



Examiner's report

F5 Performance Management

June 2015

General Comments

There were two sections to the examination paper and all of the questions were compulsory. Section A consisted of 20 multiple choice questions (two marks each) which covered a broad range of syllabus topics. Section B had three shorter questions (worth 10 marks each) and two longer questions (worth 15 marks each.) These questions covered all of the key syllabus areas.

The following paragraphs report on each section and focus on some of the key learning points.

Specific Comments

Section A

It was pleasing to see that the majority of candidates attempted all of the questions. Candidates preparing for the next examination of F5 are advised to work through the sample questions discussed here and to carefully review how each of the correct answers was derived. The following two questions are reviewed with the aim of giving future candidates an indication of the types of questions asked, guidance on dealing with exam questions and to provide a technical debrief on the topics covered by the specific questions selected.

4 The Mobile Sandwich Co prepares sandwiches which it delivers and sells to employees at local businesses each day. Demand varies between 325 and 400 sandwiches each day. As the day progresses, the price of the sandwiches is reduced and, at the end of the day, any sandwiches not sold are thrown away. The company has prepared a regret table to show the amount of profit that would be foregone each day at each supply level, given the varying daily levels of demand.

Regret table

		Daily supply of sandwiches (units)			
		325	350	375	400
Daily demand for sandwiches (units)	325	\$0	\$21	\$82	\$120
	350	\$36	\$0	\$44	\$78
	375	\$82	\$40	\$0	\$34
	400	\$142	\$90	\$52	\$0

Applying the decision criterion of minimax regret, how many sandwiches should the company decide to supply each day?

- A 325
- B 350
- C 375
- D 400

Candidates often struggle with minimax regret questions as the concept can be a little difficult to understand. Taking each corresponding level of supply and demand, it is necessary to work out the regret from choosing one supply level rather than another, taking into account the actual demand level. This is why, when the supply and demand levels are the same, there is always a value of \$0 as there is no regret because exactly the correct level of supply was anticipated. In order to decide on the optimum supply level using minimax regret as the decision criterion, the business should firstly identify

what the highest regret is for each level of supply. Then, it should choose the minimum of those maximum regrets in order to decide the appropriate level of supply. So, in this question, the maximum regret at each supply level is as follows:

At 325: \$142
 At 350: \$90
 At 375: \$82
 At 400: \$120

The minimum of these is \$82 at 375, therefore the answer is C.

13 A company's sales and cost of sales figures have remained unchanged for the last two years. The following information has been noted:

Year ended	31 May 2015	31 May 2014
Inventory turnover period	45 days	38 days
Accounts payable payment period	40 days	35 days
Receivables payment period	60 days	68 days
Current ratio	1.3	1.4
Quick ratio	1.1	1.3

The following statements have been made about the company's performance for the most recent year:

- (i) Customers are taking longer to pay and this may have contributed to the decline in the company's current ratio.
- (ii) Inventory levels have decreased and this may have contributed to the decline in the company's quick ratio.

Which of the above statements is/are true?

- A (i) only
- B (ii) only
- C Both (i) and (iii)
- D Neither (i) nor (ii)

The answer here is D. The first statement is wrong because customers are actually paying more quickly.

The second statement is wrong because inventory levels have increased.

It would have been easy to make a mistake on this question as firstly, if customers were taking longer to pay, it *would* contribute to the decline in the current ratio. Remember: question *every aspect* of what the statements are telling you. Similarly, as regards statement 2 inventory levels have increased, so this makes the statement false even though inventory is excluded from the quick ratio calculation. Again, it would have been easy to slip up by not questioning every aspect of the statement.

