Name: ___________________________ Date: _____________

1. Which version of the exam do you have?
   A) B
   B) D
   C) A
   D) E
   E) C

Use the following to answer questions 2-6:

TTC Enterprises has 12,000 units of bonds outstanding that have a 6% coupon rate. The par value of each unit is $1,000. The bonds are selling at 98% of face value, pay interest semi-annually, and mature in 28 years. In addition, there are 1.40 million shares of common stock outstanding with a market price of $54 a share. The common shares were sold at $60 per share when first issued. The stock just paid a dividend of $1.80 per share and expects to increase those dividends by 4% annually. The firm's tax rate is 34%.

2. What is the cost of equity based on the dividend growth model?
   A) 7.47%
   B) 7.58%
   C) 7.28%
   D) 7.33%
   E) 7.16%

3. What is the after-tax cost of debt financing?
   A) 6.15%
   B) 5.02%
   C) 4.06%
   D) 3.08%
   E) 5.49%

4. What is the market value of the common stock?
   A) $79.30 million
   B) $81.35 million
   C) $84.00 million
   D) $75.60 million
   E) $11.76 million

5. What weight should be given to debt in the WACC computation?
   A) 11.09%
   B) 11.54%
   C) 12.28%
   D) 13.97%
   E) 13.46%

6. What is the weighted average cost of capital of the firm?
   A) 6.28%
   B) 5.98%
   C) 6.75%
   D) 7.01%
   E) 7.29%

7. The appropriate cost of capital for a project depends on ___________________.
   A) the type of security issued to finance the project
   B) the total risk of the firm's equity
   C) the risk associated with the project
   D) the interest rate on the firm's outstanding long-term bonds
   E) the type of assets used in the project (that is, whether they are current or fixed assets)

8. In which of the following cases would it most likely be appropriate to use the WACC that relates to existing operations?
   A) A grocery store owner is considering adding a bakery and a delicatessen to his store
   B) A gas tank manufacturer is contemplating switching to manufacturing tie-outs for dogs
   C) A manufacturer of garbage bags is considering expanding production capacity to meet increasing demand
   D) A pizza delivery service is planning to expand by adding a sit-down pizza restaurant
   E) A gas station owner is considering adding a convenience store

9. The return that shareholders require on their investment in the firm is called the:
   A) Income return.
   B) Dividend yield.
   C) Cost of capital.
   D) Cost of equity.
   E) Capital gains yield.

Use the following to answer questions 10-16:

You own a high-tech manufacturing entity. You would like to expand your operations but to do so you need to either lease or buy a $1.5 million piece of equipment for the next five years. The equipment would generate additional sales by $30,000 per year for five years. If you choose to lease, the lease payments would be $325,000 a year for the five years and the payments are due at the beginning of each year. Alternatively, you can choose to purchase this equipment, which belongs to a category with a CCA rate of 30%. The equipment would have a salvage value of $200,000 at the end of the fifth year. Your firm has a tax rate of 34%. You could arrange a bank loan at 8%.

10. What is the after-tax cost of debt for your firm?
    A) 10.72%
    B) 4.67%
    C) 8.00%
    D) 5.28%
    E) 7.33%

11. What is the present value of all future CCA tax shields, including the impact of the salvage on the CCA tax benefit?
    A) $338,238.94
    B) $422,798.68
    C) $263,910.47
    D) $295,106.28
    E) $378,092.02

12. What is the present value of all after-tax lease payments?
    A) $966,638.31
    B) $970,185.23
    C) $1,469,977.62
    D) $921,528.52
    E) $1,396,255.34

13. What is the net advantage to leasing amount?
    A) -$45,747.02
    B) $45,747.02
    C) -$2,909.69
    D) $2,909.69
    E) -$57,706.69

14. What amount would the lease payment have to be for your firm to be indifferent between leasing and buying?
    A) $324,025.29
    B) $306,965.12
    C) $341,133.83
    D) $379,763.70
    E) $318,035.27

15. If the NAL of this project was negative, what should you do?
    A) You should buy the equipment, instead of leasing.
    B) You should not go ahead with this project.
    C) You do not know.
    D) You should become a lessee.
    E) You should lease the equipment, instead of buying.

16. What is the net advantage to leasing if your firm, for whatever reason, does not have to pay any taxes for at least the next five years?
    A) $375,182.33
    B) -$37,557.86
    C) $124,610.06
    D) -$124,610.06
    E) -$375,182.33

17. Which of the following are considered examples of leasing to reduce uncertainty?
    I. Leasing a piece of equipment due to concerns over the residual value
    II. Leasing a building due to less restrictive financing covenants
    III. Leasing a computer due to obsolescence concerns
    IV. Leasing equipment due to a desire to avoid capitalization of the asset
    A) I, III, and IV only
    B) II and IV only
    C) I, II, and III only
    D) II and III only
    E) I and III only

18. In a world without taxes, M&M Proposition I contends that:
    A) A firm's cost of equity varies with its cost of debt.
    B) The total value of the firm remains constant regardless of the debt-equity mixture applied.
    C) A firm's WACC also determines its cost of equity.
    D) The cost of capital is a linear function with a positive slope.
    E) The cost of equity is dependent upon the debt-ratio of the firm.

