

2903/305 2909/304

2906/305 3103

MANAGEMENT ACCOUNTING

July 2016

Time: 3 hours



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**

*This paper consists of SEVEN questions.*

*Answer any FIVE questions in the answer booklet provided.*

*ALL questions carry equal marks.*

*Show all your workings.*

*Candidates should answer the questions in English.*

**This paper consists of 8 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) Highlight the differences between Management Accounting and Financial Accounting, using each of the following bases:
- (i) Primary users
  - (ii) Free of choice of accounting measures
  - (iii) Time focus of reports
  - (iv) Types of reports
- (8 marks)

- (b) Theka Traders had the following budgeted income statement for the month ending 31 January 2013.

	Ksh '000'
Net revenue	24,000
less: expenses, which include	
fixed expenses of Ksh.12,000)	26,400
Net loss	Ksh 2,400

The accountant has advised the proprietor that sales would increase substantially, if an additional Ksh.6,000,000 would be spent in advertising.

- (i) Calculate the break-even sales when the additional advertising expenses of Ksh.6,000,000 is incurred.
  - (ii) Calculate the sales revenue that would result in a target profit of Ksh.20,000,000 when the Ksh.6,000,000 advertising expenses is incurred.
- (12 marks)

2. (a) Makazi Limited had the following data for the six month of 2011:

Month	Output (Unit '000')	Total Cost (Ksh '000')
July	30	6,810
August	32	6,880
September	36	7,020
October	45	7,335
November	48	7,440
December	50	7,510

- (i) Using the High-Low method, calculate the fixed cost of production.
- (ii) The company's fixed costs will increase by 80% when the output exceeds 80,000 units.  
Calculate the estimated total cost of producing 100,000 units.

(8 marks)

(b) Explain each of the following terms in relation to investment appraisal techniques:

- (i) Discounted Cash Flow (DCF) model.
- (ii) Internal Rate of Return (IRR).
- (iii) Required rate of return.
- (iv) Real options model.
- (v) Recovery period.
- (vi) Accounting Rate of Return (ARR).

(12 marks)

3. (a) Explain four limitations of the cost-volume profit analysis.

(8 marks)

(b) Soloit Grain Handlers Limited, operates three warehouses: WI in Narok, WII in Nakuru and WIII in Nairobi. The stock of wheat (in '000 bags) in each of the warehouses as at 30 October, 2011 was as follows:

<b>WI</b>	<b>WII</b>	<b>WIII</b>
620	680	720

Three customers require to be supplied with wheat and their requirements (in '000 bags) were as follows:

<b>CI</b>	<b>CII</b>	<b>CIII</b>
700	720	600

Transportation cost of one bag of wheat from the warehouses to the customers is as given below:

<b>WAREHOUSE</b>	<b>Transportation cost per bag (Ksh)</b>		
	<b>CUSTOMER</b>		
	<b>CI</b>	<b>CII</b>	<b>CIII</b>
I	150	60	140
II	140	65	160
III	110	130	160

Using the Vogel's approximation method (VAM), calculate the minimum transportation cost to deliver the wheat to the customers.

(12 marks)

4. (a) Parapa Limited operates two divisions, N and M. Both divisions have proposed similar investment projects worth Ksh.15,000,000 each. Out of this investment, the controllable contribution is given as 20% of the proposed investment for division N, while division M has estimated their controllable contribution to be 25%. The cost of capital charge is 15% of the proposed investment for each of the companies.

Using the residual income approach method of evaluating divisional performance, advise the management on which division's project to be undertaken if the company has capital constraints. (8 marks)

- (b) John planned to start a business with an initial capital of Ksh.1,350,000 on 1 June 2015. He bought a pick-up costing Ksh.650,000 for business use. The estimated purchases, sales and expenses for the next six months were as follows:

	Expenses Ksh	Purchases Ksh	Sales Ksh
June	750,000	450,000	1,250,000
July	600,000	460,000	3,000,000
August	600,000	950,000	1,500,000
September	650,000	858,000	500,000
October	660,000	360,000	4,500,000
November	700,000	400,000	6,000,000
December	720,000	470,000	550,000

Additional information:

- Payment for purchases and receipts from debtors will be made one month after the transaction.
- All expenses will be paid for in the month they are incurred.
- Depreciation on the pick-up will be at the rate of 25% on cost.

Prepare a month-by-month cash budget for the six months ending November 2015.

(12 marks)

5. (a) Explain **four** factors to be considered before making a long-term investment decision. (8 marks)
- (b) Motokaa Garage provides maintenance services to its clients. Four customers have requested for the service of their vehicles in August 2016. The garage, engages four mechanics. The following table shows the clients and the cost (Ksh '000) to be incurred by each mechanic to service each of the client's vehicle.

Mechanics	Clients			
	Clive	Clara	Christine	Clova
Michael	7	4	2	9
Mika	1	9	5	5
Moses	3	8	9	8
Mark	4	3	1	3

Assign the mechanics to the clients in order to minimize the total cost.

(12 marks)

6. (a) Explain **five** ways in which Management Information Systems may be used in a manufacturing company. (10 marks)
- (b) A bank teller can serve an average of one client in every 3 minutes. On average, a client arrives after every 2.5 minutes. Using a single service queue 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 a customer spends in the system.

