

BrainBox Vietnam

Foreign Languages and Management Training Center

Cost Accounting Final Examination

Date : 31 August 2010

Please read these instructions carefully

- a) Check that this set of examination paper consists of 7 pages including this page.
- b) Answer ALL questions.
- c) All essential workings must be shown.
- d) Write ALL your answers in the writing paper provided.

Total Marks for this paper : 100

Time Duration : 3 hours

Student Details
Name
CMND

TOTAL MARKS

BrainBox Vietnam

Foreign Languages and Management Training Center

Question 1 [10 marks]

Toshiba Ltd makes a product in two processes. The following data is available for the latest period, for process 1.

Opening work in progress of 200 units was valued as follows:

Materials	£2400
Labour	£1200
Overhead	£400

No losses occur in the process.

500 units were added and costs incurred during the period:

Material	£6000
Labour	£3350
Overhead	£1490

Closing work in progress of 100 units had reached the following degrees of completion:

Material	100%
Labour	50%
Overhead	30%

Required:

- A. Prepare the Process One Account [7 marks]
- B. Briefly explain the following [3 marks]:
 1. The meaning of Equivalent Unit
 2. Why First-In-First-Out (FIFO) method cannot be used here

Question 2 [10 marks]

Hitachi plc makes one product. The cost and selling price details are as follows:

	£ per unit
Direct materials	6.00
Direct labour	7.50
Variable overhead	2.50
Fixed overhead absorption rate	5.00
Selling price	30.00

Budgeted production for the month was 5000 units. The company produced 5800 units and sold 5200 units. Fixed overhead costs incurred were £27400.

Required:

- A. A statement to show the profit using marginal costing [4 marks]

BrainBox Vietnam

Foreign Languages and Management Training Center

B. A statement to show the profit using absorption costing [4 marks]

C. Reconcile the difference in the two profits [2 marks]

Question 3 [10 marks]

Sony Ltd has prepared the following standard cost for one unit of product based on budgeted production output of 5000 units.

		£ per unit
Direct materials	2kg @ £13/kg	26.00
Direct labour	4 hours @ £4/hour	16.00
Fixed overheads	4 hours @£2.50 / hour	10.00

Actual results for the period were recorded as follows:

Production output	4,820 units
Materials (9,720 kg)	£121,500
Labour (19,100 hours)	£80,220
Fixed overheads	£41,700

Calculate the following variances:

- A. Material price variance
- B. Material usage variance
- C. Direct labour rate variance
- D. Direct labour efficiency variance
- E. Fixed overhead expenditure variance
- F. Fixed overhead volume capacity variance

Question 4 [10 marks]

Matsushita Co manufactures a product which has a selling price of £14 and a variable cost of £6 per unit. The company incurs annual fixed costs of £24,000. Annual sales demand is 8,000 units.

Required:

- A. Calculate the breakeven point (in units) [2 marks]
- B. Calculate the margin of safety as a percentage of annual sales [1 mark]

The company is considering a new production method which would cause a 30% increase in fixed costs and a £1 reduction in the variable cost per unit. The new production method would result in an improved product that can be sold at £15 per unit.

Required:

- C. Calculate the breakeven sales revenue using the new production method [2 marks]

BrainBox Vietnam

Foreign Languages and Management Training Center

- D. Calculate the number of units to be sold if the company wishes to achieve the same profit as that under the existing method [2 marks]
- E. What are two limitations or weaknesses of Cost-Volume-Profit analysis? [3 marks]

Question 5 [10 marks]

Sanyo Co makes three products, all of which use the same machine which is available for 50,000 hours per period. The standard costs and selling price of the products are as follows:

	A-Yo	B-Yo	C-Yo
	£ per unit	£ per unit	£ per unit
Direct materials	70	40	80
Direct labour			
Machinists (£8 per hour)	48	32	56
Assemblers (£6 per hour)	36	42	42
Selling price	200	158	227
Demand	3000	2000	2000

Fixed costs are £100,000 per period.