Section B

Question One

This first question was a ten mark question covering activity-based costing. Part (a) covered the calculations, asking candidates to calculate the activity-based cost per procedure. The setting for the question was a private hospital providing two types of procedures to patients. The overheads included costs such as nursing costs and general facility costs, the costs for which were driven by the length of patient stay. This question was not as well answered as previous activity based costing questions. In the question, there were 14,600 of procedure A being performed by the hospital each year and 22,400 of procedure B. The length of patient stay for each procedure was 24 hours and 48 hours respectively. An example of a common error being made as regards nursing costs was that candidates would take the nursing costs and divide them by 72 hours (24 + 48) without first multiplying the number of hours for each procedure by the number of those procedures being carried out. Even more worryingly, another common error was to take the nursing costs and derive a cost per procedure for A by dividing the nursing costs by 24, then for B, by dividing the nursing costs by 48. This made absolutely no sense at all. It was these kinds of fundamental errors that meant marks for this question were not as high as usual.

Part (b) asked candidates to advise the finance director whether activity-based costing should be introduced, making reference to the findings in part (a). Candidates should have observed that the main components of the overhead costs were nursing and general facility costs, both of which were driven by patient hours. Therefore, if patient hours were to be used as the basis of absorbing the overheads rather than simply the number of procedures, a fairer allocation of overheads could be achieved without the time and effort involved in implementing activity based costing. Only a handful of answers identified this key point. It is important that candidates learn to stand back and look at the big picture in questions at this level, a skill that is very much needed when moving on to the professional level papers.

Please note that where advice is asked for as to whether to implement something, a conclusion should be given.

Question Two

This question covered transfer pricing and, as has been noted in previous diets where this topic has been examined, this was poorly answered. As always, it was important to read the scenario and requirements carefully. The scenario stated that Division M had the capacity to produce 60,000 motors but total demand was 30,000 motors from external customers and 35,000 from Division S. Therefore, there were 5,000 more motors demanded than Division M could supply. Currently, it had no choice and had to supply internally before it could make external sales. However, the question was: if this policy could be changed, in order to maximise group profits, should Division M actually sell externally first and let Division S buy 5,000 motors from outside the group.

The first problem with answers came from a lack of reading of the requirement. Many candidates said that Division M must supply Division S first because that was the group policy. Consequently, they made it impossible to earn any of the marks available for discussing what the optimum internal/external supply combination would be. It is essential to read requirements carefully; the words 'assuming the group's policy could be changed' were right at the beginning of the requirement to draw candidates' attention to them.

For those candidates who did interpret the scenario and requirements correctly, only a minority adopted the correct approach in working out the optimum external/internal supply level. To answer the question it was necessary to compare the incremental cost of buying in for Division S of \$60 (\$800 external price less \$740 internal variable cost) with the incremental loss of \$80 in lost contribution if external sales were not made by Division M (\$850 price less \$770 variable cost of external sales). Comparing these two figures, it would be better for Division M to sell the 5,000 that were in question to external customers and for Division S to buy 5,000 units in.

The second problem was that candidates did not answer both parts of the requirement as, not only was it necessary to establish the supply levels but it was also necessary to discuss the transfer price/s. The way to tackle these types of transfer pricing questions is to logically consider the minimum transfer price, the maximum transfer price, then discuss what a reasonable transfer price would therefore be. This approach is guaranteed to earn marks even if minor errors are made. When answers did adopt this approach, many of them did identify that the transfer price should be between \$740 and \$800: the variable cost of producing one motor internally vs the cost of buying one in. However, many answers used \$770 as the variable cost of making rather than \$740; the \$770 was the variable cost of supplying motors externally not internally.

Question Three

Question three examined learning curves in conjunction with planning and operational variances. Part (a) was purely calculative and well answered by many candidates. Firstly, it was necessary to work out what the revised average cumulative time per hour was for the actual 460 hours worked, which many candidates managed to do. When errors were made here, it was mainly because candidates worked out the revised average cumulative time per hour for 1,000 hours rather than 460 hours. Again, this error was made because of incorrect reading of the question. The question stated that a learning curve should have been anticipated for the first 1,000 hours, but since only 460 hours were worked, it was the revised cumulative average time per hour for 460 hours that was required. There were no major problems in calculating the variances, however, which was good to see.

