Name:_____ . _____ ___Index No._____ _____ . _____

2903/305
2906/305
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3103
MANAGEMENT ACCOUNTING
November 2015
Time: 3 hours

Candidate's Signature:_____ .

Date: _____.. ..

THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN SUPPLY CHAIN MANAGEMENT
DIPLOMA IN BUSINESS MANAGEMENT
DIPLOMA IN ROAD TRANSPORT MANAGEMENT
MODULE III
BUSINESS EDUCATION SINGLE AND GROUP CERTIFICATE EXAMINATIONS
STAGE III

MANAGEMENT ACCOUNTING

3 hours

INSTRUCTIONS TO CANDIDATES

Write your name and index number in the spaces provided above.
Sign and write the date of the examination in the spaces provided above.
This paper consists of SEVEN questions.
Answer any FIVE of the SEVEN questions in the spaces provided in this question paper.
All questions carry equal marks.
Show all your working.
Candidates should answer the questions in English.

For Examiner's Use Only

Question	1	2	3	4	5	6	7	TOTAL SCORE
Candidate's Score								

This paper consists of 26 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

Turn over

1. (a) Using **five** points, explain why cost-volume-profit (C-V-P-) analysis is useful to a management accountant. (10 marks)

(b) The following information relates to Kinyanjui's financial statements for two years:

	2009	2010
	ksh	ksh
Sales	780,000	910,000
Profit	52,000	84,500

Using the high/ low method, calculate the:

(i) variable cost per unit;

(ii) fixed costs per year;

(iii) break even point in shillings;

(iv) sales revenue required in order to make a profit of ksh. 100,000. (10 marks)

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2. (a) Outline **four** limitations of budgetary control.   (8 marks)

    (b) The total maintenance costs and machine hours of Jumbo Limited for ten months were as follows:

Month	Machine hours	Maintenance
January	400	960
February	240	880
March	80	480
April	400	1,200
May	320	800
June	240	640
July	160	560
August	480	1,200
September	320	880
October	160	440

Using least squares method of Regression Analysis, calculate the:

(i)   fixed costs for the firm;
(ii) variable costs per unit of the firm;
(iii) the firm's regression equation.

                    (12 marks)

3.   (a)   Explain **four** assumptions of a transportation model.   (8 marks)

   (b)   A cashier in a supermarket can serve an average of 36 customers per hour. On average, 27 customers visit the cashier per hour.
        Assuming a single service queueing model, determine the:

        (i)   traffic intensity;

        (ii)   average number of customers in the queue;

        (iii)   average number of customers in the system;

        (iv)   average time customers spend in the queue;

        (v)   probability of a customer not queuing on arrival.   (12 marks)

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4.   (a)   Explain **four** functions of management accounting.   (8 marks)

     (b)   Awele Limited manufactures two products, X and Y, using two types of materials,
           M and N. The following information relates to the production activities of the firm in a
           particular month.

      •   Budgeted sales:

Product	Quantity	Prince per unit (Ksh)
X	1,250	215
Y	3,111	302

      •   Budgeted materials to be uses:

Material	M	N
	Ksh	Ksh
Unit cost	90	60
Quantities to be used:		
X	6	4
Y	2	2

      •   The following stocks are expected:

- Finished products	Opening Stock	Closing Stock
X	501	200
Y	333	443

- Materials		
M	221	100
N	50	155

           Prepare the following budgets:

           (i)   Sales budget.

           (ii)   Production budget.

           (iii) Material usage in quantity budget.

           (iv)   Material purchase budget.

                                                                                              (12 marks)

5. (a) Zawadi Limited manufactures a product "Zoa" which they sell for ksh. 50 per unit. Current output is 40,000 units per month which represents 80% of capacity. They have received an order for 4,000 units which they can produce by working extra time during the month. The sales revenue of this order is ksh. 96,000. Total costs for the last month were ksh. 840,000 which included fixed costs of ksh. 140,000. If the special order is undertaken, the variable cost per unit will increase by 30% but fixed costs will remain unchanged.

Advise the company whether to accept or reject this order. (8 marks)

(b) Abu Limited is considering an investment proposal to instal a new milling machine. The machine will cost ksh. 50,000 and has a life expectancy of five years and no salvage value. The estimated cash inflows from the proposed investment are as follows:

Year	Cash flows (ksh)
2011	10,000
2012	11,600
2013	12,400
2014	13,000
2015	19,000

Compute the following:

(i) Net Present Value at 10% discount rate.

(ii) Internal rate of return. (12 marks)

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6. (a) The management of an energy company intends to assign three service teams to three geographical zones. The different service costs are shown in the table below:

ZONE Service Team	Z1	Z2	Z3
S_1	ksh '000' 20	ksh '000' 15	ksh '000' 31
S_2	17	16	33
S_3	18	19	27

Determine the optimal assignment cost.   (10 marks)

(b)   A company is undertaking a two year project for which it can either use an existing machine or trade in for a new one. The operating cost for existing machine is ksh. 3,500 per year and the machine will have a scrap value of ksh. 2,000 in one year's time and nil scrap value in two year's time.

The new machine costs ksh. 2,500 each year to operate and will have scrap value of ksh. 4,000 in one year's time and nil scrap value in two year's time. The net cost of the new machine after trade-in-allowances is ksh. 4,500. Revenues for the next two years have been estimated as follows:

Machine	Year 1		Year 2	
	Probability	Revenue (ksh)	Probability	Revenue (ksh)
Old machine	0.7	6,000	0.5	8,000
			0.5	5,500
	0.3	5,000	0.4	5,000
			0.6	5,500
New machine	0.5	8,500	0.4	10,000
			0.6	9,000
	0.5	7,000	0.7	8,000
			0.3	9,000

Present the above information on a decision tree diagram.   (10 marks)

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7. (a) Pamba limited produces three products and is reviewing the production and sales budget for the next accounting period.
The following information is available for the three products:

	Product X	Product Y	Product Z
Contribution per unit	ksh 12,000	ksh 10,000	ksh 6,000
Machine hours required per unit	6 hours	2 hours	1 hour
Estimated demand	200,000 units	200,000 units	200,000 units

The available machine hours is 1,200,000 and the fixed overhead is ksh 2,400,000.

Advise the management on the products to produce during the period and determine the resultant profit.   (10 marks)

(b)   Supa cement Limited has two processing plants, one in town A, with a supply capacity of 100 tonnes a day, and another in town B, with a supply capacity of 110 tonnes a day. The company has three warehouses, R, S and T. To be viable, the warehouses need 80, 120 and 60 tonnes, of cement each day respectively. The transportation costs for each warehouse are as follows:

From Town	To warehouse	Cost per tonne in ksh'000'
A	R	1
A	S	2
A	T	3
B	R	4
B	S	1
B	T	5

Calculate the transportation cost using least cost method.   (10 marks)

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