CBT practice assessment model answers

Management Accounting: Budgeting (MABU)

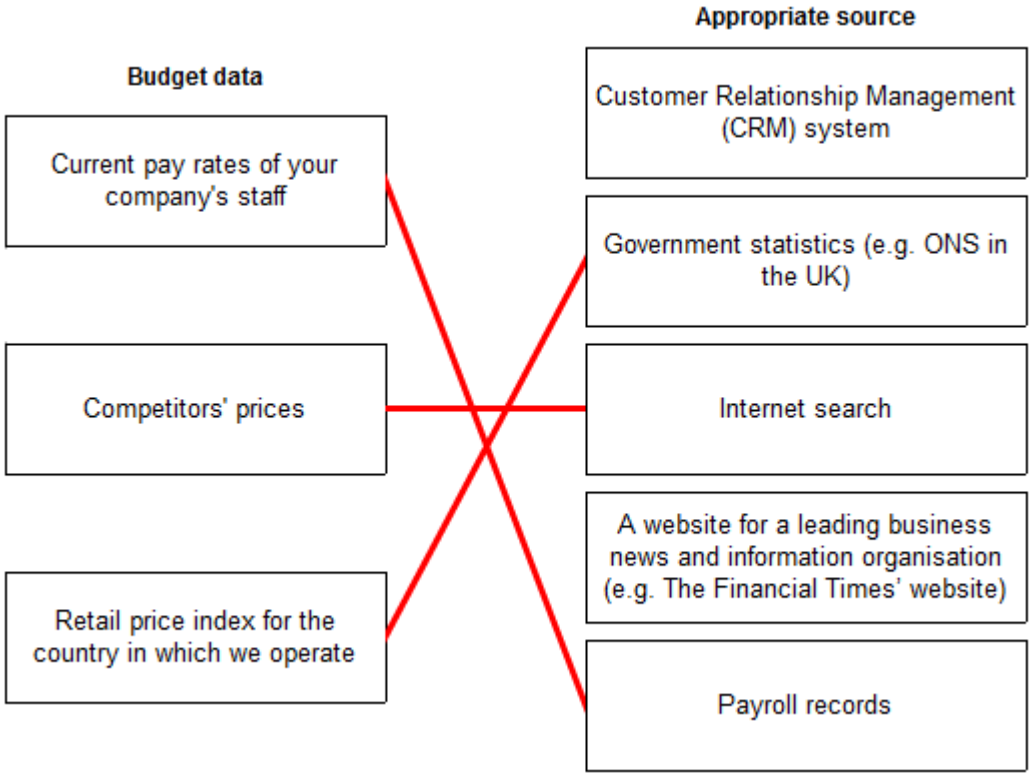
Practice assessment 1 (for Live assessments from 20 January 2020)

Practice assessment model answers - MABU

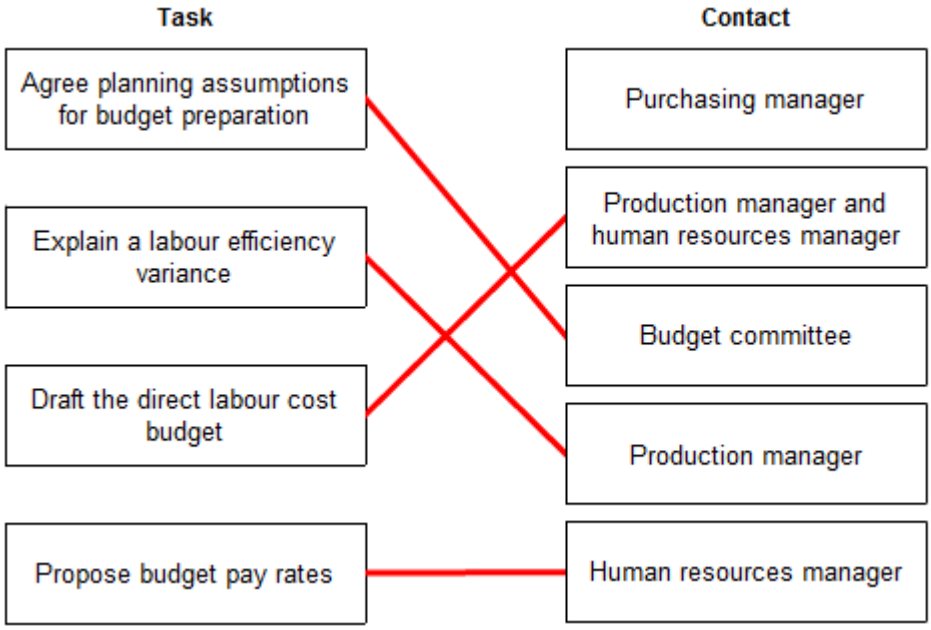
Task 1 (20 marks)

You are gathering budget information for the company for which you work.

