Examiner's report
Performance Management (PM)
September 2019

The examining team share their observations from the marking process to highlight strengths and weaknesses in candidates' performance, and to offer constructive advice for future candidates.

General comments

The Performance Management (PM) exam is offered as a computer-based exam (CBE). The model of delivery for the CBE exam means that candidates do not all receive the same set of questions. In this report, the examining team share their observations from the marking process to highlight strengths and weaknesses in candidates' performance, and to offer constructive advice for future candidates.

- Section A objective test questions – we focus on two specific questions that caused difficulty in this sitting of the exam.
- Section B objective test case questions – here we look at the key challenge areas for this section in the exam.
- Section C constructed response questions - here we provide commentary around some of the main themes that have affected candidates' performance in this section of the exam, identifying common knowledge gaps and offering guidance on where exam technique could be improved, including in the use of the CBE functionality in answering these questions.

Section A

Here we take a look at **TWO** Section A questions which proved to be particularly challenging for candidates.

Example 1

A company grows different types of tea leaves and blends them together. The tea leaves are picked by hand because too many leaves were damaged and wasted when picking machines were used. The tea leaves are then dried and processed and any waste produced is recycled.

The company regularly tests its tea for contaminants, in line with food safety legislation. It recently identified that one tea plantation contained high levels of contaminated soil after the use of a new pesticide.

Identify, by selecting the relevant box in the table below, the environmental cost classification of each of the following costs.

Cost incurred to clean contaminated soil	**PREVENTION**	**DETECTION**	**INTERNAL FAILURE**	**EXTERNAL FAILURE**
Staff cost for picking leaves by hand	**PREVENTION**	**DETECTION**	**INTERNAL**	**EXTERNAL**

			FAILURE	FAILURE
Recycling waste cost	**PREVENTION**	**DETECTION**	**INTERNAL FAILURE**	**EXTERNAL FAILURE**
Cost incurred for testing tea for contaminants	**PREVENTION**	**DETECTION**	**INTERNAL FAILURE**	**EXTERNAL FAILURE**

What does this test?

✓ The classification of costs to environment cost categories.

What is the correct answer?

- The cost incurred to clean contaminated soil is an external failure cost. This is because this cost has arisen as a result of discharging contaminants into the external environment.
- The staff cost for picking leaves by hand is a prevention cost. The picking machines damage too many leaves which causes waste, therefore handpicking leaves prevents this wastage.
- The recycling waste cost is an internal failure cost because it is waste which is created by the business but is dealt with by the company so that it is not released into the environment.
- The cost incurred for testing tea for contaminants is a detection cost as testing the tea ensures that the company is compliant with legislation.

Example 2

A company needs 400kg of material Z to fulfil a customer order in one month's time.

It currently has no material Z in inventory. The current purchase price of material Z is $20 per kg and this is expected to rise to $24 per kg in one month's time. Material Z is perishable and normally 20% of stored material is lost per month.

The company expects to have 200kg of material Y in inventory in one month's time with no alternative use other than to sell it for scrap for $18 per kg. The 200kg of material Y could be converted into 200kg of material Z in one month's time at a cost of $4 per kg. Material Y is not perishable.

What is the total relevant cost of material Z to fulfil the customer order?

$ _____

What does this test?

✓ The calculation of relevant costs for a decision.

What is the correct answer?

✓ The correct answer is **$9,200**

- The first step is to determine what the company's options are and the cost of those options. They can do the following:

  1) Buy material Z now and store it for one month but the loss would need accounting for = $20/0.8 = $25 per kg
  2) Buy material Z in one month's time = $24 per kg
  3) Convert material Y into material Z in one month's time = $18 + $4 = $22

- Based on the cost of the options the company would prefer to convert material Y into 200kg of material Z and then for the remaining 200kg of material Z required for the order, the company would buy it in one month's time.

- The total relevant cost is (200kg x $22) + (200kg x $24) = $9,200

Section B

Section B tests candidates' knowledge on a number of topics in more detail than section A, with three case questions containing five two-mark objective test questions. The range of topics covered in the September 2019 examination was:

- Life-cycle costing
- Pricing
- Variance analysis
- Throughput accounting
- Short-term decisions

A few key points that came out of section B were:

- Read the case scenario and requirements very carefully. This goes for the whole exam, but any objective test question is 'all or nothing' – if you misread the requirement or miss a vital piece of information from the scenario and get the answer incorrect you score zero for that question.
- Close reading is also important for identifying the instructions in the question on how to round your answers. Please take care with Fill in the Blank questions which have rounding instructions as you want to ensure that the answer you input meets those rules.
- Cover the whole syllabus. The list above should highlight this – PM has a large syllabus which can seem daunting, but it is essential to have a broad knowledge. If, for example, a section B OT case covering variances comes up and you haven't covered this in your studies, the 10 marks available are left to chance.
- Be able to apply your knowledge of theories/techniques to the scenario given, as in the OT case questions these areas will often be examined in the context of the case. It is important that you are able to apply the logic of a concept or theory to a problem and so you need to understand the method and why you are doing the calculations and not just focus on how to do the calculations.

