PVIFA(14%,5) + (7,500) $(1 + 14\%)^{-5}$
= **-4,609**

9. For which discount rate will the NPVs of the two following projects equal?
- Project A: C_0 = -100; C_1 = 20; C_2 = 40; C_3 = 60
- Project B: C_0 = -150; C_1 = 50; C_2 = 60; C_3 = 70

A) 8%
B) 9%
C) 10.5%
D) 12%
E) 14%

Solution D
Solve for the IRR of the differential project:
Project (B – A): C_0 = -50; C_1 = 30; C_2 = 20; C_3 = 10 ➔ r = **11.8%**

10. Which of the following mutually exclusive projects should you choose if the company can invest up to $500,000?

Project	Initial investment	NPV
A	$100,000	$30,000
B	$50,000	$25,000
C	$60,000	$15,000
D	$75,000	$45,000

A) Project A
B) Project B
C) Project C
D) Project D
E) Projects A, B, C and D

Solution D
Since the projects are mutually exclusive, you should choose the project with the highest NPV; that is **project D**.

11. The Ace Manufacturing Company is considering buying one of two machines, which have identical capacity and can do the same job, but have different costs and economic lives:
- Machine M costs $8,000 and will last 4 years. It costs the company $1,000 per year to operate.
- Machine N costs $13,000 and will last 6 years. It costs $800 per year to operate. If the company's cost of capital is 7%.

Which machine should the company buy?

A) M because of its lower equivalent annual cost of $2,847
B) M because of its lower equivalent annual cost of $2,933
C) M because of its lower equivalent annual cost of $3,362
D) N because of its lower equivalent annual cost of $2,802
E) N because of its lower equivalent annual cost of $3,527

Solution C
EAC = (PV of costs)/(PVIFA)
EAC of M = [8,000 + (1,000) (PVIFA (7%, 4))]/ (PVIFA (7%, 4) = $3,361.82
EAC of N = [13,000 + (800) (PVIFA (7%, 6))]/PVIFA (7%, 6) = $3,527.35
Therefore, **M has lower EAC of $3,362**

12. Which of the following projects should the company choose if it has a limited capital budget of $20 million for the coming year?

Project	**Initial Cost** (millions)	**NPV** (millions)
L	6	2.8
M	7	3.2
N	4	1.9
O	4	2.3
P	5	2.6

A) L, M, O, P
B) M, N, O, P
C) L, N, O, P
D) L, M, N, O
E) L, M, N, P

Solution C

Project	**Initial Cost**	**NPV**	**PI**
O	4	2.3	0.58
P	5	2.6	0.52
N	4	1.9	0.48
L	6	2.8	0.47
M	7	3.2	0.46

Please use the following information to answer Questions 13 – 16.

Joshua Inc. is reviewing a 3 year project that has the following related information. The project will result in an increase in cash sales of $189,400 per year and an increase in cash expenses of $102,301 per year. At the beginning of the project Joshua will need to make an investment in net working capital of $7,000. Machinery will have to be acquired today at a cost of $80,000 (30% CCA class). At the end of the three years, the equipment has an estimated market value of $26,000. The company requires a 14% rate of return on this project and Joshua is in a 34% marginal tax bracket. Assume that net working capital will be recovered at the end of the project and that the half year rule applies.

13. What is the present value of the after-tax operating cash flow ignoring the impact of depreciation (CCA)?

A) $57,485
B) $133,460
C) $142,958
D) $172,456
E) $202,212

Solution B
For years 1-3, the CFO (excluding CCA) is:

(189,400 – 102,301) x (1 – 34%) = 57,485
PV(CFO excluding CCA) = 57,485 x PVIFA(14%,3) = **133,459.81**

