Student name:\_\_\_\_\_\_\_\_\_\_

**MULTIPLE CHOICE - Choose the one alternative that best completes the statement or answers the question.  
1)** The acronym APV stands for:

1) \_\_\_\_\_\_

A) applied present value.   
 B) all-purpose variable.  
 C) accepted project verified.  
 D) adjusted present value.  
 E) applied projected value.

**2)** If you discount a project’s expected future unlevered aftertax cash flows using the \_\_\_\_\_ and then subtract the initial investment, you will calculate the:

2) \_\_\_\_\_\_

A) cost of capital for the unlevered firm; adjusted present value.   
 B) cost of equity capital; project NPV.  
 C) weighted cost of capital; project NPV.  
 D) cost of capital for the unlevered firm; all-equity net present value.  
 E) cost of equity capital for the levered firm; all-equity net present value.

**3)** Capital budgeting decisions are treated separately from capital structure decisions, even though these decisions may be highly interwoven. This interweaving is most apt to result in:

3) \_\_\_\_\_\_

A) firms rejecting positive NPV, all-equity projects because changing to a capital structure with debt will always create negative net present values.   
 B) firms foregoing project analysis and making decisions at random.  
 C) corporate financial managers first checking with their investment bankers to determine the best type of capital to raise before valuing a project.  
 D) firms accepting some negative NPV all-equity projects because changing the capital structure adds enough positive leverage tax shield value to create a positive NPV.  
 E) firms never changing their capital structure because all capital budgeting decisions will be overridden by capital structure decisions.

**4)** The four financing side effects, which are addressed by the APV method, are:

4) \_\_\_\_\_\_

A) tax subsidy of dividends, cost of issuing new securities, subsidy of financial distress, and cost of debt financing.   
 B) cost of issuing new securities, cost of financial distress, tax subsidy of debt, and other subsidies to debt financing.  
 C) cost of issuing new securities, cost of financial distress, tax subsidy of dividends, and cost of debt financing.  
 D) subsidy of financial distress, tax subsidy of debt, cost of other debt financing, and cost of issuing new securities.  
 E) cost of financial distress, tax subsidy of debt, increased cost of equity capital, and cost of issuing new securities.

**5)** How does one calculate the adjusted present value?

5) \_\_\_\_\_\_

A) Multiply the additional effects of debt by the all-equity project value.   
 B) Add the additional effects of debt to the all-equity project value.  
 C) Divide the project’s levered cash flow by the risk-free rate.  
 D) Divide the project’s levered cash flow by the risk-adjusted rate.  
 E) Add the pretax cost of debt to the project’s all-equity NPV.

**6)** Subsidized financing \_\_\_\_\_\_\_\_ the APV \_\_\_\_\_\_\_\_\_\_\_.

6) \_\_\_\_\_\_

A) has no impact on; as the lower interest rate is offset by the lower discount rate   
 B) decreases; by increasing the interest on the debt  
 C) increases; by decreasing the interest on the debt  
 D) has no impact on; as the interest tax deduction is not allowed for subsidized loans  
 E) increases; because subsidies offset all tax payments.

**7)** The flow-to-equity (FTE) approach in capital budgeting is defined as the:

7) \_\_\_\_\_\_

A) discounting of all project cash flows at the overall cost of capital.   
 B) scale-enhancing discount process.  
 C) discounting of a project’s levered cash flows to the equityholders at the required return on equity.  
 D) dividends and capital gains that will be available to flow to shareholders of a firm.  
 E) discounting of a project’s unlevered cash flows to the equityholders at the WACC.

**8)** When employing the flow-to-equity approach to calculate NPV, the appropriate discount rate is the:

8) \_\_\_\_\_\_

A) all-equity cost of capital.   
 B) cost of equity for the levered firm.  
 C) all-equity cost of capital minus the weighted average cost of debt.  
 D) weighted average cost of capital.  
 E) all-equity cost of capital plus the weighted average cost of debt.

**9)** The flow-to-equity approach to capital budgeting involves all of the following *except:*

9) \_\_\_\_\_\_

A) calculating the levered cost of equity.   
 B) determining the amount of the investment that is not borrowed.  
 C) computing the PV of the cash flows using the cost of equity for an all-equity firm.  
 D) discounting the levered cash flows using the levered cost of equity.  
 E) computing the project’s NPV.

**10)** The term (*RBB*) represents the:

10) \_\_\_\_\_\_

A) pretax interest payment.   
 B) pretax cost of equity dividends.  
 C) aftertax cost of debt.  
 D) average pretax cost of equity.  
 E) weighted average cost of capital.