19. __________ arises from decisions that affect the left-hand side of the balance sheet, while ________________ arises from decisions that affect the right-hand side of the balance sheet.
   A) Systematic risk; unsystematic risk
   B) Systematic risk; financial risk
   C) Business risk; diversifiable risk
   D) Business risk; financial risk
   E) Unsystematic risk; systematic risk

20. Which of the following statements is/are true regarding corporate borrowing when EBIT is positive?
   I. Increasing financial leverage increases the sensitivity of EPS and ROE to changes in EBIT
   II. The effect of financial leverage depends on the company's EBIT, that is, leverage is unfavourable when EBIT is relatively high, and leverage is favourable when EBIT is relatively low
   III. High leverage decreases the returns to shareholders (as measured by ROE)
   A) III only
   B) I only
   C) I and II only
   D) I, II, and III
   E) II only

21. Of the following, all are conclusions that can be drawn from the capital structure puzzle EXCEPT:
   A) Firms in lower tax brackets will tend to benefit less from increases in financial leverage.
   B) In the framework of the static theory of capital structure, a firm can precisely identify its optimal capital structure.
   C) The financial structure that minimizes WACC is the one that will maximize the value of the firm.
   D) All else the same, firms with tangible, liquid assets will have an incentive to borrow more.
   E) Firms with tax shields from other sources such as depreciation will benefit less from leverage.

22. Which of the following are indirect costs of bankruptcy?
    I. Loss of key employees
    II. Foregone profitable projects due to debt restrictions
    III. Loss created by sale of assets which was required to improve liquidity
    IV. Accounting and legal fees incurred in the bankruptcy process
    A) I, II, III, and IV
    B) I, III, and IV only
    C) II, III, and IV only
    D) I and III only
    E) I, II, and III only

23. An unlevered firm with a market value of $1 million has 50,000 shares outstanding. The firm restructures itself by issuing 100 new bonds with face value $1,000 and an 8% coupon. The bonds are issued at par. The firm uses the proceeds to repurchase outstanding stock. In considering the newly levered versus formerly unlevered firm, what is the break-even EBIT? Ignore taxes.
    A) $50,000
    B) $8,888.89
    C) $80,000
    D) $95,000
    E) $20,000

Use the following to answer questions 24-28:

Rogers Inc. is debating whether to keep its current capital structure or to convert to a proposed one. Information about these two capital structures are following.

	Current capital structure	Proposed capital structure
Assets	$25 million	$25 million
Debt	$0	$5 million
Equity	$25 million	$20 million
Share price	$50.00	$50.00
Shares outstanding	???	???
Bond coupon rate	N/A	8%

There are no taxes. EBIT is expected to be $2.5 million, but could be as high as $3.5 million if an economic expansion occurs, or as low as $2 million if a recession occurs. All values are market values.

24. How many shares are outstanding under the current and proposed capital structure?
    A) 0.5 million; 0.4 million
    B) 0.4 million; 0.4 million
    C) 0.4 million; 0.5 million
    D) 0.5 million; 0.5 million
    E) 0.5 million; 0.1 million

25. If you own 100 shares of the firm, what will be your total earnings under the current capital structure if there is a recession?
    A) $500
    B) $600
    C) $700
    D) $800
    E) $400

26. If you own 100 shares of the firm, what will be your ROE during an expansion for the proposed capital structure?
    A) 15.5%
    B) 8%
    C) 14%
    D) 10%
    E) 10.5%

27. Suppose the firm does convert, but you prefer the current all-equity capital structure, how could you undo the leverage to create the current capital structure? Assume you start with 100 shares of the firm.
    A) Borrow $1,000 at 8% and buy 20 more shares
    B) Cannot replicate the current capital structure
    C) Sell 20 shares and lend $1,000 at 8%
    D) Sell 25 shares and lend $1,250 at 8%
    E) Borrow $1,250 at 8% and buy 25 more shares

28. Suppose the firm maintains the current capital structure, but you prefer the proposed capital structure, what could you do to create the proposed capital structure? Assume you start with 100 shares of the firm.
    A) Borrow $1,000 at 8% and buy 20 more shares
    B) Cannot replicate the proposed capital structure
    C) Sell 20 shares and lend $1,000 at 8%
    D) Sell 25 shares and lend $1,250 at 8%
    E) Borrow $1,250 at 8% and buy 25 more shares

Use the following to answer questions 29-32:

Ryerson Inc. is contemplating changing its capital structure. Currently the company has no debt. It is considering issuing $50,000,000 of perpetual debt. If the company issued the debt, it would have an interest rate of 8%. The proceeds of the debt issue would be used to repurchase the company's stock. The corporate tax rate is 40%. The company's EBIT is $20,000,000, and will not be affected by the change in the capital structure. The company's current required rate of return on the equity is 15%. There are 1,000,000 shares outstanding of the company's stock.

