

Series 2 Examination 2007

COST ACCOUNTING

Level 3

Monday 4 June

Subject Code: 3616/M

Time allowed: **3 hours**

INSTRUCTIONS FOR CANDIDATES

- Answer **5** questions.
- All questions carry equal marks.
- Write your answers in blue or black ink/ballpoint. Pencil may be used only for graphs, charts, diagrams, etc.
- Begin your answer to each question on a new page.
- All answers must be correctly numbered but need not be in numerical order.
- Workings must be shown.
- Presentation is important.
- You may use a calculator provided the calculator gives no printout, has no word display facilities, is silent and cordless. The provision of batteries and their condition is your responsibility.

QUESTION 1

Curtis McPhee manufactures a single product.

The following budgeted information has been provided for a period based on producing and selling 48,000 units:

	RM
Direct materials	216,000
Direct labour	96,000
Production overhead – variable	38,400
Production overhead – fixed	182,400
Selling and administrative overhead – variable	14,400
Selling and administrative overhead – fixed	57,600

During the period the actual production was 50,000 units and 44,000 units were sold at RM13 per unit.

Production overheads are absorbed using predetermined rates per unit.

Opening stock was 6,500 units, valued at the budgeted unit cost for the period.

Total fixed costs and unit variable costs actually incurred in the period were as budget.

REQUIRED

- (a) Prepare a profit statement for the period based on:
- (i) Marginal costing (6 marks)
 - (ii) Absorption costing. (6 marks)
- (b) (i) Reconcile the two profit figures arrived at in part (a) (4 marks)
- (ii) Clearly explain why the profit difference has arisen. (4 marks)

(Total 20 marks)

QUESTION 2

Darryl Rogers Ltd makes and sells a single product.

The actual production and sales units for March were:

Month	Production (units)	Sales (units)
March	4,000	4,000

The plans for the next five months are shown below:

Month	April	May	June	July	Aug
Production (units)	5,000	6,000	6,000	6,500	6,500
Sales (units)	4,000	5,000	6,000	6,500	7,000

Further information:

- (i) The selling price is currently RM 41.00 per unit. This is planned to increase to RM 43.00 per unit from 1st June. Twenty per cent of sales are for cash, the remainder being paid in full one month after sale.
- (ii) Raw material costs are currently RM 12 per unit, rising to RM 13.50 from 1st June. Material are purchased and paid for one month before being used in production.
- (iii) Wages and other variable production costs are currently RM 16 per unit, rising to RM 18 per unit from the 1st May. 80% of these costs are paid in the month of production, with the remaining 20% paid in the following month.
- (iv) Fixed costs will be RM 32,000 per month from April. These are paid in the month they are incurred (excluding depreciation).
- (v) A new machine costing RM 125,000 is to be purchased and paid for in April. This will be financed by a loan, repayable monthly over one year in twelve equal installments with interest of 20% of the original sum. Payments will commence in May. This equipment will be depreciated on a straight line basis over four years, starting immediately. The depreciation charge for the new machine has been included in the fixed costs above.
- (vi) The company also has other equipment which cost RM 187,000 and which is also being depreciated on a straight line basis over four years. The depreciation charge for these assets has been included in the fixed costs above.
- (vii) The overdraft interest rate is 18% per annum charged monthly on the prior month closing balance (rounded to the nearest RM).
- (viii) Interest is received monthly on cash balances at 9.0% per annum on the prior month closing balance (rounded to the nearest RM).
- (ix) On 1st April the firm expects to have RM 35,000 in the bank.

REQUIRED:

- (a) Prepare a Cash Budget for each of the months, April to July. (16 marks)
- (b) Describe **2** benefits that the business would expect to achieve from the budget setting process. (4 marks)

(Total 20 marks)

QUESTION 3

Delaney Limited manufactures a single product and prepares a reconciliation statement each month showing the variances between standard production costs and actual production costs.

The following is the statement for March:	RM	RM	RM
Standard cost of production			583,200
Cost variances	Favourable	Adverse	
Direct materials – price	8,250		
Direct materials – usage		3,000	
Direct labour – rate		9,668	
Direct labour – efficiency	1,050		
Variable overheads – expenditure		9,900	
Variable overheads – efficiency	700		
Fixed overheads – expenditure		500	
Fixed overheads – volume	<u>7,200</u>		
	<u>17,200</u>	<u>23,068</u>	<u>5,868</u> Adverse
Actual cost of production			<u>589,068</u>

The standard production cost for one unit of the product was:

Direct materials 5 kilos at RM 4 per kilo	RM
Direct labour 4 hours at RM 6 per hour	20
Variable overheads 4 direct labour hours at RM 4 per hour	24
Fixed overheads 4 direct labour hours at RM 3 per hour	16
Total	<u>72</u>

The actual production for March was 8,100 units.