**11)** Given the all-equity cost of capital, the cost of levered equity can be computed as:

11) \_\_\_\_\_\_

A) *RS* = (*B*/*S*)(*R*0) + (1 − *TC*)*B.*   
 B) *RS* = *R*0 + (*B*/*S*)(1 − *TC*)(*R*0 − *RB*).  
 C) *RS* = *R*0 + (1 − *TC*)*B.*  
 D) *R*0 = *Rs* + (*B*/*S*)(1 − *TC*)(*R*0 − *RB*).  
 E) *R*0 = *Rs* + (1 − *TC*)*B.*

**12)** The weighted average cost of capital is determined by \_\_\_\_\_ the weighted average cost of equity.

12) \_\_\_\_\_\_

A) multiplying the weighted average aftertax cost of debt by   
 B) adding the weighted average pretax cost of debt to  
 C) adding the weighted average aftertax cost of debt to  
 D) dividing the weighted average pretax cost of debt by  
 E) dividing the weighted average aftertax cost of debt by

**13)** When calculating a firm’s weighted average cost of capital, the appropriate cost of debt to employ is the:

13) \_\_\_\_\_\_

A) pretax market cost of debt.   
 B) levered equity rate.  
 C) aftertax market borrowing rate.  
 D) pretax coupon rate.  
 E) aftertax coupon rate.

**14)** If a project’s debt level is known over the life of the project, which of the following methods is(are) most applicable?

14) \_\_\_\_\_\_

A) WACC   
 B) APV  
 C) FTE  
 D) Either APV or FTE  
 E) Either FTE or WACC

**15)** The adjusted present value method (APV), the flow to equity (FTE) method, and the weighted average cost of capital (WACC) method produce equivalent results, but each can have difficulties making computation impossible at times. Accordingly, which one of the following statements is correct?

15) \_\_\_\_\_\_

A) The WACC method is preferred when evaluating a leveraged buyout.   
 B) The APV method is the most commonly used method in actual practice.  
 C) Use the FTE method when the level of debt is known over a project’s life.  
 D) Use the WACC method when the level of debt is known over a project’s life.  
 E) The WACC method is appropriate when the target debt-to-value ratio applies over a project’s life.

**16)** In leveraged buyouts, the WACC approach to valuation is not as useful as the APV approach because:

16) \_\_\_\_\_\_

A) there is greater risk with an LBO.   
 B) the future reductions in debt are known at the time of the LBO.  
 C) there is no interest tax shield with the WACC.  
 D) the value of the levered and unlevered firms are equal in an LBO.  
 E) WACC only applies to unlevered projects.

**17)** When the debt-equity ratio changes over time, the best method(s) to use when evaluating a project is(are):

17) \_\_\_\_\_\_

A) APV.   
 B) FTE.  
 C) WACC.  
 D) either APV or WACC.  
 E) either FTE or WACC.

**18)** Which of the following methods discount(s) levered cash flows?

18) \_\_\_\_\_\_

A) APV   
 B) FTE  
 C) WACC  
 D) Both APV and WACC  
 E) Both APV and FTE

**19)** The APV method is least useful in which one of the following situations?

19) \_\_\_\_\_\_

A) A leveraged buyout   
 B) A project involving interest subsidies  
 C) A project based on a target debt-to-value ratio  
 D) A project with flotation costs  
 E) A lease-versus-purchase decision

**20)** The cost of equity would be expected to be lowest when the debt-to-equity ratio is:

20) \_\_\_\_\_\_

A) zero.   
 B) .15.  
 C) .50.  
 D) .65.  
 E) 1.00.

**21)** Which one of the following statements is correct?

21) \_\_\_\_\_\_

A) Flotation costs increase the value of *RS.*   
 B) The weighted average cost of capital is equal to *B*/*S*(*RS*)(1 − *Tc*).  
 C) The discount rate for levered equity is unaffected by the debt-equity ratio.  
 D) The cost of equity for an all-equity firm is less than the cost of equity for a levered firm.  
 E) The cost of levered equity is indirectly related to beta.

**22)** The cost of equity for an all-equity firm is designated as:

22) \_\_\_\_\_\_

A) *Rs.*   
 B) *RD.*  
 C) *RS*(1 − *TC*)*.*  
 D) *R*0*.*  
 E) *R*0(1 − *TC*).

