National University of Science and Technology

FACULTY OF COMMERCE

DEPARTMENT OF ACCOUNTING

FIRST SEMESTER FINAL EXAMINATION PAPER

DATE:	**JANUARY 2013**
SUBJECT:	**MANAGEMENT AND COST ACCOUNTING 11: CAC 4105**
TIME ALLOWED:	**THREE (3) HOURS**
MARKS:	**100**

INSTRUCTIONS TO CANDIDATES

1. Answer **ALL** QUESTIONS
2. Use the Answer book provided
3. Use black or blue pen
4. Begin each question on a new page and
5. Submit all answer books

QUESTION 1 (30 Marks)

As a consultant, you have been assigned to a budget project at Batanai Council (BC), which is too short-staffed to cover the introduction of improved budgets in all council services. Your project includes preparing a new budget for the next year for Batanai Libraries (BL). BL has had a single, cash-limited, departmental budge. Nine months into the current year, it is forecast that the year's budget will probably just be met, albeit only by postponing some orders for books, equipment and maintenance. The budgeted costs for the year were as follows:

	$
Staff costs (full and part time and casual)	250 000
Purchases of books ad periodicals, new bindings, etc	125 000
Purchases of CDs, records, tapes, software, etc	60 000
Furnishings, fittings and equipment (FEE) including computers	70 000
Rent charge by TC for premises used	50 000
Maintenance of premises and of FEE (and energy costs)	40 000

The Control budget is on a cash basis. Pending actual transfer to accrual accounting, depreciation (covering all assets other than premises) is shown as a footnote to the budget. For the current year, depreciation was set at 20%, on estimated year-end historical-cost asset values of $600 000.

The improved budget for next year is to reflect new operational objectives assigned to BL management. Books and periodicals are to operate as a cost centre, fully funded (NB fines and charges, being negligible, can be ignored). Services relating to CDs, records, tapes, software and public use of computers, etc. are to operate as a contribution centre (and, at the least, to break even, partly so as not to provide unfair competition to local private businesses). Target revenue for these services next year is to be set at 10% above budget costs (with any profit contribution to be divided equally between BC general funds and BL funds for carry-forward for extra spending in the following year).

Next year's total budget will be the same as for the current year, except for uplift of 3% in line with the general inflation forecast. However, average hourly pay is expected to increase by 5% and to cover for this staff hours will be cut by 1%, and purchases of books and periodicals will be cut by 2%. All other cost categories are expected to rise in line with general inflation. The proportions of budget headings chargeable to the new contribution centre are forecast to be as follows:

Staff	40%
Fee spending	60%
Rent and maintenance (proportional to space)	30%

Required:
Draft a budget for BL for next year. The budget statements should be constructed with user-friendly captions, and should reflect controllability and operational objectives. **(30 Marks)**

QUESTION 2 (30 Marks)

(a) Discuss in general the ways in which variance analysis helps management to control a business. **(10 Marks)**

(b) ATC Ltd uses flexible budgets and standard costing for its single product P which it makes and sells.

Three kilogrammes of material, having a standard cost of $4, 40 per kilogramme, are required for each unit of P. Actual material purchase and used in April cost $336000 with the actual purchase price being $4, 20 per kilogramme. Each unit of P requires thirty minutes of direct labour time and the standard wages rate per hour is $5. The actual wages rate in April was $5, 40 per hour. Sufficient direct labour time was utilized to produce 28000 units of P although actual production in April was 25000 units.

The company has a normal operating capacity of 15000 hours per month and flexible overhead budgets are:

Hours of operation	12500	14000	15000
	$	$	$
Variable production overhead	150 000	168 000	180 000
Fixed production overhead	270 000	270 000	270 000
	420 000	438 000	450 000

Actual overhead incurred in April was $430 000 of which $270 000 was fixed.

Required:

(i) Calculate the appropriate variance for material, labour and overhead **;** **(9 Marks)**

(ii) Show the variance in a statement suitable for presentation to management, reconciling the standard cost with the actual cost of production**.** **(11 Marks)**

QUESTION 3 (40 Marks)

(a) Identify and discuss five assumptions underlying cost-volume-profit analysis. (**10 Marks)**

(b) A hotel budget for the year 2013 shows the following room occupancy:

	Average %
January-March	45
April-June	60
July-September	90
October- December	55

Revenue for the year is estimated to be $3million and arises from three profit centres:
Accommodation 45%; Restaurant 35%; Bar 20%

Note: The accommodation revenue is earned from several different categories of guest, each of which pays a different rate per room.

The three profit centres have the following percentage gross margins:

	Accommodation	**Restaurant**	**Bar**
	%	%	%
Revenue	100	100	100
Wages	20	30	15
Cost of sales	-	40	50
Direct costs	10	10	5
	30	80	70
Gross margin	70	20	30

Fixed costs for the year are estimated to be $565 000.
Capital employed is $7million.

As a means of improving the return on capital employed, two suggestions have been made:
(i) to offer special two-night holidays at a reduced price of $25 per night. It is expected that those accepting the offer would spend an amount equal to 40% of the accommodation charge in the restaurant, and 20% in the bar.
(ii) to increase prices: Management is confident that there will be no drop in volume of sales if restaurant prices are increased by 10% and bar prices by 5%. Accommodation prices would also need to be increased.

Required:

(1) Calculate the budgeted return on capital employed before tax**; (6Marks**)

(2) Calculate:

(i) how many two-night holidays would need to be sold each week in the three off-peak quarters to improve the return on capital employed (ROCE) by a further 4% above the percentage calculated in (1) above **;** **(6 Marks)**

(ii) by what percentage the prices of accommodation would need to be increased to achieve the desired increase in ROCE shown in (2) (i) above; **(6 Marks)**

(3) to explain the major problems likely to be encountered with each of the two suggestions and recommend which should be adopted, assuming that they are mutually exclusive**.** **(12 Marks)**

END OF EXAMINATION PAPER