

**BUSINESS FINANCE - FIN2304**

**TEST 2 - VERSION B**

**MARCH 2012**

**TIME: 1:20 hours**

**WEIGHT 30%**

**INSTRUCTORS:**

**James Campbell, Scott McBride and Ildebrando A de A Lucas**

**STUDENT'S NAME:** \_\_\_\_\_

**STUDENT NUMBER #** \_\_\_\_\_

**SECTION:** \_\_\_\_\_

**INSTRUCTIONS:**

**PART A:                      MULTIPLE CHOICE QUESTIONS                      (WEIGHT 30%)**

- 1)    **CHOOSE THE MOST APPROPRIATE ANSWER.**
- 2)    **PLACE ALL OF YOUR ANSWERS ON THE COMPUTER SHEET "SCANTRON" -MANDATORY- TO BE MARKED**
- 3)    **THERE ARE TWENTY (20) QUESTIONS**

**PART B:                      QUESTIONS AND PROBLEMS                      (WEIGHT 70%)**

- 1)    **DO ALL QUESTIONS ON THE TEST PAPER.**
- 2)    **SHOW ALL FORMULAS AND/OR CALCULATOR ENTRIES**
- 3)    **ROUND ALL FINAL ANSWERS TO TWO (2) DECIMAL PLACES**
- 4)    **THERE ARE FIVE (5) QUESTIONS**

**Out of 25:**

**TOTAL 100**

**Question 1 (3 Marks)**

If the discount rate for the following cash flows has an annual rate of 5% compounded monthly,

YEARS	CASH FLOW
0	-2,000
1	3,500
2	2,500
3	600
4	100
5	0
6	1,000

- a) What is the **FUTURE VALUE** of these cash flows at the end of **year 6**? Show all calculations or calculator entries. (3 Marks)

**Question 2 (2 Marks)**

If you had two investments, (A), and (B) that you could invest for a period of 1 year;

You can either invest \$25,000 in (A) that pays an annual rate of 2.75% compound continuously, or

You can invest \$25,000 in (B) that pays an annual rate of 2.76% compounded monthly. Which investment would you choose? Make sure to include, at least, 4 decimals ON THE FINAL ANSWERS **and show all calculations.** Provide total investment return amounts at the end of the year. (2 Marks)

**Question 3 (5 Marks)**

The following information is for “YOUR Company”;

Net Income (Profit) = \$250,000

Sales are \$1,500,000

The pay-out ratio is 25%

The Capital Structure is  $0.40D + 0.60E = 1$

The CIR ratio is 3.0 (Remember the equation)

a) Calculate the Retained Earnings (Dollar amount). (1 Mark)

b) Calculate the ROA. (1.5 Mark)

c) Calculate the ROE. (1.5 Mark)

d) Calculate the Internal Growth Rate. (1 Mark)



**FINISH THE INCOME STATEMENT AND COMPLETE THE PRO FORMA  
INCOME STATEMENT & PRO FORMA INCOME STATEMENT (\$)**

ACCOUNTS	BASE YEAR (2009)	PRO FORMA (2010)
SALES	\$20,000	
ADMINISTRATIVE COSTS	12,500	
DEPRECIATION	2,500	
EBIT		
TAX (30%)		
NET INCOME		
DIVIDENDS		
RETAINED EARNINGS		

**COMPLETE THE PRO FORMA  
BALANCE SHEET & PRO FORMA BALANCE SHEET (\$)**

ACCOUNTS	BASE YEAR 2009	PRO FORMA 2010	ACCOUNTS	BASE YEAR 2009	PRO FORMA 2010
CASH	1,000		A/P	2,000	
A/R	5,000		N/P	4,000	
INVENTORY	2,000		TOTAL CURRENT LIABILITIES	6,000	
TOTAL CURRENT ASSETS	8,000				
			LONG TERM DEBT	3,000	
PLANT & EQUIPMENT	10,000				
GOODWILL	2,000		OWNER'S EQUITY		
TOTAL FIXED ASSETS	12,000		COMMON STOCK	8,000	
			RETAINED EARNINGS	3,000	
TOTAL ASSETS	20,000		TOTAL LIABILITES & OWNER'S EQUITY	20,000	
				EFN	
	PRO FORMA TOTAL ASSETS			Pro Forma Total Liabilities & Owner equity	

- a) Complete the above Income Statement and the Pro Forma Income Statement. (2 Marks)
- b) Complete the above Pro Forma Balance Sheet. (3 Marks)
- c) Calculate the Capital Intensity Ratio (CIR). (1 Mark)
- d) Using the information from the above tables, and if the company wants to grow at 15% as stipulated in the problem, and, if the Company expects to maintain the same D/E ratio for next year and cannot issue equity, calculate the EFN\* using the Finance approach not using Financial Statements. Show all calculations. (Sustainable growth EFN\* approach using the normal growth of  $g = 15\%$ ) (2 Marks)

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. An amortized loan:
  - A) requires the principle amount to be repaid in even increments over the life of the loan.
  - B) may have equal or increasing amounts applied to the principle from each loan payment.
  - C) requires that all interest be repaid on a monthly basis while the principle is repaid at the end of the loan term.
  - D) requires that all payments be equal in amount and include both principle and interest.
  - E) is the type of loan that describes most corporate bonds.
  
