AFRICA UNIVERSITY
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COLLEGE OF BUSINESS, PEACE, LEADERSHIP & GOVERNANCE

NMAC 301 MANAGEMENT ACCOUNTING

SUPPLEMENTARY EXAMINATIONS

JANUARY 2020

LECTURER: I. RARAMI

DURATION: (3HRS)

INSTRUCTIONS
Answer **ALL** questions in **SECTION A** & **ANY** 3 from **SECTION B**
Start each question on a new page in your answer booklet. The marks allocated to each question are shown at the end of the question.
Show all your workings
Credit will be given for presentations that are neat, logical and grammatically well constructed.

SECTION A: COMPULSORY [40 MARKS]

1. Donegal Ltd has just completed its budget for 2012. An extract from the budget is as follows:

Sales revenue	$1,000,000
Variable costs	$450,000
Fixed production overheads	$275,000
Fixed selling overhead	$55,000

What is the break-even revenue value?

A $600,000 B $550,000 C $700,000
D Not enough information provided to calculate.

2. In a limiting factor situation which of the following statements is true?

A A company should produce the product that uses the largest amount of the scarce resource first in order to maximise its profits.
B A company should produce the product with the highest profit first in order to maximise its profits.
C A company should produce the product with the highest contribution per scarce resource first in order to maximise its profits.
D A company will maximise its profits regardless of the product mix chosen.

3. The following statements relate to the participation of junior management in the budget setting process:

(1) It speeds up the budget setting process
(2) It increases their commitment to budgets
(3) It incorporates their knowledge into budgets
(4) It improves their morale and motivation

Which of the statements are true?

A 1, 2 and 3 B 1, 2 and 4 C 2, 3 and 4 D 2 and 3 only

4. Which of the following are considered to be benefits of a participative approach to budgeting?

(1) Individuals at all organisational levels are recognised as being part of the team which gives greater support to the organisation
(2) Budget estimates are prepared by those in direct contact with activities which give rise to variance reporting
(3) Managers are held responsible for attaining their goals, and cannot be absolved of this if unrealistic goals are demanded by the budget
(4) When managers set the final targets for the budget, top management need not be concerned with the overall profitability of current operations

A 1, 2 and 3 only B 1, 2 and 4 only C 1, 3 and 4 only D 2, 3 and 4 only

5. Which of the following are potential benefits of budgeting?

(1) It plans for the efficient use of scare resources
(2) It complies with financial reporting requirements
(3) It delegates responsibility in an organisation
(4) It is a starting point for developing a mission statement

A 1 and 3 only B 1 and 4 only C 2 and 3 only D 2 and 4 only

6. Hiccup expects the following sales volumes for the first quarter of next year:

January	5,000 units
February	4,000 units
March	8,000 units

Finished goods inventory on 1 January is expected to be 1,000 units. However, the company's policy for next year will be to maintain finished goods inventory level at 80% of the following month's sales.

How many units should be budgeted for production in January?

A 3,200 B 6,400 C 7,200 D 8,000

7. A manufacturing company always carries finished goods inventory equal to 20% of the next month's budgeted sales. Sales for the current month are 2,000 units and are budgeted to be 20% higher next month.

How many units will be produced in the current month?

A 2,080 B 1,920 C 2,000 D 2400

8. What would be the usual order of budget preparation for a manufacturing company, whose principal budget factor is sales demand?

A Production budget, sales budget, purchases budget
B Production budget, purchases budget, sales budget
C Sales budget, production budget, purchases budget
D Sales budget, purchases budget, production budget

9 A retailer forecasts the following data for the coming period:

Sales	$500,000
Opening inventory	$40,000
Closing inventory	$50,000
Mark-up	25%

What amount should be budgeted for purchases?

A $365,000 B $385,000 C $390,000 D $410,000

10. A retailer forecasts that sales in the first month of the year will be $600,000 and will then grow at 4% per month for the next three months. It prices its products by

adding a mark-up of 20% to its purchase cost. The retailer always carries sufficient inventory to cover the next month's forecast sales.

What is the forecast inventory (to the nearest dollar) at the end of the second month of the year?

A $540,800 B $562,432 C $648,960 D $811,200

11. OC had December sales of $30,000. Anticipated sales during January are $40,000, and February sales are projected at $37,500. 40% of sales are for cash, the remainder on credit terms. For credit sales OC expects to collect 50% in the month of sale and 45% in the following month. 5% of accounts receivable are expected to be uncollectible.

How much cash is expected to be received in February?

