Examiner's report

F5 Performance Management
September 2016

General Comments

The examination consisted of three sections. Section A contained 15 OT questions for 30 marks, Section B contained 3 OT cases each comprising of 5 OTs for a total of 30 marks and Section C contained two questions of 20 marks each. In order to pass this examination, there is a significant cost in terms of time, discipline and energy in order to obtain the required level of knowledge and application. Candidates should manage their own learning and not be totally reliant on a single textbook or revision course for their knowledge. Candidates are unlikely to be successful if they simply rely on a short revision course without having dedicated many hours to the subject area.

Generally, candidates scored better on the short form OT questions than the written questions in section C. The encouraging aspect of this is that these questions cover every aspect of the syllabus, so candidates are including so-called 'minor' areas in their studies. Focusing on these at the expense of the longer questions is a dangerous tactic, however, as enough time should be allocated to section C to allow candidates to do themselves justice and pick up some of the easier marks available.

F5 is a very broad syllabus, and the new structure reinforces the need to cover all of this. To score well on the OTs, a thorough knowledge of the techniques and theories in the syllabus is essential. If one of the Section C questions contains an unfamiliar area, it will be very hard for a candidate to make up for this elsewhere. Passing this exam requires a great deal of dedication and effort to cover all of this. Candidates should use all the resources available to them – study and revision materials, ACCA articles and past exams are all invaluable tools.

Section A

It was very pleasing to see that once again almost all candidates attempted all of the questions. Candidates preparing for the next examination of F5 are advised to work through the specimen exam, past exams and sample questions discussed here and to carefully review how each of the correct answers were derived. Section A questions aim to provide a broad coverage of the syllabus, and future candidates should aim to revise all areas of the F5 syllabus, rather than attempting to question spot. 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.

Example 1

At the end of 20X1, an investment centre has net assets of $1m and annual operating profits of $190,000. However, the bookkeeper forgot to account for the following:

A machine with a net book value of $40,000 was sold at the start of the year for $50,000 and replaced with a machine costing $250,000. Both the purchase and sale are cash transactions. No depreciation is charged in the year of purchase or disposal. The investment centre calculates return on investment (ROI) based on closing net assets.

Assuming no other changes to profit or net assets, what is the return on investment (ROI) for the year?

A 18.8%
B 19.8%
C 15.1%
D 15.9%

This question tested candidates' knowledge of Return on Investment (ROI) and how it is affected by different transactions which may take place, and was not well answered. Most candidates are familiar with the ROI calculation of operating profit/net assets (other denominators can be used but net assets is given in the question). To obtain the correct answer, we need to look at how the transactions given affect profits and net assets. Looking at each transaction in turn:

Firstly, a machine with NBV of $40k was sold for $50k. This will reduce non-current assets by $40k and, as we are told this was a cash transaction, increase cash by $50k – increasing net assets by $10k. As a profit has been made on disposal, it will also increase profits by $10k.

Secondly, another machine was purchased for $250k. This will increase non-current assets by $250k, but as this was also a cash transaction, decrease cash by $250k, so no net effect. As no depreciation is charged on either machine there is no further effect.

The net effect is therefore +10k to both profit and net assets, so the ROI is ($200k/$1,010k)*100%=19.8%. Therefore answer B.

Answer A was obtained by omitting the profit on disposal from profits – ($190k/$1,010k)=18.8%. Answer C was obtained by omitting the profit on disposal and increasing net assets by the $250k machine purchase but not subtracting the cash – ($190/$1,260k)=15.1%. Answer D was obtained with the correct profit figure but the incorrect net assets of $1,260k – ($200/$1,260) =15.9%.

Example 2

A manufacturing company uses three processes to make its two products, X and Y. The time available on the three processes is reduced because of the need for preventative maintenance and rest breaks.

The table below details the process times per product and daily time available:

Process	Hours available per day	Hours required to make one unit of product X	Hours required to make one unit of product Y
1	22	1.00	0.75
2	22	0.75	1.00
3	18	1.00	0.50

Daily demand for product X and product Y is 10 units and 16 units respectively.

Which of the following will improve throughput?

A Increasing the efficiency of the maintenance routine for Process 2
B Increasing the demand for both products
C Reducing the time taken for rest breaks on Process 3
D Reducing the time product X requires for Process 1

This question tested candidates' knowledge of throughput accounting, and specifically how throughput can be improved. It is also a good example of a question where it's important not to rush – all of the possible answers could improve throughput, depending on what our bottleneck (limiting factor) is – Process 1,2 or 3. If none of the processes are limited, then increasing demand would improve throughput.

Once we have realised this, we need to find out which (if any) process is limiting us. This is a common calculation in F5 but worth going over. We need to calculate, for each process, how many hours are required to meet maximum demand – 10 units of X and 16 of Y:

Process	**Hours to produce 10 X**	**Hours to produce 16 Y**	**Total hours required**	**Total hours available**	**Bottleneck?**
1	10 (10 * 1.00)	12 (16 * 0.75)	22	22	No
2	7.5	16	23.5	22	Yes
3	10	8	18	18	No

As the table shows, Process 2 is the bottleneck – we cannot produce 10 units of X and 16 of Y in the 22 hours available. Therefore increasing the efficiency of the maintenance routine will increase the amount of units we can produce, and therefore improve throughput. Any of the other options will mean we are still limited by Process 2, and therefore will have no effect.

