

Series 4 Examination 2009

COST ACCOUNTING

Level 3

Wednesday 25 November

Subject Code: 3717/S

Time allowed: **3 hours**

INSTRUCTIONS FOR CANDIDATES

- Answer **all 5** questions.
- All questions carry equal marks.
- Study the “**REQUIRED**” section of each question carefully and extract the data required for your answers from the information supplied.
- Write your answers in blue or black ink/ballpoint. You can only use pencil 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.
- 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.
- Marks may be lost through lack of neatness and poor presentation.

QUESTION 1

Geovanni Warner Ltd makes and distributes a single product and is budgeted to produce 1,500 units in a month.

The standard production cost of one unit of the product is as follows:

	\$ per unit
Direct materials (8 kgs x \$ 11.50 per kg)	92
Direct labour (3 hrs x \$ 36 per hour)	108
Variable overheads (3 hrs x \$ 9 per hour)	27
Fixed overheads	<u>12</u>
Standard production cost	<u>239</u>

The actual production for the month was 1,650 units and the actual costs incurred were as follows:

	\$
Direct materials purchased – 14,100 kg	155,805
Direct labour – 5,250 hours	175,875
Variable overheads	42,345
Fixed overheads	19,450

The opening stock of raw materials was 2,260 kg, valued at standard purchase price.

14,860 kg of materials were issued to production in the month.

There was no opening stock or closing stock of work in progress.

REQUIRED

Prepare the following accounts in the company's integrated accounting system:

- (a) Raw Material Stock (4 marks)
- (b) Direct Labour (Wages Control Account) (3 marks)
- (c) Production Overhead (5 marks)
- (d) Work In Progress (8 marks)

When compiling the above, show clearly all relevant variances within the accounts.

(Total 20 marks)

QUESTION 2

Dean Cousins Ltd has estimated its costs and revenues for the last three months of 2009 as follows:

	October	November	December
	\$	\$	\$
Sales	526,000	560,000	652,000
Materials purchased	204,000	212,000	234,000
Wages accrued	140,500	142,000	145,780
Overheads accrued	184,000	206,000	216,780

You are provided with the following additional information:

- (1) 30% (by value) of the materials purchased are paid for in the month of purchase. 40% of the materials purchased in a month are paid for one month later and the remainder two months later. Purchases in August amounted to \$196,500, and in September \$187,000.
- (2) 35% of customers (by value) are expected to pay in the month of sale, for which they receive a 5% discount. A further 35% pay one month after sale, and the remainder after two months, with the exception of 3% of the original sales which are written off. Sales for August and September were \$496,000 and \$506,500 respectively.
- (3) 65% of the wages accrued are payable in the month, and 35% one month later. Wages accrued for September totalled \$139,760.
- (4) 75% of the monthly overheads are payable in the month they occur, and the remainder one month later. Overheads for September totalled \$163,010.
- (5) Capital equipment will be purchased in October, totalling \$62,500. This will be financed by a loan, repayable monthly over one year in equal instalments with interest of 20% of the original sum. Payments will commence in November. This equipment will be depreciated on a straight line basis over four years, commencing in October.
- (6) The company also has other equipment which cost \$184,800 and which is also depreciated on a straight line basis over four years. The depreciation charge for all these assets has been included in the overheads. (You may need to round these calculations to the nearest \$).
- (7) Any overdraft resulting at the end of each month will incur interest at a rate of 18% per annum. This will be payable/charged in the month immediately after the overdraft is incurred.
- (8) The bank balance, as at 1st October, is expected to be \$41,500.

REQUIRED

- (a) Prepare the firm's cash budget by month for the period October to December 2009. (18 marks)
- (b) Explain what is meant by the term 'principal budget factor'. (2 marks)

(Total 20 marks)

QUESTION 3

Mendy Zayette Ltd manufactures and sells a single product.

The following budgeted information is available for a period:

Selling price	\$120 per unit
Direct materials	\$ 34 per unit
Direct labour	\$ 18 per unit
Variable overheads	\$ 14 per unit

The company is aiming to make a profit of \$150,390.

The firm has a maximum production capacity of 9,000 units.

Fixed costs are forecast at \$284,850 for the period.

REQUIRED

- (a) Calculate the contribution/sales ratio and determine the sales in units and revenue if the company is to achieve its aimed for profit. (6 marks)
- (b) Calculate the break even point (in sales units) and the margin of safety (as a % of the budgeted sales) from the above information.

Note: A break-even chart is **not** required.

(4 marks)

Assume that the budgeted contribution/sales ratio changes to 40% as a result of changes to the budgeted variable costs.

- (c) Calculate the revised budgeted:
- (i) break even point (in both sales units and sales revenue)
 - (ii) margin of safety as a % of budgeted sales. (6 marks)
- (d) State and explain **two** assumptions that can be made in cost-volume-profit analysis. (4 marks)

(Total 20 marks)

QUESTION 4

Marlon Fagan Ltd uses batch production methods to manufacture Product Hay by combining three materials together.

The standard usage and prices for producing a batch of 300 kg of the product are as follows:

Material Exe	75 kg @ \$7.20 per kg
Material Wye	120 kg @ \$5.60 per kg
Material Zed	180 kg @ \$1.80 per kg

Standard wastage in the preparation of the product is 20% of each material.

This waste has no commercial value.

Actual results for the period just ended were as follows:

Output of product Hay	72,900 kg
Material Exe	17,520 kg costing \$127,290
Material Wye	30,420 kg costing \$170,040
Material Zed	44,460 kg costing \$79,920

REQUIRED

(a) Calculate:

- (i) the standard material cost per kg of output of product Hay
- (ii) the standard material cost of production for the period.

(4 marks)

(b) Calculate the following for the period:

- (i) Total direct material price variance (4 marks)
- (ii) Total direct material usage variance (4 marks)
- (iii) Total direct material mix variance (4 marks)
- (iv) Total direct material yield variance. (4 marks)

(Total 20 marks)

QUESTION 5

Stelios Halmosi Ltd makes three products and at present uses traditional absorption costing, in order to establish the production costs for these products.

The details for each of these products for a period are as follows:

	Alpha	Beta	Gamma
Production units	4,000	3,200	2,400
Per unit:			
Direct material Exe @ \$15.00 per kg	2.5 kg	4.5 kg	3.0 kg
Direct material Wye @ \$30.00 per kg	2.0 kg	1.0 kg	2.5 kg
Direct labour hours @ \$15.00 per hour	5 hours	4 hours	3 hours
Machine hours	3 hours	6 hours	4 hours
Number of production runs	16	12	12
Number of orders	100	75	60

Production overheads for the period are \$438,240 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 (\$)
Material Exe handling	75,840
Material Wye handling	64,500
Inspection/Set up	115,200
Machining	112,200
Packaging	70,500

It has been decided that the following cost drivers are to be used:

Material Exe handling	Quantity of material used
Material Wye handling	Quantity of material used
Inspection/Set up	Number of production runs
Machining	Number of machine hours
Packaging	Number of orders

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)**