

UNIVERSITY OF SWAZILAND
DEPARTMENT OF ACCOUNTING
MAIN EXAMINATION PAPER 2007

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) Solani Ltd has two divisions, A and B. Total sales for the year were E1,200,000. It is estimated that Division B will account for 60% of the total sales. Solani Ltd wishes to earn 14% on its investment.

The following data is available:

	Division A	Division B
Cost of goods sold	E300,000	E500,000
Selling + admin expenses	150,000	150,000
Plant investment	200,000	300,000

REQUIRED:

- i) Compute the investment turnover of each division (4 Marks)
 - ii) Compute the earnings ratio (margin) for each division (4 Marks)
 - iii) Compute the return on investment of each division (4 Marks)
 - iv) Compute the residual income for each division (4 Marks)
- b) What are the advantages and disadvantages of decentralizing an organization? (14 Marks)
- c) What are the disadvantages of using the return on investment? (ROT) as a measure of performance? (10 Marks)

Total (40 Marks)

QUESTION TWO

ZONDWAKO
INCOME STATEMENT YEAR ENDED 31 2006

	DEPARTMENT A E	DEPARTMENT B E	TOTAL E
Sales revenue	100,000	200,000	300,000
Cost of sales	<u>60,000</u>	<u>100,000</u>	<u>160,000</u>
Gross margin	<u>40,000</u>	<u>100,000</u>	<u>140,000</u>
Selling expenses:			
Advertising	6,000	9,000	15,000
Delivery expenses	3,000	6,000	9,000
Salesmen's salaries	10,000	26,000	36,000
Depreciation of equipment	<u>400</u>	<u>600</u>	<u>1,000</u>
	<u>19,400</u>	<u>41,600</u>	<u>61,000</u>
General expenses:			
Office salaries	20,000	40,000	60,000
Bad debts	500	1,500	2,000
Rent, light, and heat	1,250	3,750	5,000
Building maintenance	<u>2,250</u>	<u>6,750</u>	<u>9,000</u>
	<u>24,000</u>	<u>52,000</u>	<u>76,000</u>
Total expenses	<u>43,400</u>	<u>93,600</u>	<u>137,000</u>
Net income (loss)	<u>3,400</u>	<u>6,400</u>	<u>3,000</u>

Zondwako Co. Ltd is contemplating to discontinue Department A, as it is a loss maker.

Further investigation reveals the following information:

Advertising is a direct cost. Delivery expenses are allocated to the two departments on the basis of sales volume. If Department A is discontinued, it is estimated that the total delivery expense for the year can be reduced to E7,000. Salesmen's salaries are direct costs. Rent, light, heat, and building maintenance costs are allocated to the departments on the basis of floor space. If Department A is discontinued, the equipment now in use in the department will be discarded at no salvage value. Office salaries are allocated to the departments in relation to sales volume. It is not expected that these will be reduced if Department A is discontinued. Losses from bad debts are direct departmental costs. In case Department A is closed, the space now occupied by Department A will be used by Department B. There is no reason to believe that the sales volume of Department B will be substantially increased, however.

REQUIRED: Submit data that might be useful in deciding whether Department A should be closed. Total (30 Marks)

QUESTION THREE

- A) Magele Hotel has given you the following paired activities:
 0-1, 1-2, 2-4, 3-6, 1-5, 5-6, 2-3, 3-4
 (Dummy activity) 4-6

REQUIRED: Construct the PERT network (6 Marks)

- B) With reference to (a) above, the following time estimates, optimistic estimate a, most likely estimate m, and pessimistic estimate b, have been obtained for one of Magele's project activities:

Activity	Time estimates in days		
	<u>a</u>	<u>m</u>	<u>b</u>
0-1	3	8	13
1-2	2	5	14
2-4	11	15	25
3-6	4	10	22
1-5	0.5	2	9.5
5-6	4	5	6
2-3	1	3.5	9
3-4	0	0	0
4-6	4	5	12

REQUIRED:

- i) Determine the expected completion times for all activities (9 Marks)
- ii) Determine the critical path, and the slack at each event in the net work (4Marks)
- iii) Compute the total slack in the network (6 Marks)

C) Assuming there were large amounts of slack in the network developed in requirement A and B above, management has decided to utilize some of that slack in order to accelerate the project. Not all of the resources in the project are transferable, nor is all of the slack in the network idle capacity. Some of it is attributable to unavoidable waiting time, paint to dry for instance. However, the slack at event 3 does represent idle capacity, and some of the equipment and labour allocated to activity 3-6 can be shifted on a one-to-one basis to other activities. Accordingly, 5 days work of resources are shifted from that activity to the critical activity, 2-4, thereby increasing the time of activity 3-6 to 16 days, and reducing the time activity 2-4 to 11 days .

REQUIRED: Determine the effect that the shift will have on the project's completion time. (5 Marks)

Total (30 Marks)

QUESTION FOUR

Timperly industries manufactures screens for residential (doors and windows) and commercial (chemical filters) applications. The firm is trying to strengthen its formal budgeting and planning process. The company has encountered a problem in budgeting utilities expense. 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 expense. The following data have been gathered from recent operations and may serve as a basis to describe the relationship.

Month	Machine Hours	Utilities Expense
January	1,400	E9,000
February	1,700	9,525
March	2,000	10,900
April	1,900	10,719
May	2,300	11,670
June	2,700	13,154
July	2,500	13,000
August	2,200	11,578

REQUIRED:

- In analyzing the data, how do you know that utilities expense is a mixed cost? Prepare a scatter graph. Does the scatter graph indicate utilities expense is a mixed cost? (5 Marks)
- Using the high-low method, estimate utilities expense as a function of machine hours in the form $y = a + bX$. (6 Marks)
- Using least squares regression, estimate utilities expense as a function of machine hours in the form $y = a + bX$. (14 Marks)
- Which of your answers, parts (b) or (c), provide the better estimate of the relationship between utilities expense and machine hours? Why? (5 Marks)

Total (30 Marks)