(a) Match each item of budget data below with its appropriate source.
To show each answer, click on a box in the left column then click on a box in the right column. To remove a line, click on it. (3 marks)



(b) Match each task with the individual or group that you will need to contact for information. To show each answer, click on a box in the left column then click on a box in the right column. To remove a line, click on it. (4 marks)



Task 1 continued

(c) Select the appropriate accounting treatment for each of the following items. (6 marks)

Preparing plans for factory extension	Capitalise and depreciate over useful life
Repairs to sales office furniture	Allocate to marketing overheads
Raw material usage	Direct cost
Production labour - overtime pay	Direct cost
Product advertising	Allocate to marketing overheads
Replacement of production machinery	Capitalise and depreciate over useful life

(d) Select the appropriate term to match the following description. **(1 mark)**

Collecting data about a proportion of the items in the population to indicate the characteristics of the whole population.

Sampling

The budget committee has set the sales volume growth and pricing assumptions for years 2, 3, 4 and 5 in the form of indices.

(e) Complete the sales revenue forecast below.
Do not show decimals. Round each figure to the nearest whole number. (6 marks)

	Year 1	Year 2	Year 3	Year 4	Year 5
Sales volume index	140.0	148.0	152.6	156.0	160.0
Sales price index	112.0	115.0	120.0	125.0	130.0

Sales revenue	Actual year 1 £	Forecast year 2 £	Forecast year 3 £	Forecast year 4 £	Forecast year 5 £
At Year 1 prices	384,000	405943	418560	427886	438857
At expected prices		416816	448457	477551	509388

Task 2 (20 marks)

(a) Complete the following production forecast for product G.
Round any decimal figures up to the next whole number of units, if necessary.

(10 marks)

- Closing inventory should be 30% of the following week's sales volume.
- 8% of all production fails quality control checks and is rejected.

Production (units)	Week 1	Week 2	Week 3	Week 4	Week 5
Opening inventory	20,000	20700	20100	21000	
Good production	68700	68400	67900	70600	
Sales volume	68,000	69,000	67,000	70,000	72,000
Closing inventory	20700	20100	21000	21600	
Rejected production	5974	5948	5905	6140	
Total manufactured units	74674	74348	73805	76740	

(b) Calculate material purchases.
Round up to the next whole number of kilograms, if necessary.

(i) How many kilograms are required for input to production? (1 mark)

706316 kg

(ii) How many kilograms must be purchased? (1 mark)

702316 kg

(c) Calculate overtime hours.
Round up to the next whole number of hours, if necessary. (1 mark)

How many overtime hours should be budgeted?

820 hours

Task 2 continued

(d) Calculate machine utilization.
Do not show decimals. Round to the nearest whole percentage, if necessary. (2 marks)

What is the machine utilisation?

90 %

(e) Calculate the capacity constraints for product JJ by completing the table below.
Round down to the maximum whole number of units, if necessary. (5 marks)

Production capacity	Units
Sufficient materials are budgeted to manufacture:	750
Without overtime, sufficient direct labour is budgeted to manufacture:	600
Sufficient machine time is budgeted to manufacture:	700
Without overtime, the maximum sales volume is:	600
With unlimited overtime, the maximum sales volume is:	700

Task 3 (20 marks)

(a) Complete the three working schedules using the information from the production budget and notes below. Enter all figures as positive values. (9 marks)

Materials	Kg	£
Opening inventory	8,800	12,320
Purchases @ £1.45 per kg	242200	351190
Sub-total	251000	363510
Used in production	243600	352780
Closing inventory	7,400	10730

Labour	Hours	£
Basic time @ £15.00 per hour	26240	393600
Overtime	2760	57960
Total	29000	451560

Production overhead	Hours	£
Variable @ £2.60 per hour	29000	75400
Fixed		94,660
Total		170060

(b) Complete the operating budget.
Enter income, costs and inventories as positive figures. (6 marks)

Operating budget	Units	£ per unit	£
Sales revenue	340000	3.95	1343000
Cost of goods sold			**£**
Opening inventory of finished goods			70,740
Cost of production		**£**	
Materials		352780	
Labour		451560	
Production overhead		170060	974400
Closing inventory of finished goods			95760
Cost of goods sold			949380
Gross profit / (loss)			393620
Overheads		**£**	
Administration		112,000	
Marketing		168,000	280000
Operating profit / (loss)			113620

Task 3 continued

(c) Complete the cash flow forecast using the budget data that you have calculated in parts (a) and (b) of this task and the additional information below.
Enter receipts and payments as positive figures. (5 marks)

