NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF COMMERCE

GRADUATE SCHOOL OF BUSINESS

GENERAL MASTERS IN BUSINESS ADMINISTRATION (GMBA)

MANAGERIAL ACCOUNTING (GMB 5162)

FINAL EXAMINATION

EXAMINATION DATE: NOVEMBER 2011

TIME ALLOWED: 3 HOURS + 30 MINUTES

Reading time is 30 minutes. Candidates are permitted to make notes on the question paper but not to write in the answer book during this period.

INSTRUCTIONS

1. Answer all questions
2. Questions may be answered in any order
3. Credit will be given for use of appropriate examples.

The number of marks is given in brackets ( ) at the end of each question or part question.

All accounting statements are to be presented in good style. Workings should be shown.

You may use a calculator.

The businesses in this question paper are intended to be fictitious.

QUESTION 1

The managers of Kays Engineering are reviewing the operations of the company with a view to making operational decisions for the next month. Details of some of the products manufactured by the company are given below.

Product	A	B	C
Selling price ($/unit)	21	28.50	27.30
Material V (kg/unit)	2	3	3
Material K (kg/unit)	2	2.2	1.6
Direct labour (hours/unit)	0.6	1.2	1.5
Variable production overheads ($/unit)	1.10	1.30	1.10
Fixed production overheads ($/unit)	1.50	1.60	1.70
Expected demand for next month (units)	950	1 000	900

Material V is expected to be in short supply in the next month because of industrial action at a major producer of the material. Kays Engineering has just received a delivery of 5,500kg of Material V and this is expected to be the amount held in stock at the start of the month. The company does not expect to be able to obtain further supplies of Material V unless it pays a premium price. The normal market price is $2.50 per kg.

Material K is available at a price of $2 per kg and Kays Engineering does not expect any problems in securing supplies of this material. Direct labour is paid at a rate of $4 per hour.

Required:

a) Determine the optimum production schedule for Products A, B and C for the next month, on the assumption that additional supplies of Material V are not purchased. **(12 marks)**

b) If Kays Engineering decides to purchase further supplies of Material V to meet demand for Products A, B and C, what should be the maximum price per kg that the company is prepared to pay? **(4 marks)**

c) Discuss the limitations of marginal costing as a basis for making short-term decisions. **(9 marks)**

QUESTION 2

ABC Ltd makes quality wooden chairs. Results have been disappointing in recent years and a new managing director, Tom Adams, was appointed to raise production volumes. After an initial assessment Mr. Adams considered that budgets had been set at levels which made it easy for employees to achieve. He argued that employees would be better motivated by setting budgets which challenged them more in terms of higher expected output.

Other than changing the overall budgeted output, Mr. Adams has not yet altered any part of the standard cost card. Thus, the budgeted output and sales for November 2011 was 5000 chairs and the standard cost card below was calculated on this basis:

		$
Wood	25 kg @ $4.20/kg	105.00
Labour	5 hours @ $10/hr	50.00
Variable overheads	5 hours @ $5/hr	25.00
Fixed overhead	5 hours @ $20/hr	100.00
		280.00
Selling price		320.00
Standard profit		40.00

Overheads are absorbed on the basis of labour hours and the company uses an absorption costing system. There were no stocks at the beginning of November 2011. Stocks are valued at standard cost.

Actual results for November 2011 were as follows:

		$
Wood	90 000kg @ $4.80/kg	432 000
Labour	25 000 hours @ $8/kg	200 000
Variable overheads		120 000
Fixed overhead		360 000
Total production cost		1112 000

(4 300 chairs)	
Closing stock	
(600 benches at $280)	168 800
	944 000
Sales (3 700 chairs)	1 258 000
Actual profit	314 000

The average monthly production sales for some years prior to November 2011 had been 3 900 units and budgets had previously been set at this level. Very few operating variances had historically been generated by the standard costs used.

Mr. Adams has made some significant changes to the operations of the company. However, the other directors are now concerned that Mr. Adams has been too ambitious in raising production targets. Mr. Adams had also changed suppliers of raw materials to improve quality, increased selling prices, begun to introduce less skilled labour, and significantly reduced fixed overheads.

Required:

a) Calculate all *necessary* operating variances and prepare an operating statement that reconciles budgeted and actual profit for the month for ABC Ltd. **(17 marks)**

b) In so far as the information permits, examine the impact of the operational changes made by Mr. Adams on the profitability of the company. In your answer, consider each of the following:

(i) Motivation and budget setting (**2 marks**)

(ii) Possible causes of variances **(6 marks)**

QUESTION 3

Bob Ltd is an engineering company which is organised for management purposes in the form of several autonomous divisions. The performance of each division is currently measured by calculation of its return on capital employed (ROCE). Bob Ltd's existing accounting policy is to calculate ROCE by dividing the net assets of each division at the end of the year into the operating profit generated by the division during the year. Cash is excluded from net assets since all divisions share a bank account controlled by Bob Ltd's head office.

The divisional management teams are paid a performance-related bonus conditional upon achievement of a 15.75% ROCE target. On 20 December 2010 the divisional managers were provided with performance forecasts for 2010 which included the following:

Forecast	*Net assets at 31 December 2010*	*2010 operating profit*	*ROCE*
Division A	4 620 000	681 450	15.49%
Division B	504 000	126 000	26.25%

Subsequently the manager of Division A invited members of her management team to offer advice. The responses she received included the following:

From the divisional administrator:

'We can achieve our 2010 target by deferring payment of a $94 500 trade debt payable on 20 December until 1 January. I should add that we will thereby immediately incur a $2 100 late payment penalty.'

From the financial controller:

'The existing method of performance appraisal is unfair. We should ask head office to adopt residual income (RI) as the key performance indicator, using the company's average 12.6% cost of money for a finance charge.'

Required to:

a) Assess the divisional administrator's proposal having regard to the achievement of the ROCE performance target in 2010. **(8 marks)**

b) Explain the extent to which you agree or disagree with the financial controller's proposal. **(9 marks)**

c) Explain the value and use of non-financial performance measures. **(8 marks)**

QUESTION 4

For many organizations in both the private and public sectors the annual budget is the basis of much internal management information. When preparing and using budgets, however, management and the accountant must be aware of their behavioural implications.

Required:

i) Critically assess the use of Zero Based Budgeting as a tool that might be used to motivate employees. (**5 marks**)

ii) Briefly discuss four purposes of budgets **(8 marks)**

iii) Explain the behavioural factors which should be borne in mind and the difficulties of applying them in the process of budgeting and budgetary control. **(12 marks)**