14. What is the present value of the investment in net working capital including recovery?

A) -$1,995
B) -$2,275
C) $0
D) -$7,000
E) -43,000

Solution B
$-7{,}000 + 7{,}000/(1.14)^3$ = **-2,275.20**

15. What is the present value of the CCA tax shield?

A) $11,379
B) $12,518
C) $13,338
D) $17,407
E) $18,545

Solution C
C = 80,000; d = 30%; Tc = 34%; r = 14%; S = 26,000; t = 3

$$PVCCATS = \left[\frac{CdT}{r+d}\right]\left[\frac{1+0.5r}{1+r}\right] - \left[\frac{SdT}{r+d}\right]\left[\frac{1}{(1+r)^t}\right]$$ **= 13,338.46**

16. What is the net present value of the project?

A) $64,523
B) $82,072
C) $84,348
D) $90,523
E) $92,798

Solution B
NPV= – C + PV(CFO) + PV(Change in NWC) + PV(Salvage) + PVCCATS
NPV = –80,000 + 133,459.81 – 2,275.20 + 17,549.26 + 13,338.46 = **82,072.33**

Please use the following information to answer Questions 17 – 19.

Julia Inc. is deciding on a project based on the following parameters. The 5 year project will require an initial investment in equipment of $100,000. Depreciation will be calculated straight line over the life of the project with no salvage value at the end of the project. Annual sales will be $70,000 per year and variable costs will be 30% of sales. There are no fixed costs. Julia's corporate tax rate is 20% and it expects a 7% annual rate of return on all projects.

17. What is the accounting break even level of sales?

A) $0
B) $28,571
C) $66,667
D) $70,000
E) $100,000

Solution B
B/E Sales Revenue = (Fixed Costs + Depreciation) / (Contribution Margin per $)
= (0 + 20,000) / ($1 – $0.30) = **$28,571.43**

18. What is Julia's Degree of Operating Leverage?

A) 1
B) 1.41
C) 1.46
D) 1.69
E) 2.45

Solution D
Pre-Tax Profit = Cash Sales – Cash Expenses – Depreciation
= 70,000 – 21,000 – 20,000 = $29,000

DOL = 1 + [(Fixed Costs + Depreciation) / (pre-tax profits)]
DOL = 1 + [(0 + 20,000) / 29,000] = **1.69**

19. What is the NPV break-even level of sales if annual cash flows are determined by (0.56 × sales + $4,000)?

A) $36,409
B) $40,374
C) $54,374
D) $71,343
E) $75,344

Solution A

NPV-break even level of sales must solve:
(0.56 × Sales + $4,000) x PVAF(7%,5) = $100,000 ➔ Sales = **$36,409.05**

20. A project has a 60% probability of $4 million and $10 million in returns for years 1 and 2 respectively; and a 40% chance of $2 million and $4 million in returns for years 1 and 2 respectively. What is the IRR of this project if the initial investment is $10 million?

A) -26%
B) -10%
C) 3%
D) 5%
E) 22%

Solution D
Using the probabilities, the expected CF are C_0 = -10; C_1 = $3.2; C_2 = $7.6
Solving for the IRR gives IRR = **5%**

21. What is the variance (in percentages squared) of a six-stock portfolio that produced returns of 20%, 25% and 30% in the last three years?

A) 7.07
B) 16.67
C) 25.00
D) 50.00
E) 100.00

Solution C
Mean return = (20+25+30)/3 = 25%
Variance= $[(20-25)^2 + (25-25)^2 + (30-25)^2] / 2$ = **25 percentages squared**

22. If a project's expected return is 15%, which represents a 35% return in a booming economy and a 5% return in a stagnant economy, what is the probability of a booming economy?

A) 18.33%
B) 25%
C) 33.33%
D) 50%
E) 66.67%

Solution C
$E(R) = \sum p_i R_i$
$0.15 = p_b \times 0.35 + (1-p_b) \times 0.05$ ➔ p_b = **0.3333**

23. What is the total risk of a portfolio that will decline in value by 13% in a recession, will increase by 16% in normal times, and will increase by 23% during boom times if each scenario has equal likelihood?

