



F5 Examiner's report

December 2016

Introduction

Performance at the December 2016 diet was satisfactory and there were some excellent individual performances, together with some disappointing ones.

Overall, whilst many candidates were well prepared for this exam, others were less so, but hopefully this report will help candidates needing to resit the F5 exam next sitting understand where they may have gone wrong on this one.

General Examination Comments

The examination consisted of three sections.

Section A contained 15 objective test questions of 2 marks each, for a total of 30 marks; Section B contained three scenarios each consisting of 5 objective test questions of 2 marks each, for a total of 30 marks; and Section C contained two questions of 20 marks each, for a total of 40 marks.

For success to be achieved in all exams at this level there is a significant investment required in terms of time, discipline and energy in order to obtain the necessary level of knowledge and application. Candidates that do invest this time in an effective way will generally perform well. Candidates who do not invest this time and do not cover the whole breadth of the syllabus are unlikely to succeed. Question spotting will simply not work, especially given the structure of the exam as it now stands.

As always, candidates must remain vigilant when reading and interpreting the requirements of a question. It may be useful to underline both the instruction and the content required. An instruction tends to be in the form of a verb, such as prepare, discuss, explain or describe. The content is the subject matter that needs to be prepared/discussed/explained/described. When writing an answer to a question, it is useful to keep referring back to the requirement and making sure that the answer is actually reflecting the requirement's instruction and content. This point will be discussed in more detail later on.

Section A (questions 1-15)

It was good to see that almost all candidates attempted all of the questions. Candidates preparing for the next examination of F5 are advised to work through as many objective test questions as possible. Sources for these questions may include the specimen exam and any published past exams and questions available from various publishers. These questions should be carefully reviewed to understand how each of the correct answers was derived. Reviewing questions after practising them is just as important as doing the questions in the first place.

The following question is reviewed with the aim of giving future candidates an indication of the type of questions asked and guidance on dealing with such exam questions.

The example is numerical and illustrates how both reading all of the question's information and the question's requirement are essential. This was a question which many candidates answered incorrectly in the December 2016 exam.

Example of Section A question

Perrin Co has two divisions, A and B.

Division A has limited skilled labour and is operating at full capacity making product Y. It has been asked to supply a different product, X, to division B. Division B currently sources this product externally for \$700 per unit.

The same grade of materials and labour is used in both products. The cost cards for each product are shown below:

Product	Y (\$)/unit	X (\$)/unit
Selling price	600	-
Direct materials (\$50 per kg)	200	150
Direct labour (\$20 per hour)	80	120
Apportioned fixed overheads (\$15 per hour)	60	90

Using an opportunity cost approach to transfer pricing, what is the minimum transfer price?

- A. \$270
- B. \$750
- C. \$590
- D. \$840

The correct response is **B** and the approach to calculating it is shown below.

Using the opportunity cost approach to transfer pricing, the minimum price charged by the transferring division must be the marginal (variable) cost of producing X + the contribution that is lost from selling however many units of Y could have been made for each X. So, the key point to note in the first instance is that whilst Y only uses 4 hours of the scarce resource, which is labour (\$80/\$20), X uses 6 hours (\$120/\$20). So, for each X that is made by Division A, it forfeits the contribution from 1.5 units of Y (6 hours/4 hours). The question could therefore be approached by calculating the contribution per unit from Y and then multiplying it by 1.5 to find the contribution lost by making X instead. Alternatively, the way it is shown below is by calculating the contribution per labour hour for Y and then multiplying this by the number of hours X uses. It is the contribution per labour hour that is relevant because of the fact that it is labour that is in short supply.

Product	Y (\$)
Selling price per unit	600
Less direct materials (4 kg)	200
Less direct labour (4 hours)	80
Contribution per unit	320
Contribution per labour hour for Y	80

Therefore, if Division A is to be no worse off by selling Product X to Division B instead of Product Y externally, the contribution per labour hour from selling X must also be \$80. The opportunity cost is therefore \$80 per labour hour. Since it uses 6 labour hours to make one unit, one unit must generate a contribution (i.e. opportunity cost in this context) of $6 \times \$80$ i.e. \$480.

To arrive at a minimum transfer price, the marginal cost of producing X must be added. Total variable cost per unit of X = \$150 + \$270. Therefore, the minimum transfer price is \$750.

The *incorrect* responses were as follows:

C

The most common incorrect answer was C and this was the answer given by a majority of candidates. This was found by taking the contribution per unit for Y of \$320 and simply adding it to the variable cost per unit of \$270 of X, thus giving \$590. However, this ignored the fact that X takes 1.5 times as long to make as Y and therefore either the contribution per labour hour must be calculated and multiplied up by 6 as shown above, or the contribution per unit of \$320 must be multiplied by 1.5 before adding it to the variable cost of \$270.

A

\$270 is simply the marginal cost of producing X. This is incorrect as the opportunity cost approach requires you to add the lost contribution to this figure too.

D

\$840 is the correct figure of \$750 calculated but with the apportioned fixed overheads of \$90 added on too. This is incorrect as the minimum transfer price is *marginal* cost only + opportunity cost. Apportioned fixed costs are therefore ignored.

