2804/301 2809/301
2806/301
MANAGERIAL ACCOUNTING
March/April 2025
Time: 3 hours

THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN ACCOUNTANCY
DIPLOMA IN BUSINESS ADMINISTRATION
DIPLOMA IN TRANSPORT MANAGEMENT

MANAGERIAL 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.
Candidates should answer the questions in English.

This paper consists of 7 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) Explain **four ways** in which managerial accounting is useful in planning. (8 marks)

(b) Mabuka limited uses 250,000 units of material MX per annum. The purchase cost is Ksh. 50 per unit. Ordering costs are Ksh. 735 per order. Carrying costs are 15% of the purchase cost.

Determine the:

(i) Economic order quantity;
(ii) Number of orders in a year;
(iii) Average inventory.
(iv) Total relevant cost.

(12 marks)

2. (a) Highlight **five** limitations of responsibility accounting. (10 marks)

(b) The following data relates to material 'KZO' used by Luku manufacturers;

Normal usage	3,900 Kg. Per day
Minimum usage	2,700 Kg. Per day
Maximum usage	6,000 Kg. Per day
Lead time	6 - 8 days
Economic order quantity	60,000 Kg.

Calculate the:

(i) Re-order level;
(ii) Minimum stock level;
(iii) Maximum stock level;
(iv) Average stock level.

(10 marks)

3. (a) Highlight **five** requirements of a linear programming problem. (10 marks)

(b) Solo limited manufactures and sells product 'S15'. The following information relates to the product.

	Ksh
Selling price	900
Variable costs per unit	400
Fixed costs per annum	5,000,000

Determine the:

(i) Break-even point in units and in shillings;
(ii) Contribution-Sales ratio;
(iii) Number of units to be produced and sold in order to earn a profit of Ksh. 2,000,000.

(10 marks)

4. (a) Highlight **five** rules that should be followed when constructing a network diagram.

(10 marks)

(b) Sitra limited intends to invest Ksh. 18,000,000 in either project X or project W. The following are the expected net cash inflows from the projects.

Year	Project X Ksh	Project Y Ksh
1	2,000,000	8,000,000
2	4,000,000	6,000,000
3	6,000,000	4,000,000
4	8,000,000	3,000,000
5	10,000,000	2,000,000

The company's cost of capital is 14%.

(i) Calculate the Net Present Value (NPV) of each project.

(ii) Based on the results in (i) above, advise the management on the project to invest in.

(10 marks)

5. (a) Explain **four** advantages of using the account analysis method in estimation of costs.

(8 marks)

(b) Kutano limited intends to construct a factory building. The following activities relate to the project.

Activity	Preceding activity	Duration (Weeks)
L	-	20
M	-	24
N	L	20
P	L	18
Q	L	26
R	M	34
S	P	24
T	P	28
U	Q	26
V	N,R,S	24
X	V	20
Y	T,U	28
Z	X,Y	26

(i) Draw a network diagram to represent the above information.
(ii) Determine the critical path and the project duration.

(12 marks)

6. (a) Agesa limited makes and sells one product. The following information relates to the product for the year 2024.

	Units
Production	30,000
Sales	20,000

	Ksh.
Selling price per unit	500
Unit cost:	
Direct materials	160
Direct labour	80
Variable production overheads	40
Variable selling overheads	40

Fixed costs for the year	Ksh.
Production	480,000
Administration	30,000
Selling and distribution	50,000

Prepare a profit statement using marginal costing technique. (10 marks)

(b) Kana limited intends to invest in either project S or project T. The folowing are the expected net cash inflows from the projects.

Year	Project S Ksh.	Project T Ksh.
0	(9,000,000)	(13,000,000)
1	3,000,000	4,000,000
2	3,000,000	2,000,000
3	4,000,000	6,000,000
4	5,000,000	3,000,000

(i) For each of the projects, calculate the payback period.

(ii) The management policy is to accept projects whose payback period is two and a half years or less. Advise the management on the project to invest in.

(10 marks)

7. (a) Amona limited manufactures a single product. The following information relates to the number of units produced and their respective costs of production over the last seven years.

Year	Production (units) x	Cost of production (Ksh. 'Millions') y
2018	500	100
2019	510	115
2020	516	120
2021	534	130
2022	540	145
2023	544	152
2024	546	155

(i) Using the regression analysis method, determine the estimation equation in the form $y = a + bx$.

(ii) Estimate the cost of production for the year 2025 if 600 units are to be produced.

(10 marks)

(b) Kumbuka Limited requires ballast in four different construction sites.

Site	Quantity required (Tonnes)
A	200
B	400
C	900
D	300

The ballast is to be obtained from three different quarries; X, Y and Z. The quantities available from each quarry is as shown below.

Quarry	Quantity available (Tonnes)
X	700
Y	500
Z	600

The transportation cost of one tonne of ballast (in thousands of shillings) from each of the quarries to each construction site is as shown below;

Site / Quarry	A	B	C	D
X	5	8	10	4
Y	6	7	11	3
Z	4	9	9	5

Using the least-cost method, determine the:

(i) optimal transportation schedule;

(ii) minimum cost of transportation.

(10 marks)

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

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	.7730	.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	.5521	.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	*	*
50	.6080	.3715	.2281	.1407	.0872	.0543	.0339	.0213	.0134	.0085	.0035	.0014	.0009	.0006	.0003	.0001	*	*	*	*
60	.5504	.3048	.1697	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.0011	.0004	.0002	.0001	*	*	*	*	*	*

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