A) 8.67%
B) 13%
C) 15.58%
D) 17.33%
E) 19.09%

Solution C
$E(R) = \sum p_i R_i = -13/3 + 16/3 + 23/3 = 8.6667\%$
$Var(R) = \sum p_i (R_i - 8.6667\%)^2 = 0.0243$
$\sigma(R) =$ **15.58%**

24. What is the correlation between securities A and B below?

State	Probability	Return on A	Return on B
Bust	0.25	-2%	-3%
Normal	0.45	4%	6%
Boom	0.30	8%	12%

A) -1
B) -0.725
C) 0
D) 0.5
E) 1

Solution E
Note that for each scenario, the return on B is 1.5 times the return on A. So the two stocks are perfectly positively correlated.

25. What should be the beta of a replacement stock if an investor wishes to achieve a portfolio beta of 1.0 by replacing Stock C in the following equally weighted portfolio: Stock A = .9 beta; Stock B = 1.35 beta; Stock C = 1.1 beta?

A) 0.75
B) 0.93
C) 1.08
D) 1.15
E) 1.35

Solution A
$\beta_p = \sum w_i \beta_i = 0.9/3 + 1.35/3 + 1/3 \times \beta_c = 1 \rightarrow \beta_c =$ **0.75**

26. What is the market risk premium at a time when T-bills yield 6% and a stock with a beta of 1.4 is expected to yield 18%?

A) 5.5%
B) 8.6
C) 12%
D) 14.6%
E) 20.6%

Solution B
$E(R) = R_f + \beta(R_m - R_f)$ ➔ $0.18 = 0.06 + 1.4\ (R_m - 0.06)$
➔ $R_m = 0.1457$ ➔ Market risk premium = $0.1457 – 0.06 =$ **0.0857**

27. If the market portfolio returns 12% and the risk-free return is 4%, are these stocks overpriced, under-priced or fairly priced?

Stock	Return	Std Dev	Beta
ABC	10%	15%	1.8
XYZ	8%	13%	0.65

A) ABC is under-priced; XYZ is overpriced
B) Both stocks are fairly priced
C) Both are overpriced
D) ABC is overpriced; XYZ is under-priced
E) Both are under-priced

Solution C
$E(R_{ABC}) = 0.04 + 1.8 \times 0.08 = 18.40\%$ ➔ ABC is overpriced
$E(R_{XYZ}) = 0.04 + 0.65 \times 0.08 = 9.20\%$ ➔ XYZ is overpriced

28. A project is determined to have equal probability of generating either $1.5 million annually or $1 million annually for four years. The initial outlay is $3 million. The expected return on T-bills is 6% and the market risk premium is 8%. What is the highest project beta that will still justify acceptance of the project?

A) 0
B) 1
C) 1.56
D) 2.26
E) 2.31

Solution D
E(CF) = 0.5*$1M + 0.5*$1.5M = $1.25M
Calculate IRR of project for C_0 = -$3M and C_{1-4} = $1.25M ➔ IRR = 24.10%
$E(R) = R_f + \beta \times (R_m - R_f)$
$0.2410 = 0.06 + \beta \times 0.08$ ➔ **β = 2.26**

29. Given the following information, what is ABC Corporation's WACC?
Common Stock: 1 million shares outstanding, market price of $40 per share, $1 par value per share, beta = 1.3.
Bonds: 10,000 bonds outstanding, $1,000 face value each, 8% coupon (semi-annual payments), yield to maturity = 7%, 5 years to maturity.
Other: Market risk premium = 8.6%, risk-free rate = 4.5%, tax rate = 40%.

