

# Examiner's report

## MA2 Managing Costs & Finance

### For CBE and Paper exams covering January to June 2016

#### General Comments

The examination consists of 50 objective test questions, each worth 2 marks. The purpose of this report is to provide illustrations of questions which have especially posed problems for candidates.

The three sample multiple-choice questions below cover different aspects of the syllabus. The approach to correctly answering each question is explained and the common incorrect approaches, along with the misunderstandings which they indicate, are highlighted. Answering objective test questions requires candidates to have both a clear understanding of the subject matter being examined and a logical approach.

#### Sample Questions for Discussion

##### Example 1

The sales revenue budget of X Co. for the next three months is:

	\$
June	145,000
July	156,000
August	130,000

5% of sales by value are cash sales. 25% of credit sales by value are received one month after sale with the remainder two months after sale.

#### What are the budgeted receipts in August?

- A \$146,863
- B \$152,088
- C \$154,250
- D \$136,925

This question tests the ability of candidates to use information regarding budgeted sales and trade receivables in order to determine the implications for budgeted cash flows. All options were popular with candidates and seemed to indicate that failure to read the question carefully is a widespread problem.

The correct answer is Option A. The budgeted cash receipts in August comprise:  
\$6,500 which is the cash sales for August (5% of the \$130,000 total revenue budget for August);  
+ \$37,050 which is 25% of the credit sales budget for July ( $\$156,000 \times 0.95 \times 0.25$ ) i.e. 25% received one month after the credit sale;  
+ \$103,313 which is 75% of the credit sales budget for June ( $\$145,000 \times 0.95 \times 0.75$ ) i.e. 75% received two months after the credit sale.

$\$6,500 + \$37,050 + \$103,313 = \$146,863.$

Almost as many candidates selected Option C. The error here was in calculating the 25% credit sales receipts one month after sale and the 75% credit sales receipts two months after sale on the total sales revenue budget figures rather than on 95% of the total which represents the proportion of credit sales.

Options B & D were also popular with a significant proportion of candidates. The error in Option B was taking 75% (rather than 25%) of the credit sales made in the month prior and 25% (rather than 75%) of the credit sales made two months prior. Option D confused the month of June with the month of August calculating 5% of the sales in June (rather than August) and 75% of the credit sales in August (rather than June).

### Example 2

Labour costs for a period in production cost centre P1 include:

Gross wages of direct operatives:

Normal hours	\$76,200	
Overtime hours (at a premium of 50% over the normal rate)	\$9,600	

Gross wages of indirect operatives:

Normal hours	\$14,300	
Overtime hours (at a premium of 50% over the normal rate)	\$1,650	

Overtime is worked, as necessary to satisfy seasonal sales demand.

**What amount of the above labour costs would be charged to production overhead?**

- A** \$19,150
- B** \$15,950
- C** \$25,550
- D** \$15,400

This question tests candidates' ability to distinguish between direct and indirect labour costs being charged to production. The key aspect of this question concerns the charging of the costs of overtime in a situation where the requirement for overtime working is driven by sales demand in general rather than by the urgent requirement of a particular customer.

Where the overall sales demand, at any particular time, necessitates overtime working it is regarded as unfair to charge the premium paid to workers over and above the normal rate to those products that happen to be scheduled for production in the overtime hours. In other words the premium is not charged directly to those particular products (even though the cost can be identified) but instead indirectly to (and thus shared by) all products as part of production overhead.

The correct answer is Option A. The amount of labour costs charged to production overhead comprise the gross wages of the indirect operatives plus the premium paid to direct operatives for the overtime hours worked. Thus the calculation is [ $\$14,300 + \$1,650 + \$3,200$  ( $\$9,600 \times 50/150$ )] = \$19,150.

However, Options B & C were each chosen by a significantly larger proportion of candidates than Option A.

Option B included the gross wages of the indirect operatives only (\$14,300 + £1,650 = \$15,950). It is important to realise that there may be a difference between the wages classified according to type of operative and the wages classified as to whether they are going to be charged as direct costs or as indirect costs to production.

Option C charged the whole of the overtime wages of direct operatives, rather than just the overtime premium, to production overhead as well as the wages of the indirect operatives (\$14,300 + \$1,650 + \$9,600 = \$25,550). It should be realised that the cost of the overtime hours at the normal rate would be charged directly to the appropriate products.

Option D, which was selected by a very small proportion of candidates, simply charged the total hours of indirect operatives at the normal rate to production overhead [\$14,300 + \$550 (\$1,650 × 50/150)]. As a result the whole of the overtime premium for both direct and indirect operatives would be charged as a direct cost (which is unlikely to have been practically feasible anyway).

### Example 3

The following data relate to a single product business:

	<b>\$ per unit</b>
Selling price	30.00
Prime costs	11.20
Production overheads	8.60 (15% variable)
Non-production overheads	5.70 (10% variable)
Net profit	4.50

### What is the contribution/sales (C/S) ratio?

- A 15.0%
- B 34.0%
- C 56.5%
- D 58.4%

This question requires candidates to calculate a ratio determining the percentage that contribution represents in relation to sales revenue i.e. the \$ contribution per \$ of sales. This is an important ratio used in marginal costing. Options A, B & C were each selected by a significant proportion of candidates indicating a widespread lack of knowledge in this area. Many candidates calculated the gross profit % of sales or the net profit % of sales rather than the contribution.

Contribution is calculated by deducting both production and non-production variable costs from sales revenue. It is the contribution towards covering the fixed costs and providing profit. In this question the variable costs comprise:

	<b>\$ per unit</b>
Prime costs	11.20

Variable production overhead	1.29 (8.60 × 0.15)
Variable non-production overhead	<u>0.57</u> (5.70 × 0.10)
	<u>13.06</u>

The contribution is \$16.94 per unit (selling price \$30.00 – variable costs \$13.06) and the contribution to sales (C/S) ratio is 56.5%  $[(16.94 \div 30.00) \times 100]$ . Option C is the correct answer.

Option A calculates the net profit to sales ratio  $[(4.50 \div 30.00) \times 100] = 15\%$ . Option B calculates the gross profit to sales ratio. Gross profit is sales less production cost of sales which includes not only variable but also fixed production costs whilst at the same time disregarding the variable non-production costs. The gross profit is \$10.20 per unit  $[30.00 - (11.20 + 8.60)]$  and the gross profit percentage of sales is 34.0%  $[(10.20 \div 30.00) \times 100]$ .

Finally, Option D used variable production costs only (i.e. ignoring the variable non-production costs) as the relevant costs in the calculation of contribution  $[(17.51 \div 30.00) \times 100] = 58.4\%$ . This option was selected by a smaller proportion of candidates.

### Summary

The three multiple-choice questions illustrated in this report reveal a number of misunderstandings, confusion or a lack of knowledge amongst candidates regarding the particular topics being examined. In many cases this may be symptomatic of a more widespread problem which can only be overcome by a rigorous study program and by practicing objective test questions. Candidates preparing for future examinations should try to ensure that they develop a clear understanding of the different areas of the syllabus and think logically when answering them. A failure to read questions carefully is also apparent at times.