No stock of raw materials is held.

REQUIRED

(a) Calculate for March the:

- actual quantity of direct material used and the total actual direct material cost (3 marks)
- actual direct labour hours worked and the total actual direct labour cost (3 marks)
- actual variable production overheads incurred (3 marks)
- actual fixed production overheads incurred (3 marks)

(b) Myhill Limited manufactures and sells a single product.

Details from the budget for a period are as follows:

Direct labour 4 standard hours per unit
Production 6,250 units
Variable production overheads RM 106,250
Fixed production overheads RM 75,000

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

QUESTION 3 CONTINUED

The actual results for the period were as follows:

Direct labour hours worked	26,124
Production	6,500 units
Variable production overheads	RM 108,414
Fixed production overheads	RM 73,750

REQUIRED

(b) Calculate the following variances for the period:

- (i) Variable production overhead expenditure (3 marks)
- (ii) Variable production overhead efficiency (2 marks)
- (iii) Total fixed production overhead (3 marks)

(Total 20 marks)

QUESTION 4

Parker 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:

	RM
Raw materials control	43,126
Work in progress control	25,268
Finished goods control	29,276
Production overhead control (under absorbed)	2,380
Financial ledger control	100,050

The following transactions occurred during the period:

	RM
Purchases of raw materials	267,800
Direct materials issued	241,180
Indirect materials issued	19,530
Direct wages incurred	74,730
Indirect factory wages & salaries incurred	37,714
Other indirect manufacturing expenses	25,430
Production overheads absorbed	86,250
Finished goods completed	411,322
Production cost of sales	416,630
Sales	473,012

REQUIRED

- (a) Record the above opening balances and transactions in the cost ledger for the period and balance the accounts at the end of the period.
- (b) Distinguish between an integrated and a non-integrated accounting system.

(16 marks)

(4 marks)

(Total 20 marks)

QUESTION 5

Parkin Limited has budgeted to use 6,000 units of component Zed during the forthcoming year.

Production will be distributed evenly throughout the year.

Assume the company does not carry any safety stock.

The following additional information is available concerning component Zed:

Cost of component	RM 40 per unit
Ordering costs	RM 400 per order
Stock holding costs	12% of the average stock value per annum
Order sizes available	500; 1,000; 2,000; 3,000 and 6,000 units.

REQUIRED

- (a) Produce a table showing the total annual ordering and stock holding costs of the component for each order size and identify the optimum order size in order to minimize total cost. (8 marks)
- (b) Use the EOQ formula to verify your answer to part (a) above. (4 marks)

The supplier of component Zed has now offered the following quantity discounts:

Order size	Discount
500 or 1,000	nil
2,000 or 3,000	5%
6,000	7.5%

REQUIRED

- (c) Advise the company on the order size that minimizes the total annual cost if the above quantity discounts are available. (8 marks)

(Total 20 marks)

QUESTION 6

Barmby Limited makes three products and at present uses a traditional absorption costing approach in order to establish the production costs for these products.

The details for a period are as follows:

	Product One	Product Two	Product Three
Production units	2,000	1,600	1,200
Per unit:			
Direct material Exe @ RM 7.50 per kg	5 kg	9 kg	6 kg
Direct material Wye @ RM 15 per kg	4 kg	2 kg	9 kg
Direct labour hours @ RM 7.50 per hour	5 hours	4 hours	3 hours
Machine hours	3 hours	6 hours	4 hours

Production overheads for the period are RM 213,670 and are absorbed on a direct labour hour basis.

The company is considering using an activity based costing (ABC) approach to calculate the production costs of each product.

The following information gives a breakdown of the production overhead costs for the period:

Activities	Costs (RM)	Cost Drivers
Material Exe handling	37,920	Quantity of material used
Material Wye handling	31,900	Quantity of material used
Inspection/Set up	57,600	Number of production runs
Machining	51,000	Number of machine hours
Packaging	35,250	Number of orders

You are given the following additional information for the period:

	Product One	Product Two	Product Three
Number of production runs	16	12	12
Number of orders	100	75	60

REQUIRED

(a) Calculate the production costs (to two decimal places) for one unit of each product using the traditional absorption costing approach. (7 marks)

(b) Calculate the production costs (to two decimal places) for one unit of each product using an activity based costing (ABC) approach. (13 marks)

(Total 20 marks)