SERIES 4 EXAMINATION 2005

COST ACCOUNTING

LEVEL 3

(Code No: 3716/S)

FRIDAY 02 DECEMBER

Instructions to Candidates

*(a) The time allowed for this examination is **3** hours.*

*(b) Answer **5** questions*

(c) All questions carry equal marks.

(d) All answers must be clearly and correctly numbered but need not be in numerical order.

(e) Your answers should be written in blue or black ink/ballpoint. Pencil may only be used for graphs, charts, diagrams, etc.

(f) Presentation is important and marks may be lost through lack of neatness.

(g) Candidates may use calculators provided the calculators give no printout, have no word display facilities, are silent and cordless. The provision of batteries and responsibility for their condition must rest with the candidate.

(h) It is recommended that candidates show essential workings.

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QUESTION 1

Keane Limited manufactures and sells a single product and the following standard costs applied for the year just ended:

		$ per unit
Direct material	6 kilograms x $12 per kg	72.00
Direct labour	4 hours at $27 per hour	108.00
Variable production overhead	4 direct labour hours at $5.40 per hour	21.60
Fixed production overhead	4 Direct labour hours at $11.25 per hour	45.00
		246.60
Selling and distribution costs at $18 per unit		18.00
Total cost		264.60

Standard selling price was $315.

The production budget for the year, on which the fixed overhead rate was based, was 8,000 units. The sales budget was 7,000 units.

Actual sales, production and costs for the year were as follows:

Sales	7,000 units at $324 per unit
Production	8,000 units
Costs:	
Direct material, purchased and used	49,800 kilograms at $11.85 per kg
Direct wages incurred	34,000 hours at a cost of $903,900
Variable production overhead	$169,200
Fixed production overhead	$381,000
Selling and distribution costs	$108,000

There was no opening stock of finished goods and the closing stock is to be valued at standard production cost.

REQUIRED:

(a) Prepare a statement showing the actual and the budgeted profit statements, showing the total variance for each cost element plus the total sales variance.

(12 marks)

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QUESTION 1 CONTINUED

Myhill Limited manufactures and sells a single product.

Details from the budget for month 4 are as follows:

Direct labour	8 standard hours per unit
Production	2,500 units
Variable production overheads	$100,000
Fixed production overheads	$60,000

Variable production overheads and fixed production overheads are absorbed on the basis of standard direct labour hours.

The actual results for the month were as follows:

Direct labour hours worked	20,280 hours
Production	2,600 units
Variable production overheads	$102,414
Fixed production overheads	$59,000

REQUIRED

(b) Calculate the following variances for the month:

(i) Variable production overhead expenditure (2 marks)

(ii) Variable production overhead efficiency (2 marks)

(iii) Fixed production overhead expenditure (2 marks)

(iv) Fixed production overhead volume. (2 marks)

(Total 20 marks)

QUESTION 2

Wiseman Ltd makes four separate components, which are used in the assembly of its products.

There is a limit on capacity of 44,000 direct labour hours in the next period for the manufacture of components, which will not be sufficient to meet the anticipated demand.

Therefore it will be necessary to buy in some components from an outside supplier to make up any shortfall.

The company has the following requirements for the four components in the next period:

Component	**One**	**Two**	**Three**	**Four**
Requirements: Units	2,000	5,000	6,000	3,000

The following information also relates to the next period:

Components	**One**	**Two**	**Three**	**Four**
Direct material per unit @ $5 per kg	8 kgs	10 kgs	4 kgs	8 kgs
Direct labour hours per unit	3	4	3	4

The direct labour rates, per hour, are as follows:

Component One	**Component Two**	**Component Three**	**Component Four**
$16	$14	$12	$12

Variable production overheads are absorbed on direct labour hours at $4 per hour.

Fixed production overheads are absorbed on direct labour hours at $8 per hour.

A sub-contractor has offered to supply components for the following unit prices:

Component One $121, Component Two $166, Component Three $98 and Component Four $136

REQUIRED

For the next period:

(a) Calculate the shortfall in capacity.

(2 marks)

(b) Determine the production schedule, and the details of bought in requirements, that should be undertaken by the company to maximize profit.

(14 marks)

(c) Identify two other factors, apart from cost, that the company ought to take into consideration when buying in components.

(4 marks)

(Total 20 marks)

QUESTION 3

Facey Limited manufactures and sells a single product. The following information is available for the period December 2005 to June 2006:

Sales:
The budgeted sales, in units, are as follows:

December	January	February	March	April	May	June
2,000	2,100	2,300	3,000	3,200	3,400	3,600

The selling price is budgeted at $32 per unit from December to February, rising to $34 per unit from the 1 March. 40% of the sales in value are for cash. The remaining 60% are on credit and are expected to be paid for in the month following sale, with half of these debtors paying promptly enough to receive a 10% discount.

