THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

A. M. E. C. E. A

MAIN EXAMINATION

AUGUST - DECEMBER 2018 TRIMESTER

FACULTY OF COMMERCE

DEPARTMENT OF ACCOUNTING AND FINANCE

REGULAR PROGRAMME

CBF 422: FINANCIAL FORECASTING AND MODELLING

Date: DECEMBER 2018	Duration: 2 Hours
INSTRUCTIONS: Answer Question ONE and ANY OTHER TWO Questions	

Q1.   The comparative income statement of the Stratum Supply Corporation as of December 31, 2017, appears as follows:

	2016	**2017**
Net sales	$990,000	$884,000
Cost of goods sold	574,000	503,000
Gross profit	$416,000	$381,000
Operating expenses:		
Selling expenses	$130,000	$117,500
General expenses	122,500	120,500
Total operating expenses	$252,500	$238,000
Income from operations	163,500	143,000
Interest expense	24,000	26,000
Income before income		
Taxes	$139,500	$117,000
Income tax expense	36,360	28,030
Net income	$103,140	$ 88,970

Required;
   a) Prepare a comparative income statement through;
      i)   Horizontal analysis   **(10 marks)**
      ii)   Vertical analysis   **(10 marks)**

   b) A product has a fixed cost of $270,000 and a variable cost of 70% of sales. Calculate the point of break-even sales   **(4 marks)**

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c) Your company has fixed costs of $76,000 and two products with the following contribution margin data:

	Product A	Product B
Selling price	$15	$10
Less: Variable cost	12	5
Unit CM	$ 3	$5
Sales mix	60%	40%

Calculate;
i)   The weighted average unit contribution margin   **(3 marks)**
ii)   The company's break-even point in units   **(3 marks)**

Q2. a)   Discuss the uses of financial Modelling   **(8 marks)**

b)   Discuss any three qualitative methods used in financial models **(6 marks)**

c)   The purpose of the model is to influence strategic decisions by revealing to the decision maker the implications of alternative values of these financial variables. Discuss   **(6 marks)**

Q3. a)   Consider the following investment:
Initial investment $12,950
Estimated life   10 years
Annual cash inflows $3,000
Cost of capital (minimum required rate of return) 12%
Calculate;
i)   Internal rate of return   **(2 marks)**
ii)   Net present value   **(2 marks)**

b)   You invest $40,000 and receive the following cash inflows. The interest rate is 10%. The discounted payback period is calculated as follows:

Year	Cash inflows	T3 factor @10%	Present value	Accumulated Present value
1	$15,000	.909	$13,635	$13,635
2	20,000	.826	16,520	30,155
3	28,000	.751	21,028	51,183

Calculate the discounted payback period   **(6 marks)**

c)   Distinguish between
i) Simulation and sensitivity analysis   **(5 marks)**
ii) Internal rate of return and accounting rate of return **(5 marks)**

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Q4. a) The Financial statements of Nina Co. Ltd showed the following current assets and current liabilities for the years ended December 31, 2012, and December 31, 2017:

	2016	2017
ASSETS		
Current assets:		
Cash	$ 60,000	$ 30,000
Accounts receivable, net	113,000	79,000
Inventories	107,100	106,900
Prepaid expenses	5,700	6,100
Total currents assets	$285,800	$222,000
LIABILITIES		
Current liabilities:		
Notes payable	$ 40,000	$ 33,000
Accounts payable	100,600	57,500
Total current liabilities	$140,600	$ 90,500

Required;
Calculate
   i)   Current Ratio   **(2 marks)**
   ii)   Acid-test Ratio   **(2 marks)**
   iii) Rate of return on total assets   **(2 marks)**
   iv)   Times-interest earned ratio   **(2 marks)**
   v)   Debt ratio   **(2 marks)**

   b)   Highlight the limitations of ratio analysis   **(7 marks)**

   c)   Identify three users of financial analysis   **(3 marks)**

END

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