2. The sustainable growth rate of a firm is best described as the:
  - A) minimum growth rate achievable if the firm does not pay out any cash dividends.
  - B) minimum growth rate achievable if the firm maintains a constant equity multiplier.
  - C) maximum growth rate achievable without external financing of any kind.
  - D) maximum growth rate achievable without using any external equity financing, and while maintaining a constant debt-equity ratio.
  - E) maximum growth rate achievable without any limits on the level of debt financing.
  
3. Compound interest means that you earn:
  - A) Interest only on the initial amount invested.
  - B) Interest on the initial principal only.
  - C) Interest on both the principal and prior reinvested interest.
  - D) A decreasing amount of interest each year.
  - E) The same amount of interest each year.
  
4. The retention ratio:
  - I. is equal to one plus the dividend payout ratio.
  - II. is also known as the plowback ratio.
  - III. is a measure of a firm's willingness to provide internal funds for future growth.
  - A) I only
  - B) III only
  - C) I and II only
  - D) II and III only
  - E) I, II, and III
  
5. A pure discount loan is defined as a loan where a borrower receives money today in exchange for:
  - A) annual interest payments and the repayment of the principal at the end of the loan period.
  - B) increasing loan payments over the life of the loan.
  - C) equal loan payments over the life of the loan.
  - D) equal loan payments for a period of time followed by one large payment at the end of the loan term.
  - E) one lump sum payment at the end of the loan term.

6. The interest rate expressed as if it were compounded once per year is called the \_\_\_\_\_ rate.
- A) stated interest
  - B) compound interest
  - C) effective annual
  - D) periodic interest
  - E) daily interest
7. The maximum rate at which a firm can grow without acquiring any type of external financing is called the \_\_\_\_\_ growth rate.
- A) internal
  - B) external
  - C) sustainable
  - D) supportable
  - E) linear
8. A loan where the borrower pays interest each period, and repays some or all of the principal of the loan over time is called a(n) \_\_\_\_\_ loan.
- A) amortized
  - B) continuous
  - C) balloon
  - D) pure discount
  - E) interest-only
9. An annuity due is a series of:
- A) Equal payments that occur at the beginning of each time period and continue forever.
  - B) Unequal payments that occur at the beginning of each time period for a set period of time.
  - C) Equal payments that occur at the beginning of each time period for a set period of time.
  - D) Unequal payments that occur at the end of each time period for a set period of time.
  - E) Equal payments that occur at the end of each time period and continue forever.
10. The financial planning method in which accounts are varied depending on a firm's predicted sales level is called the:
- A) Percentage of sales approach.
  - B) Sales dilution approach.
  - C) Sales reconciliation approach.
  - D) Common-size approach.
  - E) Time-trend approach.
11. Pro forma financial statements are:
- A) Illegal.
  - B) Accounting statements filed with the Securities and Exchange Commission (SEC).
  - C) Accounting statements filed with CRA.
  - D) Projections in the form of accounting statements, based on a sales forecast assumption.
  - E) The most-recently compiled accounting statements of the firm released to the public.

12. To create the same future value given a stated discount rate, you can:
- A) decrease both the present value and the time period.
  - B) increase both the present value and the time period.
  - C) decrease the time period and hold the present value constant.
  - D) increase the present value and hold the time period constant.
  - E) increase the present value and decrease the time period.
13. The process by which smaller investment proposals of each of a firm's operational units are added up and treated as one big project is known as:
- A) Separation.
  - B) Aggregation.
  - C) Conglomeration.
  - D) Appropriation.
  - E) Striation.
14. A projection using the most optimistic assumptions is called a(n):
- A) Focused projection.
  - B) Base case scenario.
  - C) Liquidity based pro forma.
  - D) Best case scenario.
  - E) Aggregated financial plan.
15. Which of the following is a true statement?
- A) When comparing investments it is best not to rely solely on quoted rates.
  - B) Compounding will typically not lead to differences between quoted and effective rates.
  - C) The APR on a loan requiring monthly payments is the annual interest rate you actually pay.
  - D) An APR is the interest rate per period divided by the number of periods per year.
  - E) With monthly compounding, the APR will be larger than the effective annual rate.
16. The process of accumulating interest on an investment over time to earn more interest is called:
- A) Growth.
  - B) Compounding.
  - C) Aggregation.
  - D) Accumulation.
17. The capital intensity ratio is calculated as:
- A) Long-term debt times total assets.
  - B) Net fixed assets divided by credit sales.
  - C) Net fixed assets times total sales.
  - D) Total assets divided by total sales.
  - E) Total sales divided by total assets.
18. When interest is credited the instant it is earned it is referred to as:
- A) Simple interest.
  - B) Annually compounded interest.
  - C) Continuously compounded interest.
  - D) Amortized daily interest.
  - E) Annuitized interest.

19. You are choosing between investments offered by two different banks. One promises a return of 10% for three years using simple interest while the other offers a return of 10% for three years using compound interest. You should:
- A) Choose the simple interest option because both have the same basic interest rate.
  - B) Choose the compound interest option because it provides a higher return.
  - C) Choose the compound interest option only if the compounding is for monthly periods.
  - D) Choose the simple interest option only if compounding occurs more than once a year.
  - E) Choose the compound interest option only if you are investing less than \$5,000.
20. Future value is best defined as:
- A) an amount of money received each period for a stated number of periods.
  - B) the amount an investment is worth in today's dollars.
  - C) the dollar amount invested today at a stated rate of interest for some period of time.
  - D) the amount an investment is worth at the end of some stated period of time.
  - E) the cash value of an investment in today's dollars based on a stated rate of interest.