A $25,800 B $26,250 C $36,100 D $37,050

12. BD is preparing a cash budget. An extract from its sales budget shows the following sales:

	$
March	60,000
April	70,000
May	55,000
June	65,000

40% of its sales are expected to be for cash. Of its credit sales, 70% are expected to pay in the month after sale and take a 2% discount; 27% are expected to pay in the following month, and the remainder are presumed to be irrecoverable.

What amount should be included for receipts from sales in the cash budget for May?

A $38,532 B $60,532 C $64,220 D $65,200

13 The following details have been extracted from the trade receivables records of CL:

Invoices paid in 30 days 50%
Invoices paid in 60 days 30%
Invoices paid in 90 days 15%
Irrecoverable debts 5%

Invoices are issued on the last day of each month. Customers paying in 30 days are entitled to deduct a 3% settlement discount. Credit sales for July to October are budgeted as follows:

July	August	September	October
$80,000	$60,000	$100,000	$70,000

How much should be included in the cash budget in October for receipts from trade receivables?

A $72,950 B $76,500 C $78,500 D $80,000

14. What is a standard cost?

A The planned unit cost of a product, component or service in a period
B The budgeted cost ascribed to the level of activity achieved in a budget centre in a control period
C The budgeted production cost ascribed to the level of activity in a budget period
D The budgeted non-production cost for a product, component or service in a period

15. Which of the following are benefits of using a standard costing system?

(1) It facilitates timelier and more efficient reporting
(2) It provides the basis on which inefficient operations can be identified
(3) Over time administrative work is reduced
(4) It focuses on controllable costs for responsibility accounting

A 1, 2 and 3 only B 1, 2 and 4 only C 1, 3 and 4 only D 2, 3 and 4 only

The following information relates to questions 16 and 17:

The standard direct material cost per unit for a product is calculated as follows:
10·5 litres at $2·50 per litre
Last month the actual price paid for 12,000 litres of material used was 4% above standard and the direct material usage variance was $1,815 favourable. No inventory of material is held.

16. What was the adverse direct material price variance for last month?
A $1,000 B $1,200 C $1,212 D $1,260

17. What was the actual production last month (in units)?
A 1,074 B 1,119 C 1,212 D 1,258

The following information relates to questions 18 and 19:
A company operating a standard costing system has the following direct labour standards per unit for one of its products:
4 hours at $12·50 per hour
Last month when 2,195 units of the product were manufactured, the actual direct labour cost for the 9,200 hours worked was $110,750.

18. What was the direct labour rate variance for last month?

A $4,250 favourable
B $4,250 adverse
C $5,250 favourable
D $5,250 adverse

19. What was the direct labour efficiency variance for last month?

A $4,250 favourable B $4,250 adverse C $5,250 favourable D $5,250 adverse

20. Last month 27,000 direct labour hours were worked at an actual cost of $236,385 and the standard direct labour hours of production were 29,880.

The standard direct labour cost per hour was $8·50. What was the labour efficiency variance?

A $17,595 Adverse
B $17,595 Favourable
C $24,480 Adverse
D $24,480 Favourable

SECTION B: ANSWER ANY THREE [60 MARKS]

QUESTION ONE

Dolow produces computer component A for sale at $47 per unit to a Manufacturer of computers. The company currently produces 15,000 units of the component per annum.

Total cost of production and unit cost are as follows:

	Production Cost	Unit Cost
	$	$
Direct materials	210000	14
Direct labour	180000	12
Variable production cost	30000	2
Fixed manufacturing overhead	150000	10
Share of non-production overhead	105000	7
	675000	45

A supplier has offered to supply 15,000 units of the components per annum at a price of $39 per unit over a four-year period without any change in price.

If Dolow accepts the offer, the following are the effects on current operation.

(1) Direct labour will be redundant but at a redundancy cost of $5,000.
(2) Direct materials and variable production cost will be avoidable
(3) Fixed manufacturing cost will be reduced by $18,750 per annum
(4) Share of non-production overhead cost will stay as it is.

Assuming further that, the extra capacity for accepting the contract offer from the supplier can be used to produce and sell 15,000 units of component Z at a price of $43 per unit with the following assumptions:

(1) All of the labour force required to manufacture component A will be used to make component Z.
(2) Variable manufacturing overhead will remain same.
(3) The fixed manufacturing overhead will remain same.
(4) Non-manufacturing overhead will be the same.
(5) The materials for component A will not be needed but additional materials at a cost of $15 per unit will be required for production.