Section B (questions 16-30)

In common with Section A, it was good to see that almost all candidates attempted all of the questions. Also, as with Section A, candidates preparing for the next examination of F5 are advised to work through as many objective test questions as possible using the sources listed above.

Each of the three Section B scenarios is followed by five objective test questions which are based upon the scenario. The scenarios can come from any area of the syllabus. As with Section A, future candidates should aim to revise all areas of the F5 syllabus, rather than attempting to question spot. The format of the F5 exam now means that lots of coverage of the syllabus can take place, thus making sure that candidates have studied the whole subject to a high standard.

In broad terms, candidates performed better in Section B than they did in Section A. Candidates' performance was weaker in December 2016 on the scenario question which tested throughput accounting in a situation where resources were scarce. It was interesting that this technique involved an understanding of limiting factor analysis, just as the example question from Section A did, suggesting that understanding is particularly lacking in this area.

Section C (questions 31-32)

Candidates in general performed better on the calculation-based questions, which were 31(a) and 32(a) but also on discussion question 32(d). Candidates in general did not perform as well on discussion question 31(c). There were many reasonable attempts at most parts of the two questions, but there were also many scripts with parts not attempted. This particularly seemed to affect 32(c).

As has been said before, it is essential to read the question requirement carefully in any examination in order to understand clearly what you are being asked to do. For example, a requirement to discuss the problems of implementing a new budgeting system, as in 31(c), is different from a requirement asking about the problems of such a new budgeting system itself.

Furthermore, some candidates try to answer the question that they think is there, rather than the one that actually is there. For example, when asked to discuss the problems involved in using a particular performance measure, there is no need to discuss the problems of using a different performance measure too. Whilst negative marking does not happen, wasting time writing an answer to a non-existent question means that potential marks are lost elsewhere.

Question 31

This longer-form question was from section C of the syllabus and covered budgeting.

Requirement (a) asked candidates to prepare the company's rolling budget for the next four quarters. On the whole, this was answered quite well. The question made it clear that the assumptions of the original budget were accurate but incorrect prices had been used in the first place. This meant that, before the rolling budget could be prepared, the actual gross profit margin (GPM) from the quarter that had just ended needed to be calculated and this percentage then needed to be applied when calculating the cost of sales and gross profit figures for the rolling budget. Many candidates simply calculated the GPM from the original budget and ignored the actual quarter 1 figures. This meant that their cost of sales and gross profit figures were therefore incorrect in their rolling budget.

A common error was to start the rolling budget with the actual quarter 1 figures that had been given in the question and then only produce three further quarters. This showed a lack of understanding of how rolling budgets work.

Requirement (b) asked for a discussion of the problems which had occurred at the company as a result of the previous budgeting process and improvements which might now be seen as a result of using realistic rolling budgets. Some answers to this were good. However, many candidates simply copied out parts of the scenario without adding any value to them. For example, it was not enough to say that a problem of the previous system was that many product lines had to be heavily discounted in the last quarter. Answers needed to go on and say that this discounting was a problem because it led to reduced sales revenues for the company and made it difficult to subsequently increase prices to their original level in later quarters.

Part (c) asked candidates to discuss problems that might be encountered when implementing the new budgeting system i.e. rolling budgets. This was referred to earlier on in the report. The biggest problem was that candidates didn't read the requirement carefully or simply answered the question that they wanted it to be. On the whole, the problems of implementing rolling budgeting are different from the problems of using rolling budgets on an ongoing basis, apart from the fact that both implementation and ongoing use of rolling budgets are time consuming and therefore expensive. Please carefully review the suggested answer for this part of the question as answers were fairly weak here and many opportunities to gain marks were lost.

Question 32

This longer-form question was from section D of the syllabus and covered divisional performance measurement.

Part (a) required candidates to calculate the return on investment (ROI) for two divisions on a basis that was suitable for measuring the divisional managers' performance. This meant that calculations should have been based on controllable profit. Whilst most items affecting profit were either clearly controllable or uncontrollable, the exchange rate gain/loss could have been argued either way, provided that the explanation in part (b) was sufficient. Similarly, the assets figure used for the calculation should have only included *controllable* assets.

Many candidates scored well on part (a) but then failed to secure many marks in part (b), where they were asked to explain why they had included or excluded items in part (a). Given the use of the verb 'explain' and the fact that this part was worth 8 marks, many of the items needed more explanation than simply saying that they were 'controllable' or 'uncontrollable'. It needed to be explained why they were controllable or uncontrollable. Easy marks were lost because answers were repetitive and too brief. Candidates must always be careful to interpret the instruction and be guided by the marks available in determining how much they need to write.

Part (c) asked for a brief discussion of whether it was appropriate to treat each division as an investment centre.

In order to answer a requirement of this nature, it is necessary to state what an investment centre is and then very briefly discuss whether this seems to be the case for the divisions in question. Some candidates correctly identified the fact that profit centre status was probably more appropriate in the circumstances but some candidates did not attempt this part at all.

Finally, part (d) asked for a discussion of the problems of using ROI to measure performance. This was well answered on the whole although some candidates spent too long also discussing the problems of using residual income, which was not asked for. This wasted time and therefore their potential to earn marks elsewhere.