Required:

- A. Calculate the shortfall in machine hours for the next period. [2 marks]
- B. Show, by using appropriate calculations, the priority of production for each product (that is, which product should be produced first, second and last) [6 marks]
- C. Calculate the maximum possible profit for the company. [2 marks]

Question 6 [10 marks]

Sharp Co wishes to minimize its inventory costs. Ordering costs are £100 per order and holding costs are 2% of average inventory holding value. The cost of one unit of inventory is £50. The company estimates annual demand to be 45,000 units.

The lead time varies from 3 to 5 weeks. The demand per week varies from 600 units to 1000 units. The supplier offers a quantity discount of 5% if the order quantity is 10,000 units or more.

BrainBox Vietnam

Foreign Languages and Management Training Center

Required:

- A. What is the reorder level? [1 mark]
- B. Calculate the Economic Order Quantity [2 marks]
- C. What is the maximum stock level? [2 marks]
- D. Advise the company whether it should order at economic order quantity or accept the quantity discount. Support your advice with calculations. [5 marks]

Question 7 [10 marks]

A joint process produces three joint products (A, B and C) and a by-product D. A loss of 10% of input is expected.

The following information relates to the month of July 2010:

Input into the process:

Direct materials	16,000 litres, cost £120,000
Direct labour	£248,000
Factory overheads are absorbed at 50% of prime costs	

Output from process:

Product A	7200 litres
Product B	4200 litres
Product C	2000 litres
By product D	800 litres
Actual loss	1800 litres

The selling prices of the products are:

Product A	£50 per litre
Product B	£60 per litre
Product C	£30 per litre
By product D	£10 per litre

Required:

- A. Using the physical units for splitting joint costs, prepare a statement to show the profits of each product. [7 marks]
- B. Explain the meaning of Abnormal Loss and Abnormal Gain [3 marks]

BrainBox Vietnam

Foreign Languages and Management Training Center

Question 8 [15 marks]

NEC manufactures and sells a single product. The following information is available:

1. The budgeted sales units for the next period are as follows:

December	January	February	March	April	May
4000	4200	4200	4500	4600	4800

2. The standard selling price is £30 per unit. 40% of sales are on cash basis with the remaining customers allowed one month's credit. It is estimated that 5% of the credit sales will be bad debts.
3. The company manufactures 75% of the sales one month before sale and the remaining 25% in the month of sale.
4. Direct materials cost £8 per unit of output. The purchase will be made one month before production and paid for one month following the purchase.
5. Direct labour will be paid at a rate of £5 per unit of output, payable at the end of the month.
6. Fixed production overheads (including annual depreciation of £60,000) are budgeted at £192,000 per year. These overheads, which accrue evenly throughout the year, are payable in the month they are incurred.
7. The company expects a bank balance of £12,000 at the beginning of January.

Required:

Prepare the following budgets for the months of January to March.

- A. Sales Budget [2 marks]
- B. Production Budget [3 marks]
- C. Material Purchase Budget [2 marks]
- D. Cash Budget [8 marks]

BrainBox Vietnam

Foreign Languages and Management Training Center

Question 9 [15 marks]

The cost accountant of Aiwa Ltd is preparing overhead analysis for the forthcoming year. There are two production cost centres Machining and Assembly, and two service cost centres, Store and Maintenance.

Relevant information is as follows:

	Machining	Assembly	Store	Maintenance
Area occupied (sq m)	5000	3000	1000	200
Machine hours	9000	3000	500	500
Direct labour hours	3000	12000	--	--
Maintenance hours	5000	4000	1000	--
No. of store requisitions	200	200	--	100

Overhead analysis worksheet:

	Machining	Assembly	Store	Maintenance
Allocated overhead	£9600	£8200	£1500	£3700

Factory Rent £36,800

Power (for machines) £13,000

Required:

- Prepare the overhead analysis worksheet as shown above and apportion the rent and power using suitable basis of apportionment. Show the total overheads in each cost centre after apportionment. [5 marks]
- Using the same overhead analysis worksheet prepared in Part A, now apportion the overheads of the service cost centres to the production cost centres using the Simultaneous Equation Method. [6 marks]
- Calculate the absorption rate in each of the production cost centres using suitable level of activity. (Correct your answers to the nearest pence) [4 marks]