29. What will be the firm value after the capital restructuring?
    A) 100 million
    B) 110 million
    C) 70 million
    D) 90 million
    E) 80 million

30. What will be the required rate of return by shareholders after the capital restructuring?
    A) 22%
    B) 19.2%
    C) 18.5%
    D) 20.5%
    E) 17.1%

31. What will be the firm's overall cost of capital after the capital restructuring?
    A) 13.6%
    B) 24%
    C) 10.8%
    D) 12%
    E) 12.6%

32. What will be the price per share after the capital restructuring?
    A) Cannot be determined
    B) $110
    C) $90
    D) $100
    E) $80

33. All else the same, an investor is likely to prefer a firm with a high dividend payout:
    I. If the firm has many positive NPV projects in which it could invest.
    II. If marginal tax rates on capital gains exceed marginal tax rates on dividends.
    III. If flotation costs are significant.
    IV. If the firm's dividend payout is restricted by a bond indenture.
    A) II, III, and IV only
    B) I, II, III, and IV
    C) II only
    D) I and III only
    E) IV only

34. Which of the following cannot be used to enhance dividend stability?
    A) The implementation of a residual dividend policy
    B) Payment of a special dividend
    C) Payment of an extra dividend
    D) Establishment of a target dividend payout ratio
    E) Share repurchases

35. On Wednesday, January 21st, a company declared a dividend with a payment date of Tuesday, March 10th. The date of record is Monday, February 23rd. What is the ex-dividend date?
    A) Wednesday, February 18th
    B) Thursday, February 19th
    C) Saturday, February 21st
    D) Monday, January 19th
    E) Friday, March 6th

36. You owned 300 shares of Kirkland, Inc's stock on January 1, 2008. The company initiated a 3 for 1 stock split on February 15, 2008. It issued a 10% stock dividend on June 30, 2008. Assuming the company did not take other actions and you did not either sell or buy any stock during 2008, what would be the total number of shares you owned at the end of 2008?
    A) 660
    B) 330
    C) 110
    D) 910
    E) 990

Use the following to answer questions 37-38:

InterPower Inc. is an all equity-funded firm, which currently has 1 million shares outstanding. The firm's shareholders require a rate of return of 15%. The firm is expected to generate perpetually an annual earning of $2.5 million, starting one year from now (i.e at t=1). InterPower has a tradition to pay out all earnings in dividends. The management has discovered a positive NPV project, which is available two years from now (i.e. at t=2). The cost of project will be $2.5 million. It will generate perpetually an additional annual earning of $0.5 million, starting one year after the initiation of the project (i.e. at t=3). There are no taxes, transaction costs, or other market imperfections.

37. What is the current market price per share, if InterPower omits the dividends at t=2 to pay for the project, but pays all available earnings in dividends in other periods?
    A) $19.57
    B) $18
    C) $17.30
    D) $20
    E) $17.01

38. What is the current market price per share, if InterPower pays dividend $2.5 per share at the first two periods, issues new stock to fund the project at t=2, and pays all available earnings in dividends starting from t=3?
    A) $19.57
    B) $18
    C) $20
    D) $17.01
    E) 17.30

Use the following to answer questions 39-40:

TTC, Inc. is an all-equity firm with 1 million shares outstanding and with its cost of equity 10%. The firm will be liquidated at t=2. The total earnings including the proceeds from liquidation, are $50 million in each of the next two years. There are no taxes, transaction costs, or other market imperfections. The firm has the following two dividend policies.
(1) Pay all earnings in dividends for each of the two years.
(2) Pay out 80% of earnings in the first year, retain and reinvest the remaining 20% of earnings in the firm at 10% and pay out all available earnings in the second year.

39. Suppose the firm chooses Policy 1, but an investor, who owns 100 shares, prefers Policy 2. What he could do to replicate his preferred dividend policy and how much he would receive in dividends at t=2 following this strategy?
   A) Reinvest $1,000 to purchase additional stock of the firm at t=1; $6,100
   B) Sell $1,000 worth of stock at t=1; $5,000
   C) Reinvest $1,000 to purchase additional stock of the firm at t=1; $5,000
   D) He could not replicate his preferred dividend policy.
   E) Sell $1,000 worth of stock at t=1; $6,100

40. Suppose the firm chooses Policy 2, but an investor, who owns 100 shares, prefers Policy 1. What he could do to replicate his preferred dividend policy and how much he would receive in dividends at t=2 following this strategy?
   A) Sell $1,000 worth of stock at t=1; $5,000
   B) Sell $1,000 worth of stock at t=1; $6,100
   C) He could not replicate his preferred dividend policy.
   D) Reinvest $1,000 to purchase additional stock of the firm at t=1; $5,000
   E) Reinvest $1,000 to purchase additional stock of the firm at t=1; $6,100

Answer Key

1. *(No Answer Provided)*
2. A
3. C
4. D
5. E
6. D
7. C
8. C
9. D
10. D
11. E
12. B
13. C
14. A
15. A
16. B
17. E
18. B
19. D
20. B
21. B
22. E
23. C
24. A
25. E
26. A
27. C
28. E
29. A
30. B
31. D
32. D
33. C
34. A
35. B
36. E
37. C
38. E
39. A
40. A