**23)** Flotation costs:

23) \_\_\_\_\_\_

A) are amortized using a declining-balance method over the life of the loan.   
 B) are amortized using the straight-line method over the life of the loan.  
 C) are deducted as a business expense in the year incurred.  
 D) cannot be deducted as a business expense.  
 E) are deducted as a business expense at the time the loan is repaid in full.

**24)** A firm currently has debt outstanding with a coupon rate of 4.5 percent. The firm is obtaining subsidized financing for a new project at a rate of 3.6 percent. The current market rate is 5.4 percent and the firm’s tax rate is 21 percent. What discount rate should be used to compute the NPV of the loan?

24) \_\_\_\_\_\_

A) 3.6 percent   
 B) 3.5 percent  
 C) 5.4 percent  
 D) 4.3 percent  
 E) 4.5 percent

**25)** The beta of debt is commonly assumed to be:

25) \_\_\_\_\_\_

A) 1.0.   
 B) .50.  
 C) 0.  
 D) −1.  
 E) −5.

**26)** When valuing a project that is *not* scale enhancing, an analyst will typically need to:

26) \_\_\_\_\_\_

A) calculate the equity cost of capital using the risk-adjusted beta of another firm.   
 B) double the firm’s beta value when computing the project WACC.  
 C) apply the firm’s current WACC to the project’s cash flows.  
 D) discount the project’s cash flows using the market rate of return since the project will diversify the firm’s operations.  
 E) replace the risk-free rate with the market rate of return when computing the project’s discount rate.

**27)** Harper Boatwrights is considering a new project with revenue of $422,000 per year for the indefinite future. Cash costs are 67 percent of revenue. The initial cost of the investment is $498,000. The tax rate is 21 percent and the unlevered cost of equity is 15 percent. What is the net present value of the project?

27) \_\_\_\_\_\_

A) $991,097   
 B) $733,436  
 C) $322,097  
 D) $235,436  
 E) $430,400

**28)** Daughtry Centers is considering a new project with revenue of $522,000 per year for the indefinite future. Cash costs are 65 percent of revenue. The initial cost of the investment is $703,000. The tax rate is 21 percent and the unlevered cost of equity is 13.5 percent. The firm is financing $250,000 of the project cost with debt. What is the adjusted present value of the project?

28) \_\_\_\_\_\_

A) $366,133   
 B) $418,633  
 C) $616,133  
 D) $313,633  
 E) $563,633

**29)** Blue Sky Ski Resorts has a levered equity cost of capital of 14.92 percent. The debt-to-value ratio is .4, the assumed tax rate is 23 percent, and the pretax cost of debt is 7.2 percent. What is the estimated unlevered cost of equity?

29) \_\_\_\_\_\_

A) 12.08 percent   
 B) 13.06 percent  
 C) 12.30 percent  
 D) 10.97 percent  
 E) 11.23 percent

**30)** Ramos Land Management has a target debt-to-value ratio of .45. The pretax cost of debt is 7.4 percent, the assumed tax rate is 24 percent, and the unlevered cost of equity 14.3 percent. What is the target cost of equity?

30) \_\_\_\_\_\_

A) 18.59 percent   
 B) 16.66 percent  
 C) 17.18 percent  
 D) 17.86 percent  
 E) 20.71 percent

**31)** Desert Adventures has a target debt-to-value ratio of .6. The pretax cost of debt is 8.4 percent, the tax rate is 21 percent, and the unlevered cost of equity 13.2 percent. A project the firm is considering has a cash flow to the levered equityholders of $48,700 each year for the foreseeable future and an initial unborrowed cost of $216,000. What is the NPV of the project?

31) \_\_\_\_\_\_

A) $41,836   
 B) $48,208  
 C) $62,342  
 D) $61,003  
 E) $38,367

**32)** Naqvi, Incorporated, has a total market value of $632,000, with debt valued at $218,000. What is the weighted average cost of capital if the aftertax cost of debt is 4.4 percent and the cost of equity is 12.6 percent?

32) \_\_\_\_\_\_

A) 10.78 percent   
 B) 9.36 percent  
 C) 11.18 percent  
 D) 10.50 percent  
 E) 9.77 percent

**33)** Ceramica maintains a debt-equity ratio of .36. The cost of equity is 12.8 percent, the pretax cost of debt is 5.7 percent, and the tax rate is assumed to be 23 percent. What is the weighted average cost of capital?