Required:

(a) Should Dolow make or buy component A? **(10 marks)**

(b) Should Dolow accept the offer and use the available space to manufacture component Z **(10 marks)**

QUESTION TWO

a). Workhard has been working for a textile manufacturing company for the past 25 years. At his present age of 50, he decided to go into the business of buying and selling as the future looks bleak for him. He provides you with the following information:

1. His savings over the 25 years was shares in a listed company at a cost of $5,000 whose present market value is $4,200. This has to be realised for the purpose of his intended business.
2. Workhard was promised sales orders amounting to $54,000 and $90,000 respectively for the first two quarters of 2019. From July onwards, sales are expected to be steady at the rate of $150,000 per quarter.
3. He will maintain inventory of goods costing $40,000 which have to be delivered in December 2018 if the business is to start in January 2019.
4. The goods will be sold, on average, at a gross profit margin of 20%.
5. A delivery van will be purchased and paid for in January 2019 for $12,000. It is expected to last for 5 years and be worth about $4,000 at the end of that period.
6. Workhard will arrange for monthly supplies of goods sufficient to replace items sold. The supplier will allow two months credit for all supplies, including the initial stocks to be delivered in December 2018. He will offer similar credit period to his customers.
7. He will conduct most of his business from home but will rent a warehouse to store the goods. He will pay 2 years rent of $5,400 payable half yearly in equal amounts for the two years commencing January 2019.
8. One Sales Executive will be employed on an annual salary of $3,600 payable monthly.
9. Telephone bill which is at present $150 per quarter which he will continue to pay privately will rise to $400 per quarter as a result of running the business from home. Other incidental expenses are estimated at $250 per quarter payable in cash.
10. Workhard will require his bank to meet all his other cash needs if the business is undertaken.

Required:

Prepare a cash budget for each of the four quarters of 2019. **(10 marks)**

b). The Chemical Free Clean Co (C Co) provides a range of environmentally-friendly cleaning services to business customers, often providing a specific service to meet a client's needs. Its customers range from large offices and factories to specialist care wards at hospitals, where specialist cleaning equipment must be used and regulations adhered to. C Co offers both regular cleaning contracts and contracts for one-off jobs. For example, its latest client was a chain of restaurants which employed them to

provide an extensive clean of all their business premises after an outbreak of food poisoning.
The cleaning market is very competitive, although there are only a small number of companies providing a chemical free service. C Co has always used cost-plus pricing to determine the prices which it charges to its customers but recently, the cost of the cleaning products C Co uses has increased. This has meant that C Co has had to increase its prices, resulting in the loss of several regular customers to competing service providers.
The finance director at C Co has heard about target costing and is considering whether it could be useful at C Co.

Required:

(a) Briefly describe the main steps involved in deriving a target cost. **(3 marks)**

(b) Explain any difficulties which may be encountered and any benefits which may arise when implementing target costing at C Co. **(7 marks)**
(10 marks)

QUESTION THREE

Xexe Ltd produces 4 products and is planning its production mix for the next period. Estimated cost, sales and production data are shown below:

	A	B	C	D
Selling price/unit	50	70	80	100
Materials @ $4/kg	12	36	20	24
Direct labour @ $2/hr	6	4	14	10
Maximum demand (Units)	3,000	3,000	3,000	3,000

Required:

(a) Explain the term "limiting factor" in a production strategy and give four (4) examples. **(2 marks)**

(b) Assuming labour hours is a limiting factor in the period, advise management on the most appropriate mix if labour hours is limited to 45,000 hours. **(5 marks)**

(c) Assuming, materials is a limiting factor in the period, advise management on the most appropriate mix if materials is limited to 55,000 kgs in the period. **(7 marks)**

(d) State and explain three (3) qualitative factors that a business need to take into account in addition to quantitative factors of cost. **(6 marks)**

QUESTION FOUR

The following is a summary of the selling prices of and cost data of Fine Fine Manufacturers (Pvt) Ltd that produces and sells three products A, B and C.

	A	B	C
	$	**$**	**$**
Selling price	20	30	40
Variable cost	12	20	24
Contribution	8	10	16
Proportions	30%	50%	20%
Fixed costs			$100 000
Target Profit			$ 40 000

Required:

1. Calculate

a). Weighted average

i). Selling price per unit **[3 marks]**

ii).Variable cost per unit **[3 marks]**

iii). Contribution per unit **[3 marks]**

iv). Contribution ratio **[3 marks]**

b). Break even volume and its composition **[4 marks]**

c). Break even value and its composition **[4 marks]**

d). Sales volume required to make target profit, and sales composition. **[4 marks]**

e). Sales value required to make target profit, and sales composition. **[4 marks]**

END OF PAPER