N11119 Introduction to Finance

Sample Examination Paper II

Answer ALL questions in Part A.
Answer TWO questions in Part B.
Each question in Part A is worth 2 marks; each question in Part B is worth 35 marks.

Time allowed: 1.5 hours.

The use of any university approved calculator is permitted.

Part A

1. Pitt Metal Works had $87,600 in net fixed assets at the beginning of the year. During the year, the company purchased $6,400 in new equipment. It also sold, at a price of $2,300, some old equipment with a book value of $1,100. The depreciation expense for the year was $4,700. What is the net fixed asset balance at the end of the year?

   (a) $78,800
   (b) $80,000
   (c) $88,200
   (d) $89,400
   (e) $91,100

2. Which one of the following is the correct formula for the future value of $500 invested today at 7 percent interest for 8 years?

   (a) $FV = \$500/\left[(1 + 0.08) \times 7\right]$
   (b) $FV = \$500/\left[(1 + 0.07) \times 8\right]$
   (c) $FV = \$500/(0.07 \times 8)$
   (d) $FV = \$500/(1 + 0.07)^8$
   (e) none of the above

3. Today is your 21st birthday and you just decided to start saving money so you can retire early. Thus, you are going to save $500 a month starting one month from now. You plan to retire as soon as you can accumulate $1 million. If you can earn an average of 8 percent on your savings, how old will you be when you retire?

   (a) 42.87 years old
   (b) 54.39 years old
   (c) 64.71 years old
   (d) 63.87 years old
   (e) 60.00 years old

4. The Food Store is planning a major expansion for 4 years from today. In preparation for this, the company is setting aside $35,000 each quarter, starting today, for the next 4 years. How much money will the firm have when it is ready to expand if it can earn an average of 6.25 percent on its savings?

   (a) $528,409.29
   (b) $540,288.16

(c) \$610,411.20
(d) \$640,516.63
(e) \$655,889.02

5. The Jones Brothers recently established a trust fund that will provide annual scholarships of \$12,000 indefinitely. These annual scholarships can best be described by which one of the following terms?

   (a) Annuity due
   (b) Amortized payment
   (c) Perpetuity
   (d) Continuation
   (e) Ordinary annuity

6. Today, you are purchasing a 20-year, 6 percent annuity at a cost of \$120,000. The annuity will pay annual payments starting one year from today. What is the amount of each payment?

   (a) \$10,462.15
   (b) \$10,754.40
   (c) \$11,013.20
   (d) \$12,208.19
   (e) \$12,986.21

7. A 6 percent bond has a yield to maturity of 6.5 percent. The bond matures in 7 years, has a face value of \$1,000, and pays semiannual interest payments. What is the amount of each coupon payment?

   (a) \$30.00
   (b) \$32.50
   (c) \$60.00
   (d) \$62.50
   (e) \$65.00

8. The common stock of Green Garden Flowers is selling for \$24 a share. The company pays a constant annual dividend and has a total return of 3.8 percent. What is the amount of the dividend?

   (a) \$0.76
   (b) \$0.91
   (c) \$1.38
   (d) \$1.54
   (e) \$1.88

9. A project has the following cash flows. What is the payback period?

year	cash flow $
0	-46,000
1	13,500
2	22,900
3	8,400
4	5,600

   (a) 2.48 years
   (b) 2.59 years
   (c) 2.96 years
   (d) 3.21 years
   (e) 3.55 years

10. Alpha Zeta is considering purchasing some new equipment costing $390,000. The equipment will be depreciated on a straight line basis to a zero book value over the four-year life of the project. Projected net income for the four years is $18,900, $21,300, $26,700, and $25,000. What is the average accounting rate of return?

   (a) 11.78 percent
   (b) 11.93 percent
   (c) 12.01 percent
   (d) 12.49 percent
   (e) 12.75 percent

11. World United stock currently plots on the security market line and has a beta of 1.04. Which one of the following will increase that stock's rate of return without affecting the risk level of the stock, all else constant?

   (a) Decrease in the security's beta
   (b) Overpricing of the stock in the market place
   (c) Increase in the market risk-to-reward ratio
   (d) Decrease in the market rate of return
   (e) both (a) and (c)

12. You want to create a $65,000 portfolio comprised of two stocks plus a risk-free security. Stock A has an expected return of 14.2 percent and stock B has an expected return of 17.8 percent. You want to own $20,000 of stock B. The risk-free rate is 4.8 percent and the expected return on the market is 13.1 percent. If you want the portfolio to have an expected return equal to that of the market, how much should you invest in the risk-free security?

   (a) $13,509
   (b) $15,266
   (c) $17,315
   (d) $18,775
   (e) $19,125

13. The preferred stock of Pollard's Pools pays an annual dividend of $5.50 a share and sells for $42 a share. The tax rate is 34 percent. What is the firm's cost of preferred stock?

   (a) 13.10 percent
   (b) 15.07 percent
   (c) 15.59 percent

(d) 16.47 percent
(e) 18.32 percent

14. Sunshine Cruises issues only common stock and coupon bonds. The firm has a debt-equity ratio of 0.55. The cost of equity is 16.3 percent and the pre-tax cost of debt is 9.9 percent. What is the capital structure weight of the firm's equity if the firm's tax rate is 34 percent?

    (a) 49.97 percent
    (b) 52.93 percent
    (c) 61.08 percent
    (d) 64.52 percent
    (e) 67.51 percent

15. An all-equity firm has a return on assets of 15.3 percent. The firm is considering converting to a debt-equity ratio of 0.30. The pre-tax cost of debt is 8.1 percent. Ignoring taxes, what will the cost of equity be if the firm switches to the levered capital structure?

    (a) 16.28 percent
    (b) 16.67 percent
    (c) 17.46 percent
    (d) 18.19 percent
    (e) 19.22 percent

Part B

1. Which is more important from a finance perspective—net income or operating cash flow? What is the difference between these two values?
2. Explain the relationships among the reward-to-risk ratio, risk-free rate of return, market rate of return, market risk premium, beta, and the security market line.
3. Assume a firm follows a policy of using its weighted average cost of capital as the required return for all of its proposed projects. Evaluate this policy. How will this policy affect the overall risk level of the firm over time?
4. Explain why the capital structure of a firm is irrelevant to equity investors.