

UNIVERSITY OF SWAZILAND

DEPARTMENT OF ACCOUNTING

SUPPLEMENTARY EXAMINATION PAPER 2009

DEGREE/DIPLOMA AND YEAR OF STUDY: B.COM IV

TITLE OF PAPER: MANAGEMENT ACCOUNTING II

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS:

1. TOTAL NUMBER OF QUESTIONS ON THIS PAPER : FOUR (4)
2. ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS
3. THE MARKS AWARDED FOR A QUESTION /PART ARE INDICATED AT THE END OF EACH QUESTION/PART OF QUESTION.
4. ALL CALCULATIONS ARE TO BE MADE TO THE NEAREST LHANGENL
5. WHERE APPLICABLE, SUBMIT ALL WORKINGS AND CALCULATIONS.

NOTE: YOU ARE REMINDED THAT IN ASSESSING YOUR WORK, ACCOUNT WILL BE TAKEN OF ACCURACY OF THE LANGUAGE AND THE GENERAL QUALITY OF EXPRESSION, TOGETHER WITH THE LAYOUT AND PRESENTATION OF YOUR FINAL ANSWER.

SPECIAL REQUIREMENTS: NONE

THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR.

QUESTION 1

A. The management of Vuvulane Irrigated Farms is trying to decide whether to buy a new span of oxen at a cost of E1000, or a new tractor at a cost of E10,000. They will perform the same job. But because the span of oxen require more labourers, the annual return is only E250 of net cash inflows. The tractor will return E2000 of net cash inflows per year. The oxen have a working life of 8 years and the tractor 10 years. Neither investment is expected to have a salvage value at the end of its useful life.

REQUIRED: Compute the following for each investment:

- | | | |
|------|---|-----------|
| i) | pay back period | (4 Marks) |
| ii) | accounting rate of return | (4 Marks) |
| iii) | net present value assuming that the company's cost of capital is 6% | (4 Marks) |
| iv) | profitability index | (4 Marks) |
| v) | internal rate of return | (4 Marks) |
| vii) | which is the two is the best investment | (4 Marks) |

B. Hleta, a vendor plans to replace the old vending machine that is obsolete and expected to be unreliable under the stress of daily operations. The machine is fully depreciated and no salvage value can be realized upon its disposals. The new vending machine being considered as a replacement would provide an annual cash savings of E7000 before income taxes and without regard to the effect of depreciation. The equipment would cost E18,000 and has an estimated useful life of 5 years. No salvage value would be used for depreciation purposes because the machine is expected to have no value at the end of 5 years.

Hleta, uses a straight-line depreciation method for both book value and tax purposes. The company is subject to a 40% tax rate. Hleta has an after tax cost of capital of 14%.

REQUIRED: Compute the following:

- | | | |
|------|---------------------------|-------------------|
| i) | payback period | (6 Marks) |
| ii) | net present value | (5 Marks) |
| iii) | accounting rate of return | (5 Marks) |
| | | (Total:40 Marks) |

QUESTION 2

ABC Company has decided to introduce a new product. Although the product can be made with existing machinery and equipment, extensive planning is required in order to get it into production and to market it. To control and monitor the project through its various phases, PERT is to be used. For illustrative purposes, assume that the following set of ordered events are the key ones which must be completed in order to successfully introduce the new product:

Order	Events
0	Start
1	Product specifications
2	Labor and material requirements established,
3	Time and cost estimates for the new product and its price set
4	Inventory planning and production-run scheduling, and initial order for raw materials placed
5	Raw materials arrive
6	Labor allocated and trained
7	Trial run to establish statistical quality control
8	Set up for initial production run
9	Initial production run
10	Advertising, promotion, and sales briefings
11	Distribution

Assume further, that the planners generally agree to the following set of pairings.

Activity	Expected time in weeks	Activity	Expected time in weeks
0-1	8	5-6	0
1-2	10	5-7	2
1-10	26	6-7	3
2-3	4	7-8	3
2-6	2	8-9	1
3-4	2	9-11	2
4-5	6	10-11	0

REQUIRED:

- Construct the PERT-Time network, (10 Marks)
- Determine the critical path. (10 Marks)
- Determine the slack at each event, and the total slack in the network. (10 Marks)

QUESTION 3

A. List the approaches to the studies of cost behaviour (5 Marks)

B. Khemba Ltd manufactures product KM.

The firm is trying to strengthen its formal budgeting and planning process. The company has encountered a problem in budgeting utilities expenses. The expense is apparently a mixed cost and varies most directly with machine hours worked. However, management does not know the exact relationship between machine hours and utilities expenses. The following data have been gathered from recent operations.