Section C

Candidates were presented with questions drawn mainly from the areas of:

- Transfer pricing
- Limiting factor analysis
- Performance measurement
- Cost volume profit (CVP) analysis
- Budgeting

Transfer pricing

Transfer pricing is a very regularly examined topic. It remains unpopular; however candidates scored well this sitting due to good exam technique – picking up the easy marks that were available for some relatively straightforward profit calculations. Candidates are often required to calculate divisional profits under the current transfer pricing arrangement, then to comment on, or recommend changes which could be made. It should be noted that despite the high scores, the parts of the questions requiring a thorough understanding of the principles of transfer pricing were not well answered, showing that this is still an area which requires attention.

The Portable Garage Company (PG Co), published in the March/June 2018 sample questions would be a useful starting point for practice of transfer pricing questions.

Limiting factor analysis

This topic centres on decision-making when one or more resources are limited, meaning that an organisation must decide how many of each of its products to make, in order to maximise profit. There are two main situations and both were examined this session – situations with only one limiting factor, and those with two or more. If only one resource is limited, **key factor analysis/single limiting factor analysis** should be used. This is a relatively simple approach – products are ranked according to their benefit (usually contribution) per unit of limiting factor, and then made in order of rank until the limited resource (factor) is used up. This was the area candidates were more familiar with, but there were several regular errors which should be mentioned:

1) Ranking products based on contribution (or profit) per unit. This misses the point entirely. A product could have very high unit contribution, but use up all of the organisation's resource. To take a simple example, if a company makes two products, product A giving contribution of $2 per unit and product B $10 per unit, under normal circumstances the company would make product B. However, if the company had a limited amount of material e.g. only 20kg, with product A using 1kg per unit and product B using 20kg per unit, this approach would not be profitable. – With the material available, the company could make 20 units of A, earning $40 contribution, compared to the $10 contribution the company would get from making 1 unit of product B – an easy decision! The numbers won't always be so easy, but calculating the contribution per unit of limiting factor i.e. per kg as $2/1kg = $2/kg for A and $10/20kg = $0.50/kg for B makes the decision clear.

2) Including fixed costs in the benefit calculation. Rather than using contribution per unit, a large number of candidates used profit per unit. When trying to calculate how many of each product to make, the fixed costs should be ignored – they won't change if the company make more or fewer of a particular product, whereas the variable costs will. Always rank based on contribution per unit of limiting factor.

3) Ignoring minimum production levels. Almost always in these questions, there will be a minimum production level for one or more products – maybe to keep a particular customer happy. This means that once the products have been ranked, the minimum levels of each product must be included in the optimal production plan. Many candidates missed this. Candidates should always be on the lookout for it in such questions.

4) Candidates should also be aware that this topic could be tested in both manufacturing and service sector contexts; however the approach to key factor analysis is the same.

The second type of question, where multiple limiting factors exist, was less well answered. Historically, these questions would require candidates to undertake **linear programming** from start to finish, including drawing the graph. Whilst ACCA does not expect candidates to produce a graph in the CBE environment, it is important to understand all of the steps. Those candidates familiar with linear programming scored well, but unfortunately there were many who were unable to attempt this area at all, missing out on some potentially easy marks. It should be noted though that although many candidates were able to define a shadow price, very few could apply that knowledge to the scenario given.

Section B of the March/June 2019 sample examination contains questions on this topic and question 32 of the September 2016 examination is also an excellent example to practise.

Performance measurement

There are many different subtopics within the performance measurement area of the syllabus e.g. financial/non-financial performance, divisional performance and not-for-profit business performance. Although each type is slightly different, the general approach is the same – use the scenario information given to assess the performance as required.

Candidates showed that they have spent significant time revising these areas – knowledge of measures such as profit margins, ROCE/ROI, working capital measures, the balanced scorecard and the 3Es was all strong, with candidates able to explain them, or discuss advantages/disadvantages.

What was missing, as in previous sittings, was useful analysis of the scenarios given. Often the marks are split between calculation and discussion (with the marks available for both clearly stated). Unfortunately, unless specifically asked for a particular measure, candidates often do not use the information given to perform enough calculations. This has a double effect – not enough calculation marks, but also not enough to talk about to gain enough discussion marks.

Following on from this, discussions were often very bland – 'X has gone up, Y has gone down'. It is very hard to award this any credit. Use the scenario – if targets are given, assess performance against these – there is a clear difference between 'Division X has an ROI of 20%, which seems good' and 'Division X has an ROI of 20%, exceeding the target of 12% and showing good performance.' In the absence of targets, comparison may be made to prior periods or other divisions – whatever is given in the scenario.