Cash flow forecast		£
Opening cash balance / (overdraft)		(8,000)
Sales receipts		1355000
Payments:	£	
Material	347190	
Labour	451560	
Production overheads	145060	
Other overheads	280000	
Capital expenditure	75000	1298810
Closing cash balance / (overdraft)		48190

Task 4 (20 marks)

Write an email to the budget committee, in three sections:

(a) Submit the draft budget for approval and explain the key planning assumptions. (10 marks)

(b) Explain why planning assumptions in this draft budget are not totally within the control of management. (5 marks)

(c) Recommend four performance measures that could be reported on a regular basis to help management keep fuel oil costs within budget. (5 marks)

(a) Budget submission

I attach the draft fuel oil cost budget for your consideration and approval. This is calculated from the agreed sales and production volume budget, which shows a 2.5% increase over this year. Fuel oil is used to power the production process and for heating.

The chief engineer has estimated the savings arising from the installation of fuel efficient production equipment (20% of the usage per 1,000 items) and improved insulation (10% of the heating requirement). We have assumed that the production element is a variable cost (varying in direct proportion to production volume) and that the heating element is a fixed cost (not varying with production volume, although it will fluctuate depending on weather conditions).

You will be aware of the recent volatility of energy prices. The chief buyer has recommended that we budget at 72p per litre which is 20% more than the average price this year.

Despite higher sales, we are budgeting for a very slight saving in fuel oil cost next year.

(b) Control

Management cannot control all of the variables in this budget.

- The sales and production budgets have already been approved but, of course, sales will be influenced by competitor activity and demand in the market.
- The price per litre of the fuel oil will depend on world energy prices and could vary considerably from the chief buyer's estimate, unless he is prepared to enter into a fixed tariff agreement.
- The usage of fuel oil for heating will be influenced by the weather.
- There is the inevitable possibility of error when estimating efficiency savings, but it is reasonable to hold management accountable for achieving the anticipated usage reductions for production and heating.

Task 4 continued

(c) Performance measures

There are four variable factors in this budget and they need to be monitored closely. I recommend that we regularly report and review the following measures:

- the purchase price of fuel oil in pence per litre
- weekly production and sales volumes, in units
- the consumption of fuel oil for production, in litres per 1,000 units of production
- the consumption of fuel oil for heating, in litres per week or month

Whereas the first three of these can be compared against budget assumptions, the heating usage will be seasonal and should be compared against this year's usage to ensure that the expected savings are achieved.

Budget Accountant

Task 5 (20 marks)

(a) Select the appropriate term to match each of these descriptions. (2 marks)

Description	Term
Detailed budgets prepared by functional managers are collated to form a master budget	Bottom-up budgeting
A cost that fluctuates in direct proportion to changes in activity	Variable cost

(b) Calculate the sales revenue budget and production cost budget for April using the information provided (7 marks)

Budgeted units	Year	April
Units sold	238,000	20,000
Units produced	246,000	21,000

Budget in £	Year	April
Sales revenue	1,594,600	134000
Cost of production:		
Material used	543,660	46410
Direct labour	623,400	53700
Variable production overhead	95,940	8190
Fixed production overhead	96,000	8000
Total production cost	1,359,000	116300

Task 5 continued

(c) Complete the alternative scenario column in the operating budget table and calculate the increase or decrease in profit.
For the sales price per unit figure, enter any decimal places, if relevant.
For the other figures, round to the nearest whole number, if necessary. (11 marks)

Operating Budget	First draft	Alternative Scenario
Sales price per unit (£)	12.00	12.6
Sales volume	80,000	73600
	£	£
Sales revenue	960,000	927360
Costs:		
Material	392,000	360640
Labour	224,000	206080
Energy	43,000	44000
Depreciation	42,000	39000
Total	701,000	649720
Gross profit	259,000	277640
Increase / (decrease) in gross profit		18640

Task 6 (20 marks)

(a) Select the appropriate term to match the following description. (2 marks)

A financial measure of the difference between budget and actual performance:

Variance ▼

(b) Complete the table of direct raw material costs, indicating whether each variance is favourable or adverse. (10 marks)

Direct raw material costs		Favourable/Adverse
Flexed budget (standard cost)	£ 139200	
Actual material price per kg (correct to £0.01)	£ 14.4	
Actual material used per item (correct to two decimal places)	1.65 kg	
Price variance	£ 990	Favourable ▼
Usage variance	£ 4350	Adverse ▼
Cost variance	£ 3360	Adverse ▼
Cost variance percentage (correct to one decimal place)	2.4 %	

(c) Prepare the direct labour cost statement from the activity data provided. Round to the nearest whole number if necessary. (8 marks)