Month	Machine Hours	Utilities Expenses
January	1400	E9000
February	1700	9525
March	2000	10900
April	1900	10719
May	2300	11670
June	2700	13154
July	2500	13000
August	2200	11578

REQUIRED:

- i) In analyzing the data, how do you know that utilities expense is a mixed cost?
(3 Marks)
- ii) Using the high-low method, estimate utilities expense as a function of machine hours in the form $Y = a + bx$
(6 Marks)
- iii) Using the least squares regression, estimate utilities expense as a function of machine hours in the form $Y = a + bx$
(10 Marks)
- iv) Which of your answers, part (ii) or (iii), provides a better estimate of the relationship between utilities expense and machine hours? Why? (5 Marks)

Total (30 Marks)

QUESTION 4

A. List the basis on which transfer prices can be made (Transfer pricing methods)

(5 Marks)

B. Selebe Ltd is a decentralized organization. One of its divisions, Beta Division, manufactures component Gamma for sale to other divisions as well as outside companies. The Head Office of Selebe treats Beta Division as a profit centre. The normal (Standard) selling price of Gamma is E12 per unit. Costs per unit of Gamma are shown below:

Direct material	E2.00
Direct labour	1.40
Variable overhead	0.80
Fixed overhead (based on production of 700.000 units of Gamma)	2.75
Variable selling expense	0.50

Another division of Selebe, Alpha Division, wants to purchase 25,000 units of Gamma from Beta Division during next year. No selling costs are incurred on internal sales.

REQUIRED:

- i) If Beta divisional manager can sell all the Gamma units it produces externally, what should the minimum transfer price be? Explain (5 Marks)
- ii) Assume that Beta Division is experiencing a slight slowdown in external demand and will only be able to sell 600,000 units of Gamma to outsiders next year at the E12 selling price per unit. What should be the minimum selling price to the Alpha Division under these conditions? Explain (5 Marks)

C. Two investment Centres of Sabelo Ltd are HH and AB Divisions. HH Division manufactures components HB that can be sold externally and also to AB Division. The following information is available about component HB:

Total production annually - 200,000 component;

Internal requirements are 150,000 component s; all others are sold externally

List (market) selling price - E25.60

Variable production costs - E12

Fixed overhead - E300,000; allocated on the basis of production

Variable selling costs - E3, includes E1 per unit in advertising cost

REQUIRED: Determine the transfer price under each of the following methods:

- | | | |
|------|---|-----------|
| i) | Total variable cost | (3 Marks) |
| ii) | Full production cost (Absorption costing) | (5 Marks) |
| iii) | Total variable production cost plus necessary selling costs | (5 Marks) |
| iv) | Market price | (2 Marks) |

Total (30 Marks)