33) \_\_\_\_\_\_

A) 10.92 percent   
 B) 10.57 percent  
 C) 12.07 percent  
 D) 11.98 percent  
 E) 12.63 percent

**34)** Paper Planet is planning to build a new shipping depot. The initial cost of the investment is $1.18 million. Efficiencies from the new depot are expected to reduce aftertax annual costs by $105,000 forever. The corporation has a total value of $62.4 million and has outstanding debt of $38.7 million. What is the NPV of the project if the firm has an aftertax cost of debt of 5.8 percent and a cost equity of 12.6 percent?

34) \_\_\_\_\_\_

A) $72,581   
 B) $46,509  
 C) $163,669  
 D) −$102,422  
 E) −$531,736

**35)** A project has an initial cost of $336,000, projected annual revenue of $272,000, annual cash costs of $163,200, an unlimited life, a tax rate of 21 percent, and a weighted average cost of capital of 11.6 percent. What is the net present value of the project?

35) \_\_\_\_\_\_

A) $388,627   
 B) $538,432  
 C) $404,966  
 D) $601,931  
 E) $740,965

**36)** Han Chiropractic is evaluating a project with an initial investment at Time 0 of $640,000. The present value of the levered cash flows is $729,400 and the net present value of the project is $157,000. Using the flow-to-equity method of valuation determine the amount borrowed.

36) \_\_\_\_\_\_

A) $89,400   
 B) $246,400  
 C) $67,600  
 D) $54,300  
 E) $64,000

**37)** Elemental Investments is considering a new project with perpetual revenue of $435,000, cash costs of $310,000, and a tax rate of 21 percent. The firm plans to issue $250,000 of debt at an interest rate of 7.3 percent to help finance the initial project cost of $475,000. The levered discount rate is 16.7 percent. What is the net present value of this project?

37) \_\_\_\_\_\_

A) $279,985   
 B) $284,022  
 C) $128,211  
 D) −$59,506  
 E) −$168,424

**38)** Cazares Properties has a beta of 1.12, a cost of debt of 8.6 percent, and a debt-to-value ratio of .6. The current risk-free rate is 3.22 percent and the market rate of return is 14.47 percent. What is the company’s cost of equity capital?

38) \_\_\_\_\_\_

A) 12.97 percent   
 B) 10.95 percent  
 C) 15.82 percent  
 D) 11.49 percent  
 E) 13.96 percent

**39)** Granite Group wants to be levered at a debt-to-value ratio of .6. The cost of debt is 9 percent, the tax rate is 21 percent, and the cost of equity for an all-equity firm is 12 percent. What will be the firm's cost of equity?

39) \_\_\_\_\_\_

A) 12.31 percent   
 B) 16.45 percent  
 C) 12.08 percent  
 D) 15.56 percent  
 E) 13.58 percent

**40)** Gudimetla Consulting has a beta of 1.08 and a cost of debt of 8 percent. The current risk-free rate is 3.2 percent and the market rate of return is 11.47 percent. What is the company's cost of equity capital?

40) \_\_\_\_\_\_

A) 8.93 percent   
 B) 16.93 percent  
 C) 12.13 percent  
 D) 20.13 percent  
 E) 16.13 percent

**41)** Long Corporation is planning to raise $3.25 million for three years at an interest rate of 7.35 percent to finance its expansion. The municipal government has just offered the firm the $3.25 million they need at 5.25 percent if the firm builds inside the municipality, pays the interest annually, and repays the principal at the end of three years. What is the net present value of the loan to Long Corporation if the firm’s tax rate is 21 percent and it accepts the municipality’s offer?

41) \_\_\_\_\_\_

A) $293,651   
 B) $212,100  
 C) $271,405  
 D) $186,416  
 E) $346,090

**42)** Guven Corporation has decided to build a new facility for its R&D department. The cost of the facility is estimated at $125 million. The firm plans to finance this project using its traditional debt-equity ratio of .65. The issue cost of equity is 6.1 percent and the issue cost of debt is 1.8 percent. What is the amount of the total flotation cost?

42) \_\_\_\_\_\_

A) $5,507,576   
 B) $6,003,121  
 C) $6,138,412  
 D) $5,761,428  
 E) $6,202,418

**43)** A project has an unlevered NPV of $1.5 million. To finance the project, debt is being issued with associated flotation costs of $60,000. The flotation costs can be amortized over the project's 5-year life. The debt of $10 million is being issued at the market interest rate of 10 percent paid annually, with principal repaid in a lump sum at the end of the fifth year. If the firm's tax rate is 21 percent, calculate the project’s APV.