Activity data	Items produced	Labour hours	Cost £
Budget	18,300	3,660	65,880
Actual results	18,800	4,700	82,720

Direct labour cost statement	£
Standard labour cost of production	67680
Variances	£ Fav / (Adv)
Labour rate	1880
Labour efficiency	(16920)
Labour cost	(15040)

Task 7 (20 marks)

(a) Complete the month one flexed budget for X Ltd.
The total cost is calculated for you automatically. (10 marks)

Month one flexed budget

Original budget £		Flexed budget £	Actual £
1,535,500	Revenue	1456650	1,285,600
490,250	Materials	465075	373,800
151,200	Labour	147210	129,900
200,000	Equipment hire	200000	120,000
29,680	Production overhead	29680	33,850
871,130	Total cost	841965	657,550
664,370	Operating profit	614685	628,050

(b) Using the High/Low method:

(i) Calculate the variable cost per unit. State your answer to two decimal places. (2 marks)

£ 3.75

(ii) Calculate the fixed cost. State your answer to two decimal places. (2 marks)

£ 11000

(c) Calculate the total amount payable after all available discounts have been claimed. State your answer to two decimal places. (2 marks)

£ 26048.40

(d) Calculate the variance as a percentage to two decimal places and identify whether it is Adverse or Favourable. Your answer should be expressed as a positive number. (2 marks)

5.38 % Adverse

(e) Select TWO statements that best describe the purpose of a flexible budget. (2 marks)

- [x] Enables the business to compare actual and planned performance for the same activity level.
- [x] Allows the business to fairly evaluate departmental performance.
- [ ] Enables the business to create an effective long term plan.
- [ ] Allows the business to predict costs based on cost drivers.

Task 8 (20 marks)

Write an email to the Chief Executive, covering the following three areas:

(a) Explain the reasons for the variances on sales revenue, materials and labour. (10 marks)

(b) Describe the information that the sales manager requires from the accounting system to help him create a rational pricing policy. (5 marks)

(c) Describe any failings that you perceive in the budgetary control process and suggest how budgetary control could be improved. (5 marks)

(a) Reasons for variances

The operating statement shows a profit of £111,000 which is 39% below the original budget, despite better than anticipated sales volume and average selling price. Profit is 40% below the flexed budget. There are three significant variances.

Sales revenue shows a favourable variance of £31,000 (2.9%) which must be due to price, as the budget has been flexed. The average selling price has increased to £1.75 per pair as a result of a shift in demand towards our premium products.

Material costs were £51,000 (17%) above the flexed budget. This can be attributed to increased demand for gloves made from best quality leather. There may also be other price or efficiency factors but our accounting system does not provide an analysis. Similarly, we cannot tell what cost reduction has resulted from the shift towards smaller glove size, using less leather.

Labour costs were £45,000 (12%) above budget. Again, the shift in demand is the most likely cause as we are selling more gloves of the intricate design which, presumably, requires more handwork. This might have involved overtime working. Again, there could be other general wage rate or efficiency factors but we do not have the data to analyse.

(b) Information for pricing

The sales manager needs to know what it costs to make each of the products in the range. The average variable cost in the budget was £1.28 per pair but the actual cost was £1.44. If, as seems likely, this increase is due to a change in the product mix, the variation in cost between the products must be considerable.

The fact that profit has dipped indicates that pricing has not been optimal. If premium products are underpriced demand will switch to them and production costs will rise disproportionately.

Costs are likely to vary according to the quality of leather used, the glove style and glove size. As fixed costs are a small proportion of the total we can focus on variable cost and contribution.

The shift in demand towards premium products should be good news for the business and enhance profitability. The contribution on each pair of the premium gloves should be at least as good, preferably better, than average.

The accounting system needs to identify the variable cost of each product in the range so that the sales manager can set prices that are both competitive and profitable across the range.

Task 8 continued

(c) Budgetary control process

Flexible budgeting is a powerful control tool in a single product environment but is of limited value if there is a diverse product range. Indeed it can produce misleading information.
Budgetary control could be improved by using standard costing. This would provide detailed cost data and analysis at product level. Standard costing can be fully integrated with budgeting to provide excellent control in a multi-product environment
Standard costs should be calculated for each of the 18 products in the range (2 styles x 3 leather grades x 3 sizes). A costing system must be put in place to collect the actual costs of each product.
This will improve control by facilitating the reporting of variances. For instance, material cost variances could be analysed into price variances for each leather grade and usage variances for each glove style and size. Similar analyses could be made for other variable costs.
Standard costing will also provide the data to build realistic budgets and to inform sales pricing as described above in section 2 of this email.

Budget Accountant