A) 7.89%
B) 9.90%
C) 12.19%
D) 13.31%
E) 13.89%

Solution D
Before tax cost of debt = 7%
Price of each bond = $1,041.58
(PMT= 40, n=10, I = 3.5, FV = 1000, Comp PV)
Cost of Equity: r_e = 4.5% + 1.3 × 8.6% = 15.68%.
D= 10,000 × $1041.58 = $10,415,830.
E = 1 million × $40 = $40,000,000.
V = $10,415,830 + $40,000,000 = $50,415,830
E/V = $40,000,000/$50,415,830 = 0.7934 ; D/V = 1 - 0.7934 = 0.2066
WACC = 0.2066 × (1-0.40) × 7% + 0.7934 × 15.68% = **13.31%**

30. What is the WACC for a firm with equal amounts of debt and equity financing, a pre-tax company cost of capital of 12%, a 35% tax rate, and a 6% coupon rate on its debt that is selling at par?

A) 7.80%
B) 9.64%
C) 10.95%
D) 12.48%
E) 16.20%

Solution C
WACC (before-tax) = 12% = 0.5 x 6% + 0.5 x r_e. This implies that r_e = 18%
WACC = 0.5 x 6% x (1 – 0.35) + 0.5 x 18 = **10.95%**

31. Given the following information for the Joyce Manufacturing Company, what is the preferred dividend per share that the company will pay out?

- Its capital structure is 30% debt, 20% preferred shares and 50% common equity,
- The total market value of the firm is $100 million
- Its WACC is 9.3%
- The company's cost of debt is 6%, and the cost of common equity is 12%
- The marginal tax rate is 40%

- There are 1 million preferred shares outstanding.

A) $1.11
B) $1.80
C) $2.22
D) $2.50
E) $3.50

Solution C
9.3% = (.30)(1-.40)(.06) + (.20)r_P + (.50)(.12)
r_P = 11.1%
P = ($100M)(.20)/(1M) = $20.00
Preferred dividend per share= ($20.00)(0.111)= **$2.22**

32. What is the after-tax cost of capital raised by selling preferred stock for $10 per share in the market, has a book value of $8 per share, and offers a $1.2 dividend per share when the tax rate is 35%?

A) 7.80%
B) 9.75%
C) 12.00%
D) 15.00%
E) 20.45%

Solution C
Cost of preferred stock = $1.2 / $10 = **12%**. Taxes have no impact on the cost of preferred stock.

Conceptual Questions

33. The value of a proposed capital budgeting project depends upon the:

A) Total cash flows produced
B) Incremental cash flows produced
C) Accounting profits produced
D) Increase in total sales produced
E) General overhead costs

34. Which one of the following statements concerning scenario analysis is correct?

A) Under the best-case scenario, total costs will be at their anticipated minimal level.
B) Under the worst-case scenario, fixed costs will be at the minimal expected level.
C) Under the base case scenario, sales will be at the highest level that is reasonably expected.
D) Using scenario analysis, you can determine the forecast risk associated with sales.
E) Scenario analysis concentrates on the changes in net income as variables move within reasonably expected ranges.

35. A company is trying to decide on which of two independent projects they should accept. The firm should:

A) Select the project with the highest NPV project.
B) Select the project with the highest internal rate of return
C) Select the project with the highest accounting return.
D) Select the project with the shortest payback period.
E) Select the project with the lowest DOL.

36. You are considering two investments. You note that the return on investment R tends to vary quite widely from its average, definitely more so than does investment P. Based on this, you believe that:

A) R has a lower variance than P.
B) R has a lower standard deviation than P.
C) R has a higher inflation premium than P.
D) R has a higher return volatility than P.
E) R must be a stock in one of the largest Canadian firms while P must be a stock in one of the smallest firms listed on the TSX

37. Suppose you purchase a stock expecting the price to rise in the coming year. After one year, your stock has actually decreased in value, due primarily to adverse information released during the year. Which of the following describes this result?

A) This is not a violation of market efficiency.
B) This is a violation of weak form efficiency.
C) This is a violation of semi-strong form efficiency.
D) This is a violation of strong form efficiency.
E) This is a violation of all forms of market efficiency.

38. Hong Kong Wireless Corporation (HKWC) just announced that earnings for the first quarter of 2010 grew at an annualized rate of 3%, well above the rate for the same quarter of 2009. Upon the announcement, HKWC's stock price did not change. (The market in general was unchanged also). Which of the following is most likely correct?

