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**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2018/2019 ACADEMIC YEAR
DIPLOMA IN BUSINESS ADMINISTRATION**

DAC 1503 – MANAGERIAL ACCOUNTING

Date: 13th April, 2018
Time: 2.30pm – 4.30pm

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- a) Decision making is the process of choosing among alternatives. Highlight the Seven steps that should be followed in decision making process. (7 Marks)
- b) A company making roof tiles has been considering the likely demand for the roof tiles over the next six years and think that demand pattern will be as follows:

Situation	Prob.
High demand for 6 years	0.5
Low demand for 6 years	0.3
High demand for 3 years followed by low demand for 3 years	0.2

There is no possibility of low demand followed by high demand. Enlargement of capacity is required and the following are the available options.

Option A Install fully automatic facilities immediately at a cost of Sh.5.4 million.

Option B Install semi-automatic facilities immediately at a cost of Sh.4 million.

Option C Install the semi-automatic facilities immediately as in B and upgrade to fully automatic at an additional cost of Sh.2 million in 3 years' time provided demand has been high for 3 years.

The returns expected for the various demand and capacity options are estimated to be:

	If high demand	If low demand
Option A	Sh.1.6m p.a.	Sh.0.6 m p.a.
B	Sh.0.9 p.a for 3 years then	0.5 p.a. for 3 years
C	Sh.0.9 p.a. for 3 years, then	Sh.1.1 for 3
	Sh.0.8m p.a. for 3 years	years then Sh.0.3m
	p.a. for 3 years	

What decisions should the firm take assuming that the objective is to maximise expected value?

(10 Marks)

c) The following data relate to Kenya Ltd for the year ended 31 December 2017.

	Sh '000'
Sales	24,000
Less: Total costs	<u>20,000</u>
Net profit	<u>4,000</u>

Fixed costs account for 40% of the total costs.

Required:

- i) Margin of safety. (2 Marks)
- ii) Break-even point in sales (2 Marks)
- iii) Sales required to earn profit of Sh 6,000,000. (2 Marks)
- iv) In order to increase sales, the management has the following two options:
 1. To increase sales by 25% on incurring a sales promotion cost of Sh 2,500,000.
 2. To increase sales by 15% on reducing selling price by 5%.

Advise the management on which option they should take. (7 Marks)

QUESTION TWO (20 MARKS)

The following information has been extracted from the books of Solarcross Ltd for the year to 31 March 2018:

	Units '000'
Production	30
Sales	24
Production cost incurred:	Sh '000'
Direct material	7,200
Direct labour	1,800
Variable overheads	1,500
Fixed overheads	2,700
Selling and administrations costs:	
Sales and salaries	450
Variable sales commission	300
Promotion and advertising	480
Other fixed costs	720

The company's unit selling price is Sh 550.

Required:

- a) An Income statement under Marginal costing approach. (8 Marks)
- b) An Income statement under Absorption costing approach. (8 Marks)
- c) An explanation of the difference in profit or loss in (a) and (b) above. (4 Marks)

QUESTION THREE (20 MARKS)

- a) Define the following terms as used in linear programming:
- i) Feasible solution (2 Marks)
 - ii) Transportation problem (2 Marks)
 - iii) Assignment problem (2 Marks)
- b) The TamuTamu products company ltd is considering an expansion into five new sales districts. The company has been able to hire four new experienced salespersons. Upon analyzing the new salesperson's past experience in combination with a personality test which was given to them, the company assigned a rating to each of the salespersons for each of the districts .These ratings are as follows:

		Districts				
		1	2	3	4	5
Salespersons	A	92	90	94	91	83
	B	84	88	96	82	81
	C	90	90	93	86	93
	D	78	94	89	84	88

The company knows that with four salespersons, only four of the five potential districts can be covered.

Required:

- i) The four districts that the salespersons should be assigned to in order to maximize the total of the ratings (12 Marks)
- ii) Maximum total rating. (2 Marks)

QUESTION FOUR (20 MARKS)

- a) For a single queue, single service point system with Poisson arrivals and exponential service time, show how the average number of people in the system could vary if an average of 12 people needed the service every hour and the average service rate took alternative values of 24 per hour. What is the probability that a person entering the system would have to queue and the Average number of customers in the system (5 Marks)
- b) The maintenance cost incurred and the actual machine hours worked during the months of January, February, March and April 2017 were as follows:

Month	Machine hours in	Maintenance
	Production departments	department's Costs
January	800	Sh. 350
February	1,200	350
March	400	150
April	1,600	550

Required:

- a) Determine the cost estimation function using:
 - i) High-low method. (5 Marks)
 - ii) Regression analysis (8 Marks)

b) Using the regression function estimate: The maintenance costs that would have been incurred if the machine hours were expected to be 900 in the month of May 2017.

(2 Marks)

QUESTION FIVE (20 MARKS)

The executive management of Bee Ltd. A small manufacturer of a single product are developing their annual profit plan. They have just reviewed the first quarter of the annual income statement and are concerned with sh. 110,000 indicated as profit on a sales volume of 20,000 units. The fixed cost structure of sh 990,000 appears to be high too. They have some doubts about departing from the units selling price of sh. 100. There is a general agreement that the “profit target should be sh. 220,000.” This case deals with several tentative options suggested during the executive committee meeting

Required:

i) Compute the budgeted break-even point in shillings and units and the number of units that would have to be sold to earn the agreed profit

(6 Marks)

ii) Respond directly to each of the following two options under consideration by management. Each option is independent of the other

Option 1.

A sales price increase of 20% is contemplated; the sales executive estimates that this will cause a drop in units that can be sold by 15%. What would be the new break-even point in shillings and units? What would be the new profit figures? How many times would the units be sold to earn the target?

(7 Marks)

Option 2.

A decrease in fixed cost of shs. 55,000 and a decrease in variable cost of 6% are also contemplated. What would be the new B.E.P in shillings and units? How many units must the firm sell to earn the target profit?

(7 Marks)