Section B

Section B contained 15 of the new style OT cases – with longer scenarios and 5 questions per scenario. This means that the questions are more likely to be focussed on one or two syllabus areas, again highlighting the importance of full syllabus coverage.

The three main topics in Section B were risk, budgeting and target costing. Performance in the risk and target costing questions was of a high standard and showed that candidates were well prepared in these areas – both of which have featured regularly in written question in recent sittings.

The budgeting questions were largely themed around flexing budgets – adjusting the original budget to actual activity level. It is an essential part of variance analysis (a key syllabus area in F5), and also demonstrates how important a knowledge of the basics of management accounting (which are covered in F2) is to passing the F5 exam.

Section C

Question 31 was a 'traditional' performance assessment question requiring candidates to discuss the financial and non-financial performance of a business. The scenario gave information about the business, along with any key changes or decisions made by the business over the period. Financial information was given, along with pertinent non-financial statistics.

The key with these questions is to identify cause and effect relationships. Marks will be awarded for explaining WHY something has changed, along with how it might affect other aspects of the business.

Marks are split between calculation and discussion on these questions – the split is usually given in the requirement, and weighted towards the discussion. However, in order to make a meaningful point, calculations are essential. Many candidates were able to pick up a high percentage of the calculation marks available through knowledge of performance measures such as gross and net profit margin. In a question of this type, percentage change is a key measure of performance.

It is worth noting that percentage change will be awarded marks, absolute change will not. The reason for this is that the statement "Revenue has increased by $10m" doesn't tell me anything about the business' performance. Is $10m a large change, or insignificant? If last year's revenue was $50m, a $10m increase (20%) would seem significant. If the prior year revenue was $1,000m, this change is not nearly so impressive (1%).

When it comes to the discussion, use the calculations to guide you to the key areas to focus on. If administrative expenses have increased by 0.2%, don't waste any time worrying about why – it's not significant. Use the scenario and any non-financial information you might have to help explain the performance. If, for example, revenue has increased by 10%, see why that might be. Does the scenario mention average industry growth? If this was 20% then a 10% growth in revenue actually represents a poor performance and a loss in market share. Making these points will add value (and marks!) to your answer. A large reduction in staff training costs (for example) will boost profit margins, but you may find that non-financial performance may suffer (customer complaints, time to provide service).

The most common mistake made by candidates was not applying the above. Most candidates were comfortable calculating percentage movement, but added no value to their calculations. Points such as "Cost of sales have decreased by 18%. This is a good performance." were common, but apart from the calculation scored no marks. Answers which looked into why cost of sales might have decreased, or what impact that might have had, scored many more marks. In this case, the decrease in cost of sales could partly be put down to a fall in revenue, but the main point is that the scenario explains how the company changed to a cheaper supplier – this would have a direct effect on their cost of sales. Even better answers would discuss how the rise in customer complaints may have been caused by the poor quality of these supplies.

Another common error was to offer the business advice. The requirement clearly stated "discuss the performance," and marks could not be given for advice. It is really important to read the requirement carefully and answer the question being asked.

Having said all of this, many candidates scored highly by backing up their calculations with sensible commentary, and using the information in the scenario to add weight to their discussion.

Question 32 examined planning with limiting factors, firstly in a single limiting factor situation, then using linear programming in a multiple limiting factor situation.

The first part of the question was a typical single limiting factor question, requiring candidates to formulate an optimal production plan and calculate maximum profit. Responses to this question were surprisingly poor given the fairly straightforward nature of the question. The most common errors were firstly ignoring the fact that the company had entered into a contract, and therefore these requirements should be produced first. Secondly there was a requirement to calculate the shortage of material – this was often omitted. Thirdly, many candidates used the dollar value of the limiting material to calculate their production plan, rather than the quantities.

These errors didn't seem to come from a lack of understanding, more a lack of care. It's possible that candidates were running short of time by this point, meaning that the requirements and scenarios weren't read properly. This highlights the importance of good time management during the exam – ensuring that some of the more straightforward marks can be obtained.

The second part of this question was a discussion about whether the business should breach the contract they have to supply another business. In general responses were disappointing – candidates focussed purely on the financial factors. Easy marks could be picked up here for realising that breaching a contract will have legal, reputational and ethical issues. Many also wasted their own time by ignoring the note in the requirement – "No further calculations are required."

The final part of the question moved on to linear programming with multiple limiting factors. This is generally a popular topic and this was overall well answered. Many candidates attempted this part of the question before any other part of Section C – good examination technique especially when under time pressure.

What this question demonstrated well was that most candidates are comfortable with the steps involved in linear programming; however there is a lack of in depth understanding of how it works. For example virtually all candidates could identify the iso-contribution line and feasible region when given on a graph, but few could explain what they meant. Many explained what they were for (finding the optimum point), but not that the iso-contribution line shows all points giving the same contribution, or that the feasible region shows all possible production plans that meet all of the constraints. Similarly, most could define slack in the context of scarce resources, but found it harder to identify slack variables from a completed graph.