A) HKWC's stock price did not change since the market was surprised by the announcement.
B) Interest rates in the economy must have increased.
C) HKWC's stock price did not change because investors likely anticipated the news announcement.
D) HKWC's stock price did not change because the market in general was unchanged.
E) HKWC must have a beta coefficient equal to one.

39. You are looking at two different stocks. ROX has a beta of 1.35 and SMC has a beta of 2.74. Which statement is true about these stocks?

A) ROX is always a better addition to your portfolio.
B) SMC is always a better addition to your portfolio.
C) The expected return on ROX will be higher than that on SMC.
D) You cannot tell which of the two stocks will have the higher expected return without additional information.
E) ROX has the same reward to risk ratio as does SMC.

40. A firm is evaluating three projects: X, Y and Z. A capital budgeting request has just come through for Project Z showing a positive NPV at the firm's overall WACC. As the financial manager of the firm, you know that Project Z is the riskiest of the three projects. You should:

A) Deny the request since the NPV was computed in error.
B) Approve the request since it has a positive NPV
C) Ask that the NPV be recalculated at a cost of capital appropriate for the project risk.
D) Approve the request if neither of the other two projects has a positive NPV.
E) Subjectively reduce the NPV to reflect the difference in project risk and then accept the project if NPV is still positive.

41. Which one of the following will increase the WACC of a firm?

A) An increase in the corporate tax rate
B) A decrease in the debt-equity ratio
C) An increase in the market risk premium
D) A decrease in the level of risk of a project
E) A decrease in the yield to maturity of the bonds

42. Which of the following statements is correct?

I. The IRR is the discount rate that equates the present value of the cash outflows (or costs) with the present value of the cash inflows.
II. If a project's NPV exceeds the project's IRR, then the project should be accepted.
III. Multiple IRRs arise when two or more mutually exclusive projects which have different lives are being compared.

A) I only
B) I and II
C) I and III
D) I, II and III
E) II and III

43. A project with a profitability index value less than one should be:

A) Always accepted
B) Always rejected
C) Accepted if its NPV is positive
D) Rejected if its IRR is less than 10%
E) None of the above

44. Risk in a revenue-producing project can best be adjusted for by

A) Ignoring it
B) Adjusting the discount rate upward for increasing risk

C) Adjusting the discount rate downward for increasing risk
D) Picking a risk factor equal to the average discount rate
E) Using the risk-free rate

45. When a computer is used to calculate outcomes from hundreds or thousands of possible combinations of variables, it is called:

A) Break-even analysis
B) Sensitivity analysis
C) Scenario analysis
D) Simulation analysis
E) DOL analysis

46. The CAPM provides a model of determining expected security returns that is:

A) Excellent for negative beta stocks
B) Excellent for well-diversified portfolios
C) Imperfect, but generally an acceptable guideline
D) Precise in its calculation of risk premiums
E) Useless for high beta stocks

47. Which of the following is true regarding the beta coefficient?

A) It is a measure of total risk
B) A beta greater than one represents lower systematic risk than the market
C) The higher the beta the higher the expected return
D) A beta of one indicates that the asset is totally risk free
E) The market portfolio has the highest beta possible

48. One common reason for issuing two distinct classes of common stock is to:

A) Allow one stock to increase in price while the other class declines
B) Restrict voting privileges from some shareholders
C) Conserve cash by offering dividends to only one class of stockholders
D) Sell different classes to increase profits
E) Reduce taxes

49. Which of the following forms of debt would be likely to offer debt holders the lowest return?

A) Subordinated debt

B) Subordinated debt that is callable
C) Secured debt with a sinking fund
D) Secured debt that is not callable
E) Unsecured debt

50. Which of the following is not a recognized approach for determining the cost of equity?

A) Dividend discount model approach
B) Capital asset pricing model approach
C) Treasury bills return plus risk premium approach
D) Cost of preferred stock plus risk premium approach
E) None of the above