Table 10-1 Present Value of \$1

Years N	5%	6%	8%	10%	12%	14%	16%	18%	20%	22%	24%	25%
1	0.952	0.943	0.926	0.909	0.893	0.877	0.862	0.847	0.833	0.820	0.806	0.800
2	0.907	0.890	0.857	0.826	0.797	0.769	0.743	0.718	0.694	0.672	0.650	0.640
3	0.864	0.840	0.794	0.751	0.712	0.675	0.641	0.609	0.579	0.551	0.524	0.512
4	0.823	0.792	0.735	0.683	0.636	0.592	0.552	0.516	0.482	0.451	0.423	0.410
5	0.784	0.747	0.681	0.621	0.567	0.519	0.476	0.437	0.402	0.370	0.341	0.328
6	0.746	0.705	0.630	0.564	0.507	0.456	0.410	0.370	0.335	0.303	0.275	0.262
7	0.711	0.665	0.583	0.513	0.452	0.400	0.354	0.314	0.279	0.249	0.222	0.210
8	0.677	0.627	0.540	0.467	0.404	0.351	0.305	0.266	0.233	0.204	0.179	0.168
9	0.645	0.592	0.500	0.424	0.361	0.308	0.263	0.225	0.194	0.167	0.144	0.134
10	0.614	0.558	0.463	0.386	0.322	0.270	0.227	0.191	0.162	0.137	0.116	0.107
11	0.585	0.527	0.429	0.350	0.287	0.237	0.195	0.162	0.135	0.112	0.094	0.086
12	0.557	0.497	0.397	0.319	0.257	0.208	0.168	0.137	0.112	0.092	0.076	0.069
13	0.530	0.469	0.368	0.290	0.229	0.182	0.145	0.116	0.093	0.075	0.061	0.055
14	0.505	0.442	0.340	0.263	0.205	0.160	0.125	0.099	0.078	0.062	0.049	0.044
15	0.481	0.417	0.315	0.239	0.183	0.140	0.108	0.084	0.065	0.051	0.040	0.035
16	0.458	0.394	0.292	0.218	0.163	0.123	0.093	0.071	0.054	0.042	0.032	0.028
17	0.436	0.371	0.270	0.198	0.146	0.108	0.080	0.060	0.045	0.034	0.026	0.023
18	0.416	0.350	0.250	0.180	0.130	0.095	0.069	0.051	0.038	0.028	0.021	0.018
19	0.396	0.331	0.232	0.164	0.116	0.083	0.060	0.043	0.031	0.023	0.017	0.014
20	0.377	0.312	0.215	0.149	0.104	0.073	0.051	0.037	0.026	0.019	0.014	0.012

Table 10-2 Present Value of \$1 Received Annually for N Years

Years N	5%	6%	8%	10%	12%	14%	16%	18%	20%	22%	24%	25%
1	0.952	0.943	0.926	0.909	0.893	0.877	0.862	0.847	0.833	0.820	0.806	0.800
2	1.859	1.833	1.783	1.736	1.690	1.647	1.605	1.566	1.528	1.492	1.457	1.440
3	2.723	2.673	2.577	2.487	2.402	2.322	2.246	2.174	2.106	2.042	1.981	1.952
4	3.546	3.465	3.312	3.169	3.037	2.914	2.798	2.690	2.589	2.494	2.404	2.362
5	4.330	4.212	3.993	3.791	3.605	3.433	3.274	3.127	2.991	2.864	2.745	2.689
6	5.076	4.917	4.623	4.355	4.111	3.889	3.685	3.498	3.326	3.167	3.020	2.951
7	5.786	5.582	5.206	4.868	4.564	4.288	4.039	3.812	3.605	3.416	3.242	3.161
8	6.463	6.210	5.747	5.335	4.968	4.639	4.344	4.078	3.837	3.619	3.421	3.329
9	7.108	6.802	6.247	5.759	5.328	4.946	4.607	4.303	4.031	3.786	3.566	3.463
10	7.722	7.360	6.710	6.145	5.650	5.216	4.833	4.494	4.192	3.923	3.682	3.571
11	8.306	7.887	7.139	6.495	5.937	5.453	5.029	4.656	4.327	4.035	3.776	3.656
12	8.863	8.384	7.536	6.814	6.194	5.660	5.197	4.793	4.439	4.127	3.851	3.725
13	9.394	8.853	7.904	7.103	6.424	5.842	5.342	4.910	4.533	4.203	3.912	3.780
14	9.899	9.295	8.244	7.367	6.628	6.002	5.468	5.008	4.611	4.265	3.962	3.824
15	10.380	9.712	8.559	7.606	6.811	6.142	5.575	5.092	4.675	4.315	4.001	3.859
16	10.838	10.106	8.851	7.824	6.974	6.265	5.669	5.162	4.730	4.357	4.033	3.887
17	11.274	10.477	9.122	8.022	7.120	6.373	5.749	5.222	4.775	4.391	4.059	3.910
18	11.690	10.828	9.372	8.201	7.250	6.467	5.818	5.273	4.812	4.419	4.080	3.928
19	12.085	11.158	9.604	8.365	7.366	6.550	5.877	5.316	4.844	4.442	4.097	3.942
20	12.462	11.470	9.818	8.514	7.469	6.623	5.929	5.353	4.870	4.460	4.110	3.954