

Name: _____ Index No: _____/_____

2903/305 2909/304

2906/305 3103

MANAGEMENT ACCOUNTING

July 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 examination in the spaces provided above.

*This paper consists of **SEVEN** questions.*

*Answer any **FIVE** questions.*

***ALL** questions carry equal marks.*

Show all your workings.

Answers must be written in the spaces provided in this question paper.

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 32 printed pages.

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

1. (a) A company sells its products at Ksh 150 per unit. The costs of production are as follows:

	Ksh per unit
Direct materials	40
Direct labour	30
Variable overheads	20

The annual total fixed costs are Ksh 2,500,000.

Determine:

- (i) the break even point in value (shillings)
- (ii) the sales value to yield a profit of Ksh 2,500,000.
- (iii) Margin of safety when the sales value is given as Ksh 8,500,000.

(10 marks)

- (b) Mukaso Limited uses material MD950 in its production. The company uses 15 units of the material per day and operates for 25 days per month. The ordering costs are Ksh 1,200 per order and the carrying costs are Ksh 1.20 per unit per annum.

Determine:

- (i) the Economic Order Quantity (EOQ).
- (ii) the annual stock holding costs.
- (iii) the annual stock ordering costs.
- (iv) the total annual stock costs.

(10 marks)

2. (a) Bartek limited has presented the table of sales and advertising expenditure in thousands of shillings during the year ended 31 March, 2013 as follows:

Advertising expenses (Ksh '000')	Sales (Ksh '000')
20	220
22	300
24	350
27	270
30	420
32	300
35	290
40	370

- (i) Calculate the regression line of Y on X, using the least square method.
(ii) Estimate the sales value when the advertising expenses is Ksh 38,000.

(8 marks)

- (b) Tiko limited is considering investing Ksh 2,500,000 in either project A or project B. The projects have the following estimated annual net cash in flows over 5 years.

	Project A Ksh	Project B Ksh
1	1,150,000	1,125,000
2	500,000	750,000
3	650,000	675,000
4	400,000	600,000
5	750,000	400,000

The cost of capital for all projects in the company is 12% per annum.

- (i) Calculate the Net Present Value (NPV) of each project.
(ii) Advise the management on the project to undertake, if the two projects are mutually exclusive.

(12 marks)

3. (a) Explain the role of Management Accounting in the following functions of an organisation.

- (i) Planning;
- (ii) Staffing;
- (iii) Controlling;
- (iv) Directing.

(8 marks)

(b) HB Limited is considering investing in a project which has the following activities, duration and costs.

Activity	Preceding Activity	Activity Duration (weeks)	Normal costs per activity Ksh '000'
A	-	6	15
B	-	8	18
C	-	10	22
D	A	11	30
E	A	12	25
F	B,D	6	8
G	F	9	12
H	F	5	16
I	C	4	20
J	E	15	10
K	E, G, H, I	19	18
L	I	18	15
M	J, K, L	3	35

- (i) Draw a network diagram for the project;
- (ii) Calculate the project's expected duration and identify the critical path;
- (iii) Calculate the total cost given that there is a fixed cost of Ksh 1,500 per week.

(12 marks)

4. (a) A transport company has five warehouses situated in five different cities in which the company stores goods for distribution to customers.

Four customers situated in different towns make orders for goods. The transport costs (in Ksh '000') from the warehouse to the customers is given in the table below:

WAREHOUSES	CUSTOMERS			
	A	B	C	D
I	5	12	10	15
II	8	15	9	12
III	10	6	8	20
IV	3	14	11	17
V	8	15	4	11

The company would like to minimise transport costs:

- (i) Advise the management on the best warehouse for each customer.
- (ii) Determine the minimum cost of transport, according to the allocations in (i) above. (8 marks)
- (b) Umoja Limited manufactures a single product which sells at Ksh 2,100 per unit. The marginal cost of production per unit is as follows:

	Ksh
Direct materials	450
Direct labour (3 hours)	600
Variable production overheads	150

Variable production overheads are absorbed on direct labour hour basis. Currently, there is no extra labour hour available. However, a customer has approached the company with a request for a special order. Information about the special order is as follows.

Sales	Ksh 400,000
Direct materials	Ksh 80,000
Direct labour	500 hours

To meet this special order, employees will work overtime at $1\frac{1}{2}$ of the normal rate of payment per hour.

- (i) Prepare the marginal cost statement to determine the contribution per unit.
- (ii) Advise the management on whether to accept or reject the special order. (12 marks)

5. (a) Motokaa Limited is an auto company that has four plants. A, B, C and D. The capacities of the four plants are 1,800, 1,500, 2,300 and 1,400, respectively. The plants are used to distribute cars to four cities: I, II, III and IV. The demand of the four cities are: 2,300, 1,400, 1,500 and 1,800, respectively. The transportation costs (in Ksh '000') between the plants and the cities are as follows:

PLANTS	CITIES			
	I	II	III	IV
A	6	8	10	6
B	7	11	11	8
C	4	10	9	10
D	11	5	12	4

Find the initial solution using the North-West Corner rule.

(8 marks)

- (b) A lone telephone operator in a company answers all incoming calls. Calls arrive at the switchboard at the rate of one call in every 3 minutes. The operator takes 2 minutes to serve every customer who calls.

Determine:

- (i) the average rate of service;
- (ii) the traffic intensity;
- (iii) the average number of calls in the queue;
- (iv) the average time a caller spends in the queue;
- (v) the total amount paid to the operator in a 10 hour day, if each call is paid at Ksh 4.

(12 marks)

6. (a) Explain **four** advantages of using internet in business transactions. (8 marks)
- (b) Vesu industries manufacture a product whose standard costs per unit are as follows:
- Materials - 5 Kgs @ Ksh 4.20 per kg
 - Labour - 2 hours @ Ksh 3 per hour

The production schedule for the month of April 2013 required 5,000 units.
The actual data for the month of April 2013 is as follows:

- Materials purchased, 30,000 Kgs for Ksh 135,000
- Materials used, 25,700 Kgs
- Direct labour hours utilized, 15,150 hours at a total cost of Ksh 48,480

Vesu, one of the directors of the company, has stated that the actual performance is better than the expected performance.

- (i) Calculate:
- (I) Direct material price variance;
 - (II) Direct material usage variance;
 - (III) Direct material cost variance;
 - (IV) Direct labour rate variance;
 - (V) Direct labour efficiency variance.
- (ii) Explain whether Vesu's statement is correct or incorrect, based on calculations in (i) above.
- (12 marks)

7. (a) (i) Explain the concept of transfer pricing using an example.
- (ii) How is transfer price determined if:
- (I) there is no external market for the transfer product. (Give three ways)
- (II) there is an external market for the transfer product.
- (8 marks)

- (b) Zeka Limited produces two models of filing cabinets; Model ZD1, and Model ZD2. The following information relates to one unit of each of the two models.

	MODEL ZD1	MODEL ZD2	AVAILABILITY
Selling Price (Ksh)	5,000	4,500	-
Material 1 (units)	120	150	12,000
Material 2 (units)	60	50	4,500
Labour (Hours)	17.50	10	1,050

- (i) Formulate a linear programming model from the information above.
- (ii) Determine the:
- (I) optimal number of cabinets of each model the company should produce and sell in order to optimize the sales, using the graphical method.
- (II) optimal sales value.
- (12 marks)