Other ways of scoring well in these questions are giving reasons for the performance – this information will come from the narrative in the scenario. For example, the scenario may say that a business' sales have increased by 15% since last year. Obviously this is positive but look in the scenario for reasons – maybe they entered a new market, or a competitor went out of business – whatever it is, use it to explain the change.

There are many instances of questions in this area. Q32 from March/June 2019, Q31 from September/December 2018 and Q32 from September/December 2017 are all good examples.

CVP Analysis

CVP analysis is another useful tool in decision making and performance management. Encouragingly, candidates did seem prepared in the sense that they knew the basic calculations. However, the interpretation elements of the requirements were less well answered – such as what would happen if the situation changed – for example the effect on the weighted average contribution to sales ratio (C/S ratio) of changing sales volumes. More practice in this area would aid understanding in the interrelationship between the various calculations.

By far the most common error is in the calculation of the weighted average C/S ratio – this is the weighted average of the C/S ratios of the products you sell – weighted by sales revenue. So products which generate more revenue, get more of the weighting. Many candidates simply take the mean of the C/S ratios of the products, not weighting them at all. It's a fairly simple calculation, demonstrated with the following example:

A company has two products:

	A	B
Number of units	800	500
	$	$
Selling price	50	20
Variable costs	(40)	(2)
Contribution	10	18
Total revenue	40,000	10,000
Total contribution	8,000	9,000
Contribution/sales ratio	20%	90%

The weighted average should allow for the fact that product A provides much more of the revenue than product B. Out of the total revenue of $50,000, A gives $40,000, or 80% and B 20%, so the C/S ratios should be weighted accordingly:

	A	B	Total
Contribution/sales ratio	20%	90%	
Weighting	80%	20%	
Weighted C/S ratio	16%	18%	34%

So even though B has a much higher C/S ratio, it's smaller overall revenue means that its high C/S ratio 'counts' less in the average.

While this works, the much simpler calculation of Total Contribution/Total Revenue, here 17,000/50,000 = 34% is much easier. Given how quickly total contribution and revenue can be calculated in a spreadsheet, this method seems far less likely to lead to errors.

Question 32 of the March/June 2018 paper focuses on this topic.

Budgeting

Another regularly examined topic, it was pleasing to see that candidates were, in the main, well prepared in this area. Knowledge of and the ability to explain pros and cons of the different budgeting methods were clearly apparent. The most common mistake, as with other syllabus areas, was a failure to link this knowledge to the scenario in question. For example, if asked to explain the advantages of a budgeting method to a business, there will be information in the scenario which will back up a candidate's argument. Take incremental budgeting – one of its big advantages is its simplicity. Stating that 'incremental budgeting is quick and easy to perform' may gain some credit, but 'incremental budgeting is quick and easy to perform, and we are told that the managers in X Co are overworked and short of time, so this will help them' will impress a marker much more!

The one area where knowledge seemed to be lacking was in discussing the beyond budgeting approach. Again, this shows the importance of broad syllabus knowledge – a couple of key facts about beyond budgeting could pick up some extra credit relatively quickly.

Question 5 from the June 2015 exam is a good example of a budgeting question.

Exam technique

As always, exam technique is an important aspect of success in any exam. Throughout this report the importance of reading and interpreting requirements very carefully has been reiterated many times; failure to do this is often the cause of poor scores. The tendency for some candidates is to answer the question that they want to get rather than answering the question which they have been given.

Candidates should ensure that they have read all the requirements and noted the mark allocation for each requirement; this is especially important in CBE as the requirements might be split over several screens. Each requirement should be properly broken down so that it can be established what is being asked. A recommended approach to this would be that at the start of an answer, candidates should do a small plan in which they have broken down a requirement and asked

themselves how many things they are being asked to do, making sure that they consider all aspects of the requirement.

It is easier to be more focussed when answering a question using word processing and spreadsheets, as the mere fact that what has been written or calculated can be seen more clearly, which helps candidates to avoid the temptation to discuss things which are irrelevant. Also, if candidates realise that they have missed a point out from an earlier part of a question, it is easier to go back and insert it in the correct place.

Finally, please remember to use the spreadsheet functionality available. Totals should be calculated by inserting formulae rather than typing in the number.

Guidance and Learning Support resources to help you succeed in your exam

Preparing for the PM examination may appear daunting but there are many support resources available to help candidates. There are technical articles available on the topics discussed in this report and all the past exams referred to (and many more) are available on ACCA's website. Candidates should refer to these regularly when studying for their exams. These resources are provided to help candidates develop confidence in their knowledge and understanding of PM.

http://www.accaglobal.com/uk/en/student/exam-support-resources/fundamentals-exams-study-resources/f5.html