# Introduction to Finance N11119

## Sample Examination Paper I

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.

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## Part A

1. Over the past year, a firm decreased its current assets and increased its current liabilities. As a result, the firm's net working capital:
   (a) had to increase.
   (b) had to decrease.
   (c) could have remained constant if the amount of the decrease in current assets equaled the amount of the increase in current liabilities.
   (d) could have either increased, decreased, or remained constant.
   (e) there is no impact on net working capital

2. Centre Bank pays 2.5 percent interest, compounded annually, on its savings accounts. Country Bank pays 2.5 percent simple interest on its savings accounts. You want to deposit sufficient funds today so that you will have $1,500 in your account 2 years from today. The amount you must deposit today:
   (a) is the same regardless of which bank you choose because they both pay simple interest.
   (b) is the same regardless of which bank you choose because the time period is the same for both banks.
   (c) will be greater if you invest with Centre Bank.
   (d) will be greater if you invest with Country Bank.

3. Today, you deposit $2,400 in a bank account that pays 4 percent simple interest. How much interest will you earn over the next 5 years?
   (a) $101.15
   (b) $480.00
   (c) $492.16
   (d) $519.97
   (e) $529.95

4. Webster Industrial Products just signed a sales contract with a new customer. What is this contract worth as of the end of year 4 if the following payments will be received and the firm earns 5 percent on its savings?

| End of year: | Payment amount $: |
|---|---|
| 1 | 84,000 |
| 2 | 113,000 |
| 3 | 125,000 |
| 4 | 130,000 |

(a) $402,311.19
(b) $460,000.00
(c) $478,887.78
(d) $483,073.00
(e) $509,122.14

5. Jodie's Fashions has just signed a $2.2 million contract. The contract calls for a payment of $0.6 million today, $0.8 million one year from today, and $0.8 million two years from today. What is this contract worth today if the firm can earn 7.2 percent on its money?

(a) $2,042,414.79
(b) $2,108,001.32
(c) $2,124,339.07
(d) $2,202,840.91
(e) $2,351,265.85

6. Kristi is considering an investment that will pay $5,000 a year for 7 years, starting one year from today. How much should she pay for this investment if she wishes to earn a 12 percent rate of return?

(a) $18,023.88
(b) $20,186.75
(c) $22,818.78
(d) $24,507.19
(e) $25,668.15

7. The manager of Gloria's Boutique has approved Carla's application for credit. The maximum payment that has been approved is $65 a month for 24 months. The APR is 15.7 percent. What is the maximum initial purchase that Carla can make given this credit approval?

(a) $1,300.00
(b) $1,331.42
(c) $1,350.00
(d) $1,428.46
(e) $1,520,36

8. Which one of the following bonds is the least sensitive to changes in market interest rates?
   (a) Zero-coupon, 10 year
   (b) 6 percent annual coupon, 10 year
   (c) Zero-coupon, 4 year
   (d) 8 percent annual coupon, 4 year
   (e) those above have the same sensitivity

9. The Glass Ceiling paid an annual dividend of $2.20 per share last year. Management just announced that future dividends will increase by 2.8 percent annually. What is the amount of the expected dividend in year 5?
   (a) $2.41
   (b) $2.46
   (c) $2.53
   (d) $2.58
   (e) $2.62

10. The Pancake House pays a constant annual dividend of $1.25 per share. How much are you willing to pay for one share if you require a 15 percent rate of return?
   (a) $7.86
   (b) $8.33
   (c) $10.87
   (d) $11.04
   (e) $11.88

11. The Spoon Restaurant is considering a project with an initial cost of $525,000. The project will not produce any cash flows for the first three years. Starting in year four, the project will produce cash inflows of $721,000 a year for three years. This project is risky, so the firm has assigned it a discount rate of 17 percent. What is the project's net present value?
   (a) $389,211.76
   (b) $414,141.41
   (c) $451,329.69
   (d) $469,691.45
   (e) $505,251.08

12. Benny's is considering adding a new product to its lineup. This product is expected to generate sales for four years after which time the product will be discontinued. What is the project's net present value if the firm wants to earn a 14 percent rate of return?

| year | cash flow $ |
|---|---|
| 0 | -62,000 |
| 1 | 16,500 |
| 2 | 23,800 |
| 3 | 27,100 |
| 4 | 23,300 |

   (a) $2,511.49
   (b) $2,874.21
   (c) $3,013.05
   (d) $3,268.47
   (e) $3,958.11

13. Blue Lagoon stock is expected to produce the following returns given the various states of the economy. What is the expected return on this stock?

| State of Economy | Probability of State of Economy | Rate of Return |
|---|---|---|
| recession | 0.30 | -27% |
| normal | 0.65 | 16% |
| boom | 0.05 | 32% |

   (a) 3.90 percent
   (b) 4.23 percent
   (c) 4.51 percent
   (d) 5.47 percent
   (e) 5.85 percent

14. Judy's Boutique just paid an annual dividend of \$1.65 on its common stock. The firm increases its dividend by 2.5 percent annually. What is the rate of return on this stock if the current stock price is \$38.20 a share?

   (a) 6.93 percent
   (b) 7.37 percent
   (c) 7.54 percent
   (d) 8.19 percent
   (e) 8.77 percent

15. High Valley Antiques would like to issue new equity shares if its cost of equity declines to 10.5 percent. The company pays a constant annual dividend of \$1.60 per share. What does the market price of the stock need to be for the firm to issue the new shares?

   (a) \$14.48
   (b) \$14.83
   (c) \$15.24
   (d) \$15.92
   (e) \$16.89

## Part B

1. Explain the similarities and differences among an ordinary annuity, an annuity due, and a perpetuity.
2. List the various determinants of bond yields and indicate the type of situation that would cause each determinant to increase the yield on a bond.
3. Explain the difference between computing the value of a zero growth dividend-paying stock and computing the value of a constant growth dividend-paying stock.
4. Identify one primary strength and one primary weakness for each of the following methods of investment analysis.
   - Net present value
   - Internal rate of return
   - Profitability index
   - Payback period
   - Average accounting return