Costs:
The variable cost of the product is as follows:

	$ per unit
Direct material (2 kgs @ $6)	12
Direct labour (0.75 hr @ $8)	6
Variable overheads	4

The purchase price of material is expected to rise to $7 per kg from 1 March. Raw material is paid for in the month following purchase.

Direct labour is paid in the month of production, whilst variable overheads are paid in the month following production.

Fixed overheads are budgeted at $15,000 in December and January, rising to $20,000 per month from 1 February. These are paid during the month they occur.

Capital equipment will be purchased in December using a bank loan of $36,000. This loan will be repaid over three years with an annual interest charge of $3,000. Repayments will be made monthly in equal installments, commencing in January. The equipment will be depreciated over a three year period. The depreciation charge has been included in the fixed overheads.

Stocks:
The company expects to have 250 units of finished goods stock at 1 December and thereafter wishes to maintain a closing stock each month equivalent to 10% of the following month's sales. The stock of finished goods at the end of June 2006 is expected to be 400 units.

The company also expects to have 600 kgs of raw material in stock at the 1 December and thereafter wishes to maintain a closing stock each month equivalent to 20% of the materials used in the following months' production. Closing stock of raw materials at the end of June 2006 is expected to be 1,560 kgs.

The company expects to have a cash balance of $2,450 at 1 January 2006.

REQUIRED

(a) Production budget (in units) by month for the **six** month period January to June 2006. (3 marks)

(b) Raw materials budget (in kgs and $) by month for the **six** month period January to June 2006. (3 marks)

(c) Cash budget by month for the **four** month period January to April 2006. (14 marks)

(Total 20 marks)

QUESTION 4

Futcher Manufacturing Ltd operates a system where the cost accounts are kept separate from the financial accounts. Any balance remaining on the production overhead account in the cost ledger is carried forward to the next accounting period

The following balances were in the cost ledger at the beginning of a period:

	$	
Raw materials control	86,250	
Work in progress control	50,535	
Finished goods control	58,548	
Production overhead control	4,760	(under absorbed)
Financial ledger control	200,093	

The following transactions occurred during the period:

	$
Purchases of raw materials	535,600
Direct materials issued	482,350
Indirect materials issued	39,056
Direct wages incurred	149,460
Indirect factory wages & salaries incurred	75,428
Other indirect manufacturing expenses	50,858
Production overheads absorbed	172,500
Finished goods completed	822,645
Production cost of sales	833,263
Sales	946,025

REQUIRED:

(a) Record the above transactions in the cost ledger for the period.

(16 marks)

(b) Calculate the manufacturing profit for the period.

(2 marks)

(c) Define the term 'integrated accounting system'.

(2 marks)

(Total 20 marks)

QUESTION 5

Barmby Ltd manufactures a product which goes through two separate processes. The output from process one goes to process two for completion.

The following information is available for process two for a period:

Opening work in progress (WIP)	6,000 units	$51,960

The opening WIP was 60% complete with respect to added materials and 40% complete with respect to conversion costs.

Transfers from process one	48,000 units	$112,500

Further costs incurred:

	$
Direct materials added	249,700
Conversion costs	327,470

Transferred to finished goods 46,500 units.

4,000 units were incomplete at the end of the period.

The closing WIP was 50% complete with respect to added materials and 30% complete with respect to conversion costs.

A normal loss of 3,000 units was anticipated. All losses occur at the end of the process and have no saleable value.

REQUIRED

For the period for process two:

(a) Calculate the equivalent units of production and the cost per equivalent unit for each element of cost. (10 marks)

(b) Prepare the process account clearly showing both units and value. (10 marks)

(Total 20 marks)

QUESTION 6

Myhill Limited has produced the following summary budgeted profit statement for the next financial year, when it expects to be operating at 75% of capacity:

			$	$
Sales	9,000 units at $32 per unit			288,000
Less:	Direct materials		54,000	
	Direct wages		72,000	
	Production overhead:	fixed	42,000	
		variable	18,000	
				186,000
Gross Profit				102,000
Less:	Administration costs:	fixed	36,000	
		Variable	27,000	
				63,000
Net profit				39,000

REQUIRED:

(a) Calculate the breakeven point in units and in value.

(4 marks)

(b) Draft a **profit volume graph** on the graph paper provided.

(6 marks)

The company is considering two alternative courses of action to the above budget:

(1) To reduce the selling price per unit to $28, whereupon the increased demand would be expected to utilize 90% of the company's capacity without any increase in fixed overhead expenditure.

(2) To attract sufficient demand to utilise full capacity which would require a 15% reduction in the current selling price *and* a £5,000 special advertising campaign.

REQUIRED:

(c) Assess **each** of the above alternatives, compared with the existing budget, to advise management which of the three possible plans ought to be adopted.

(10 marks)

(Total 20 marks)