43) \_\_\_\_\_\_

A) $2,441,107   
 B) $1,494,028  
 C) $2,384,312  
 D) $2,245,618  
 E) $1,909,417

**44)** Kang Media is given the opportunity to raise $5 million in debt for four years through a local government subsidized program. While Kang would normally be required to pay 12 percent on its debt issues, a special municipal program sets the rate at 9 percent. What is the NPV of this subsidized loan? Ignore taxes.

44) \_\_\_\_\_\_

A) $518,364   
 B) $296,007  
 C) $384,312  
 D) $455,602  
 E) $0

**45)** A global conglomerate has a debt beta of zero. If the cost of equity is 12.23 percent, and the risk-free rate is 4.36 percent, what is the firm’s pretax cost of debt?

45) \_\_\_\_\_\_

A) 4.36 percent   
 B) 8.30 percent  
 C) 7.87 percent  
 D) 0 percent  
 E) 12.23 percent

**46)** Alpha Company has riskless debt, a debt-equity ratio of .46, a tax rate of 21 percent, and an unlevered firm beta of 1.23. What is the equity beta?

46) \_\_\_\_\_\_

A) .67   
 B) .73  
 C) .86  
 D) 1.68  
 E) 1.47

**47)** VillaNet is valued at $5.8 million, has riskless debt of $2.3 million outstanding, and has an equity beta of 1.81. What is the asset beta if there are no taxes?

47) \_\_\_\_\_\_

A) 1.11   
 B) 1.86  
 C) 1.15  
 D) 1.09  
 E) 1.71

**48)** Counter Resources has a capital structure of 30 percent riskless debt and 70 percent equity. The assumed tax rate is 23 percent. If the asset beta is .9, what is the equity beta?

48) \_\_\_\_\_\_

A) .63   
 B) .41  
 C) 1.20  
 D) 1.26  
 E) 1.49

**49)** The Floor Store is valued at $8.6 million and has debt of $2.1 million outstanding. The unlevered firm beta is 1.72, and the tax rate is 21 percent. What is the levered equity beta?

49) \_\_\_\_\_\_

A) .86   
 B) 1.18  
 C) 2.16  
 D) 1.98  
 E) 1.30

**50)** Bondurant Company’s latest project has an initial cost of $1.23 million and unlevered perpetual cash flows of $238,000. The firm has a debt-equity ratio of .42, a pretax cost of debt of 7.6 percent, a cost of equity of 13.3 percent, and a tax rate of 21 percent. What is the NPV of the project?

50) \_\_\_\_\_\_

A) $864,010   
 B) $887,982  
 C) $906,056  
 D) $909,411  
 E) $892,020

**ESSAY. Write your answer in the space provided or on a separate sheet of paper.  
51)** Explain why the flow to equity approach uses levered, not unlevered, cash flows.

**52)** Discuss the adjusted present value, the flow to equity, and the weighted average cost of capital methods of capital budgeting with leverage and the guidelines for using each method.

**53)** Explain how flotation costs affect the analysis of a levered project.

**54)** Assume a project is non-scale enhancing. Describe the basic steps required to determine the net present value of the project.

**Answer Key**Test name: Chapter 18

1) D

2) D

3) D

4) B

5) B

6) C

7) C

8) B

9) C

10) A

11) B

12) C

13) C

14) B

15) E

16) B

17) A

18) B

19) C

20) A

21) D

22) D

23) B

24) C

25) C

26) A

27) D

UCF = $422,000(1 − .67)(1 − .21)  
 UCF = $110,015.40  
   
 NPV = ($110,015.40/.15) − $498,000  
 NPV = $235,436

28) B

UCF = $522,000(1 − .65)(1 − .21)  
 UCF = $144,333  
   
 NPV = ($144,333/.135) − $703,000  
 NPV = $366,133.33  
   
 APV = $366,133.33 + .21($250,000)  
 APV = $418,633

29) C

.1492 = *R*0 + (.4/.6)(1 − .23)(*R*0 − .072)  
 *R*0 = .1230, or 12.30%

30) A

*RS* = .143 + (.45/.55)(1 − .24)(.143 − .074)  
 *RS* = .1859, or 18.59%

31) A

*RS* = .132 + (.6/.4)(1 − .21)(.132 − .084)  
 *RS* = .1889, or 18.89%  
   
 NPV = $48,700/.1889 − $216,000  
 NPV = $41,836

32) E

WACC = [($632,000 − 218,000)/$632,000](.126) + ($218,000/$632,000)(.044)  
 WACC = .0977, or 9.77%

