

**COURSE CODE: AC 502 (M) 2010**

**UNIVERSITY OF SWAZILAND**

**DEPARTMENT OF ACCOUNTING**

**MAIN EXAMINATION PAPER , 2010**

**DEGREE/DIPLOMA AND YEAR OF STUDY : B.COM V**  
**TITLE OF PAPER : MANAGEMENT ACCOUNTING II**  
**COURSE CODE : AC 502**  
**TIME ALLOWED : TWO (2) HOURS**

- INSTRUCTIONS:**
- 1. THE TOTAL NUMBER OF QUESTIONS ON THIS PAPER ARE 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. 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 ONE

- A. The Materials Receiving Department of Southwood Company experienced the following costs during the first six months of 2009.

	KGS of Material			KGS. of Material	
Month	Received	Cost	Month	Received	Cost
January	5,500	E3,040	April	5,990	E3,088
February	6,040	3,288	May	5,600	3,072
March	7,000	3,340	March	6,400	3,280

- i. Using the high-low method, determine the fixed and variable values for the Formula  $y = a + bX$ , where X is kgs of material received. (6 Marks)
- ii. Given your answers to part a, predict July's total departmental costs if expected receipts (in kgs) are 6,700. (6 Marks)

- B. The Marine Hydraulics Corporation wishes to determine variable and fixed portions of its electricity expense ( a mixed cost) as measured against machine hours. Information for the first six months of 2009 follows:

	Machine	Electricity		Machine	Electricity
Month	Hours	Expense	Month	Hours	Expense
January	68,000	E1,220	April	64,000	E 1,195
February	62,000	1,172	May	67,500	1,300
March	66,300	1,014	March	62,500	1,150

Use the high-low method to answer the following questions:

- i. What is the variable rate per machine hour? (5 Marks)
- ii. What is the fixed cost portion of electricity? (5 Marks)
- iii. Develop the cost (budget) formula for electricity expense (7 Marks)
- iv. What would be the estimated electricity cost for October 2009 if 65,450 machine hours are projected? (5 Marks)

**Total (34 Marks)**

## QUESTION TWO

- A. Nash Wholesale is a growing business that is presently considering adding a new product line. The firm would be required by the manufacturer to incur setup costs of E400,000 to handle the new product line. Nash Wholesale has estimated that the product line would have an expected life of 8 years. Following is a schedule of revenues and annual fixed operating expenses (including E50,000 of a annual depreciation on the investment) associated with the new product line. Variable costs are estimated to average 65% of revenues. All revenues are collected as earned. All expenses shown, except for the included amount of straight-line depreciation, are paid in cash when incurred.

Year	Revenues	Fixed Expenses
1	E 180,000	E90,000
2	200,000	80,000
3	240,000	80,000
4	320,000	90,000
5	400,000	80,000
6	400,000	80,000
7	280,000	80,000
8	170,000	70,000

The company has a cost of capital of 12%. Management uses this rate in discounting cash flows when evaluating capital projects.

- a. calculate the accounting rate of return ( 9 Marks)
  - b. calculate the payback period ( 9 Marks)
  - c. calculate the net present value ( 9 Marks)
- B. John has lost his paperwork concerning data on a project for which he had provided his company president a net present value analysis. All he could find was the last page of his report that indicated a net present value of E32,000, an original investment of E132,000, and a 4 year life. The president asks John to calculate the payback period on the project. John knows that the company uses a discount rate of 10%. Calculate the payback period.

( 6 Marks)

**Total (33 Marks)**

### QUESTION THREE

#### A. Using the following information,

i) Prepare a PERT network and ( 8 Marks)

ii) Determine the critical path for the Moran Corporation's production of computers. ( 8 Marks)

Activity	Activity Representation	TL	TE
A	1-2	42	42
B	1-3	50	42
C	1-4	38	35
D	2-5	30	30
E	3-5	25	22
F	3-4	28	26
G	4-5	33	27
H	4-6	37	24
I	5-6	22	22

B. The Caputo Corporation has prepared the following schedule which depicts the activities and events necessary to produce product Y.

Activity	Activity Representation
A	1-2
B	1-3
C	1-4
D	2-5
E	3-5
F	4-5
G	5-6

From the above information

i) draw a representation of the PERT network (8 Marks)

ii) identify the predecessor activities for each activity. (9 Marks)

**Total ( 33 Marks)**

#### QUESTION FOUR

The Playtime Manufacturing Co. produces its toy dogs in the three departments. Department X manufacturing the parts, Department Y does the assembling, and Z does the finishing. No external market exists for the unassembled parts, and Department X uses its total cost as the transfer price when transmitting the parts to Department Y. Department Y assembles the parts and uses the current market price in its transfer of goods to Department Z. The current market price for the unfinished, assembled toy dogs is E16 per unit. Department Z sells the finished toy dogs for E22 each.

The following information pertains to June, 2009:

<b>Department X</b>	
Sales to Department Y	15,000 units
Variable costs	E6 per unit
Fixed costs	E30,000

<b>Department Y</b>	
Sales to Department Z	15,000 units
Variable costs (added in department)	E4 per unit
Fixed costs	E11,250

<b>Department Z</b>	
Sales	15,000 units
Variable costs (added in department)	E3
Fixed costs	E15,000

- a) Compute the gross for the three divisions using playtime company's present transfer price systems. **(14 Marks)**
- b) Which department in (a) seems to be in an unusually good position? How does it come by this position? **(5 Marks)**
- c) Department X has repeatedly complained about its transfer price being based solely on total costs. The Playtime Co. is therefore, changing Department X's transfer – price method from total cost plus 30%. Compute the new gross profit and show how it affects Departments Y and Z. **(14 Marks)**
- Total (33 Marks).**

Table 3.1 Present Value of \$1

Years <i>N</i>	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 3.2 Present Value of \$1 Received Annually for *N* Years

Years <i>N</i>	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