(10 marks)

7. (a) Kwikat Limited produces and sells two products, product KWI and product KAT. The standard cost of production per unit of each product is as given below:

	Products	
	KWI (KSh)	KAT (KSh)
Direct materials	8.00	8.50
Direct labour	5.00	6.00
Variable production overhead	2.00	3.00

The selling, distribution and administration expenses are:

Fixed	KSh.120,000
Variable	15% of the sales value

The fixed production overhead costs are calculated on the basis of budgeted annual output of 36,000 units.

The selling price per unit is Ksh.35.

The number of units produced and sold during a given period were:

	Products	
	KWI	KAT
Production (units)	2,000	3,400
Sales (units)	1,500	3,000

- (i) Prepare a profit statement for each product, using the marginal costing method.
- (ii) Advise the management on the product to produce and sell.

(8 marks)

- (b) Niwak Limited is considering developing and introducing a new product into the market.

The company has the following three options to consider:

#### Option 1

To install a large plant which will cost Ksh.1,000,000.

There is a 45% chance of the demand being high, a 35% chance of the demand being medium and a 20% chance of the demand being low. The plant is expected to generate cash flows of Ksh.800,000 when the demand is high, Ksh.600,000 when the demand is medium and Ksh.400,000 when the demand is low.

**Option 2**

To install a medium size plant which will cost Ksh.600,000.

**Option 3**

To install a small size plant which will cost Ksh.1,500,000.

The probabilities and cash flows expected for option 2 and option 3 are as follows:

Demand	Option 2		Option 3	
	Probabilities	Cash flows	Probabilities	Cash flows
High	0.55	800,000	0.65	800,000
Medium	0.30	600,000	0.20	600,000
Low	0.25	400,000	0.15	400,000

Draw a Decision Tree from the information given and advise the management on the best option.

(12 marks)

**Table A**  
**Present Value of Sh 1 Received at the End of n Periods:**  
 $PVIF_{r,n} = 1/(1+r)^n$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	.9901	.9804	.9709	.9615	.9524	.9434	.9346	.9259	.9174	.9091	.8929	.8772	.8696	.8621	.8475	.8333	.8065	.7813	.7576	.7353
2	.9803	.9612	.9426	.9246	.9070	.8900	.8734	.8573	.8417	.8264	.7972	.7695	.7561	.7432	.7182	.6944	.6504	.6104	.5739	.5407
3	.9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7118	.6750	.6575	.6407	.6086	.5787	.5245	.4768	.4348	.3975
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	.7084	.6830	.6355	.5921	.5718	.5523	.5158	.4823	.4230	.3725	.3294	.2923
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	.5194	.4972	.4761	.4371	.4019	.3411	.2910	.2495	.2149
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	.5963	.5645	.5066	.4556	.4323	.4104	.3704	.3349	.2751	.2274	.1890	.1580
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	.3996	.3759	.3538	.3139	.2791	.2218	.1776	.1432	.1162
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	.4039	.3506	.3269	.3050	.2660	.2326	.1789	.1388	.1085	.0854
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	.3075	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.0628
10	.9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	.2697	.2472	.2267	.1911	.1615	.1164	.0847	.0623	.0462
11	.8963	.8043	.7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.2875	.2366	.2149	.1954	.1619	.1346	.0938	.0662	.0472	.0340
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	.3555	.3186	.2567	.2076	.1869	.1685	.1372	.1122	.0757	.0517	.0357	.0250
13	.8787	.7720	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	.0935	.0610	.0404	.0271	.0184
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	.1597	.1413	.1252	.0985	.0779	.0492	.0316	.0205	.0135
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	.3152	.2745	.2394	.1827	.1401	.1229	.1079	.0835	.0649	.0397	.0247	.0155	.0099
16	.8528	.7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	.1069	.0930	.0708	.0541	.0320	.0193	.0118	.0073
17	.8444	.7142	.6050	.5134	.4363	.3714	.3166	.2703	.2311	.1978	.1456	.1078	.0929	.0802	.0600	.0451	.0258	.0150	.0089	.0054
18	.8360	.7002	.5874	.4936	.4155	.3503	.2959	.2502	.2120	.1799	.1300	.0946	.0808	.0691	.0508	.0376	.0208	.0118	.0068	.0039
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	.2317	.1945	.1635	.1161	.0829	.0703	.0596	.0431	.0313	.0168	.0092	.0051	.0029
20	.8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	.1784	.1486	.1037	.0728	.0611	.0514	.0365	.0261	.0135	.0072	.0039	.0021
25	.7798	.6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	.0378	.0304	.0245	.0160	.0105	.0046	.0021	.0010	.0005
30	.7419	.5621	.4120	.3083	.2314	.1741	.1314	.0994	.0754	.0573	.0334	.0196	.0151	.0116	.0070	.0042	.0016	.0006	.0002	.0001
40	.6717	.4529	.3066	.2083	.1420	.0972	.0668	.0460	.0318	.0221	.0107	.0053	.0037	.0026	.0013	.0007	.0002	.0001	.0001	.0001
50	.6080	.3715	.2281	.1407	.0872	.0543	.0339	.0213	.0134	.0085	.0035	.0014	.0009	.0006	.0003	.0001	.0001	.0001	.0001	.0001
60	.5504	.3048	.1997	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.0011	.0004	.0002	.0001	.0001	.0001	.0001	.0001	.0001	.0001

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