33) B

WACC = (1/1.36)(.128) + (.36/1.36)(.057)(1 − .23)  
 WACC = .1057, or 10.57%

34) A

NPV = $105,000/{[($62.4 − 38.7)/$62.4](.126) + ($38.7/$62.4)(.058)} − $1,180,000  
 NPV = $72,581

35) C

UCF = ($272,000 − 163,200)(1 − .21)  
 UCF = $85,952  
   
 NPV = $85,952/.116 − $336,000  
 NPV = $404,966

36) C

$157,000 = $729,400 − ($640,000 − Amount borrowed)  
 Amount borrowed = $67,600

37) A

LCF = [$435,000 − 310,000 − .073($250,000)](1 − .21)  
 LCF = $84,332.50  
   
 NPV = $84,332.50/.167 − ($475,000 − 250,000)  
 NPV = $279,985

38) C

*RS* = .0322 + 1.12(.1447 − .0322)  
 *RS* = .1582, or 15.82%

39) D

*Rs* = .12 + (.6/.4)(1 − .21)(.12 − .09)  
 *Rs* = .1556, or 15.56%

40) C

*Rs* = .032 + 1.08(.1147 − .032)  
 *Rs* = .1213, or 12.13%

41) C

NPVLoan = $3,250,000 − [.0525($3,250,000)(1 − .21)](PVIFA7.35%,3) − $3,250,000/1.07353  
 NPVLoan = $271,405

42) D

Total flotation cost = $125,000,000/{1 − [(.65/1.65)(.018) + (1/1.65)(.061)]} − $125,000,000  
 Total flotation cost = $5,761,428

43) D

NPV of all-equity financed project = $1.5 million  
   
 PVFlotation costs including expensing = −$60,000 + ($60,000/5)(.21)(PVIFA10%, 5)  
 PVFlotation costs including expensing = −$50,447.22  
   
 NPVLoan = $10,000,000 − [.10($10,000,000)(1 − .21)](PVIFA10%, 5) − $10,000,000/1.105  
 NPVLoan = $796,065.22  
   
 APV = $1,500,000 + 796,065.22 − 50,447.22  
 APV = $2,245,618

44) D

NPVLoan = $5,000,000 − .09($5,000,000)(PVIFA12%,4) − $5,000,000/1.124  
 NPVLoan = $455,602

45) A

Since debt is riskless, the cost of debt must equal the risk-free rate of 4.36 percent.

46) D

βEquity = [1 + (1 − .21)(.46)](1.23)  
 βEquity = 1.68

47) D

1.81 = βAsset{1 + [$2.3/($5.8 − 2.3)]}  
 βAsset = 1.09

48) C

βEquity = {1 + [(1 − .23)(.3)/.7]}(.9)  
 βEquity = 1.20

49) C

βEquity = {1 + [(1 − .21)($2.1)]/($8.6 − 2.1)}(1.72)  
 βEquity = 2.16

50) C

WACC = (.42/1.42)(.076)(1 − .21) + (1/1.42)(.133)  
 WACC = .1114, or 11.14%  
   
 NPV = $238,000/.1114 − $1,230,000  
 NPV = $906,056

51) The flow to equity approach discounts the cash flows from a project that flow to the equityholders. Unlevered cash flows ignore interest expense while levered cash flows reflect the reduction in cash flow resulting from the aftertax interest expense. Thus, the levered cash flows are the flows that apply to the equityholders.

52) The adjusted present value is defined as the value of the project to the unlevered firm plus the net present value of financing side effects. There are four side effects: the tax subsidy of debt, the costs of issuing new securities, the costs of financial distress, and subsidies to debt financing. The flow to equity approach is an alternative to adjusted present value. It is the discounted cash flow from a project to the equityholders of the levered firm at the cost of equity. Finally, the weighted average cost of capital approach considers the firm that is financed with both debt and equity and allocates the costs proportionally for each capital component. Essentially, the manager should use the WACC or FTE if the firm’s target debt-to-value ratio applies to the project over its life. Alternatively, one should use APV if the project’s level of debt is known over the life of the project.

53) Flotation costs increase the amount of the funds initially required at Time 0 and the amount of debt principal that must be repaid. These costs are amortized on a straight-line basis over the life of the loan and are tax deductible thereby creating a tax shield.

54) The five basic steps are:  
 1.Calculate the average unlevered beta in the project’s industry.  
 2.Calculate the levered beta for the project.  
 3.Calculate the cost of levered equity for the project.  
 4.Calculate the project’s WACC.  
 5.Calculate the project’s NPV.