Part (b) was the discursive part to the question. The requirement asked for a discussion of the likely consequences arising from the production manager's failure to take into account the learning effect. Answers here were weak. Many candidates identified that the budgeted hours would have been too high originally but they did not go on to consider the implications of that, such as the erroneous recruitment of temporary workers that would be sitting idle, costing the company money and eroding profits. Or that the overstated hours per unit would mean the budgeted cost and hence the selling price would also be too high, leading to lower sales volumes.

When answering this type of question involving consideration of consequences, always ask yourself: why should we care, why is this important? This will help ensure that the implications of the observations being made are also considered in order to earn the marks available.

Question Four

This was the first of the longer 15 mark questions. Part (a) was a simple calculation of the total variable cost per unit and total fixed overheads. It required an application of the high-low method. Some candidates were able to work out the variable overhead cost correctly but then failed to go on and calculate the total variable cost per unit and as a result lost easy marks. Other answers simply didn't realise that it was necessary to apply the high-low method at all and scored poorly.

Part (b) asked for a calculation of the optimum selling price for the new product and the resulting profit, using the formula: $P = a - bx$. There were some good answers here. On the whole, the main reason for losing marks was because candidates confused sales volume maximisation with profit maximisation, thus using $MR=0$ to work out their answer rather than $MC=MR$. Another reason for losing marks was forgetting to work out the resulting profit, just stopping at an optimum price and quantity. This was unfortunate as this was where the easy marks were in part (b). Candidates are advised to always reread a requirement when they think they have finished answering it and briefly reflect on whether they have answered every part of it.

Part (c) asked for a discussion of the conditions which would make market skimming a more suitable pricing strategy and a recommendation as to whether skimming should be used. The best approach in this type of question is to state what each condition is and then, for each one, say whether the company meets the condition. Finally, at the end, make a recommendation that follows on from the discussion. This is a fool-proof approach. A weaker approach is to simply list all of the conditions of market skimming, fail to apply them and fail to conclude. The quality of answers varied here, many did fail to apply or conclude unfortunately. The Skills papers are different from the Knowledge papers because candidates are required to apply information rather than simply learn and repeat knowledge. It won't be possible to pass these papers unless the skill of applying knowledge is mastered, so most requirements will ask for application, as in this question. Candidates are still struggling to do this and consequently scoring poorly on these discursive elements of the paper.

Question five

Finally, the last question was a purely discursive question on budgeting. Part (a) was a simple three mark knowledge question asking for a description of the main steps involved in zero-based budgeting (ZBB). Candidates seemed to either know this well or not at all. It was surprising to see how many candidates fell into the latter category as this particular requirement has been asked before. It suggested that there was a degree of question spotting going on, an approach which will never work in F5.

Part (b) asked for a discussion of the problems involved in introducing ZBB at the Lesting Regional Authority (LRA). Answers to this were weak because, once again, candidates simply wrote down the known problems of introducing ZBB without actually considering the particular circumstances existing at the LRA. It is not possible to pass application requirements unless knowledge is applied. Many candidates may have walked out of the exam thinking that they had done well because they had listed points such as time, cost, demotivation, but unless these were actually discussed in relation to the LRA and all the issues it had recently been experiencing, such candidates may find that they are disappointed with their results. There was so much information in the scenario and it was there for a reason as it had relevance to the effect ZBB would have on the organisation. It must therefore have been referred to throughout the answer.

Another issue with part (b) was the fact that some answers just discussed the problems the LRA were having, rather than discussing the problems of *implementing* ZBB. Hence, they did not answer the question either and scored poorly.

Part (c) was more generic in its nature, asking for the benefits of introducing ZBB. Because of this, answers were fairly good, identifying the key points.

Conclusion

Overall, because of the issues raised above, this exam sitting proved a challenge for many candidates. Hopefully, this report highlights where mistakes were made and offers ideas as to how to improve performance in future sittings.