This document should be read in conjunction with the examiner's suggested answers and marking guidance.

General comments

The Operational case study (OCS) examinations for February 2020 were based on the company Lottie Graphite, a manufacturer of graphite and coloured pencils based in Gawland, a country in Western Europe. The company manufactures just under three hundred million pencils a year at its single factory site and sells them throughout most of the world through its own extensive distribution network. The company brand is recognised globally, and the products are acknowledged as premium quality. Lottie Graphite's products include a full range of graphite pencils, coloured pencils in regular and artist grades and the PEXECO HB pencil which was launched five years ago. Financial results throughout the history of the company have been buoyant. In the financial year to 31 December 2019 the company reported an annual revenue of G$151.4 million and a profit before tax of G$12.3 million.

For this exam session, three variants based on Lottie Graphite were set. The focus for each variant was as follows:

- Variant 1: expansion into a new market in Feland, a large country that had only recently allowed foreign trade.
- Variant 2: the PEXECO pencil and the setting up of a new production facility.
- Variant 3: this variant focused on issues arising from the launch and sale of the S-Pencil (a digital stylus with an inner electromagnetic resonance core).

Each variant was based on the new OCS blueprint and covered all core activities in accordance with the weightings prescribed. This was the first exam session where a levels-based approach was used for marking candidate answers. Each variant consisted of four tasks and each of these tasks was broken down into between two and four elements. Each element of a task was then broken down into between one and three traits for marking. For each trait there was a detailed marking guide which split the total mark available into three levels: level 1, level 2 and level 3. It was also possible to achieve a score of 0 for a trait if there was no rewardable material.

To achieve a level 3 in most traits it was expected that a candidate would demonstrate good technical understanding of the topic being tested through clear and comprehensive explanation and apply this technical understanding to the Lottie Graphite business and the particular scenario within the task. If a candidate scored only at a level 1 on a trait it is likely that they did one or all of the following:

- Demonstrated some technical understanding, but with gaps in knowledge.
- Explained issues too briefly or with a lack of clarity.
- Failed to relate their answer to the task scenario and the specifics of Lottie Graphite.

Overall, performance across the three variants was reasonably good. Specific topic areas where candidates demonstrated good technical understanding and application to the scenario include beyond budgeting, costing for a digital cost object, the use of and limitations of expected value, recognition of capital expenditure under IAS16, assessing the working capital position of a company using ratios, raw material variances and for the most part KPIs. This is encouraging, especially in relation to the new topic areas.

There were however, a number of topic areas where candidates demonstrated a lack of technical understanding. These included sales mix and quantity variances, fixed overhead efficiency and capacity variances, IFRS 16 and accounting for leased assets, digital costing systems, activity-based budgeting and time series analysis. In addition, there would appear to be confusion regarding tasks about decision making where there is either risk or uncertainty. As a rule of thumb, if the task gives payoff tables without probabilities this is decision making under uncertainty and therefore maximax, maximin and minimax regret will be relevant. If the task gives probabilities, expected values, standard deviations and coefficients of variation then this is about decision making where there is risk and maximax, maximin and minimax regret approaches are not appropriate. Instead, risk attitudes should be considered.

It must be stressed that demonstrating good technical understanding is not enough on its own to pass. Candidates need to demonstrate technical understanding in the context of the scenario and the particulars of the issue being addressed. Information given to candidates as part of the task is there for a reason and should be as far as possible incorporated into answers, along with relevant information from the pre-seen. Application to the scenario is key to achieving high level 2 and level 3 scores. For this session, for the most part where candidates had the technical understanding they did reasonably well with application. Clearly where there were gaps in knowledge, application wasn't possible and therefore the importance of candidates ensuring that their knowledge base is complete needs to be stressed.

One other area worthy of mention is candidates' ability to explain. At the Operational level many of the tasks require explanation and to achieve high level 2 and level 3, it is expected that this will be clear and comprehensive. It should also be an explanation rather than a description. There were a number of tasks this session where the level of candidate explanation was poor. For example, in variant 1, task two, a considerable number of answers on the benefits of using absorption costing contained the statement "it is easier and quicker" and this earned no credit because it was not an explanation of a benefit. For this to have any value this statement should have explained how and why it was "easier" and "quicker", what being "easier" and "quicker" would bring in the case context and also explained what it was "easier" and "quicker" than.

With respect to the core activities, candidate performance was typically best for F (working capital) and B (budgeting). The weaker core activities appeared to be A (costing) and D (financial reporting and tax).

Task 1

The first element of this task asked for an explanation of the advantages and disadvantages of participative budgeting in the context of setting up an operation and selling pencils in a new country. This tested core activity B. Most answers did contain a range of advantages and disadvantages indicating that candidates had good technical knowledge. However, many candidates failed to score at level 2 or higher because they presented a textbook list that was not applied to the context of the case scenario. For example, answers asserted that an advantage of the approach to setting budgets was that the managers setting the budget would have a better operational knowledge but failed to explain that as Feland was a new market with no trading record, that this would be vital knowledge when setting a budget for the first time. Similarly, answers stated that there was a danger of budgetary slack being introduced but failed to explain that this was a particular problem as bonuses were linked to the achievement of the budget for the managers in this new location.

The second element of this task asked for an explanation of given time series information (consisting of three tables) and the limitations of using this analysis to predict future demand for pencils in Feland. This tested core activity B. In order to score at a level 3, candidates were expected to comment on all three tables as well as the limitations. Unfortunately, many candidates chose to only explain one or two of the tables, although most did make a good attempt at explaining the limitations.

Task 2

The first element of this task asked for an explanation of how leased equipment should be recorded in the financial statements for the year ending 31 December 2020 and subsequent years. This tested core activity D. Candidates either scored very well or very badly because they either knew the correct treatment of leases or did not. Some candidates stated that this was probably an operational lease. In accordance with the new financial reporting standard on leasing, IFRS 16, operational leases are no longer relevant when considering how a lessee records a lease. Only a minority of candidates did well here and clearly this is a technical area that future candidates would be advised to revise.

The second element of this task asked for an explanation of the reasons why absorption cost and marginal cost profits were different based on given data, whether marginal costing always gave a lower profit and the benefits of using absorption costing for the business. This tested core activity A. Most candidates could explain the principles that caused the difference in profit reasonably well. However, it was disappointing that so few candidates could give a good explanation of the benefits of absorption costing to the business. The

fact that the company used absorption costing was clearly highlighted in the pre-seen and therefore it was hoped that candidates would ensure that they were prepared for a question on this part of the syllabus.

The third element of this task asked for an explanation of the principles of throughput accounting and its potential benefit to the business. This tested core activity A. This was quite well answered as most candidates could explain the basic principles of throughput accounting and made a good attempt to apply these to the production processes at Lottie Graphite.

Task 3

The first element of this task asked for an explanation of the principles underlying a production schedule, how it had been used to determine the number of batches of three different types of pencil to make and whether it would be worthwhile paying a G$14 overtime premium. This tested core activity E. To gain a level 3 score, candidates needed to have answered all three parts. Most candidates scored at a level 1 because they only produced a description of the table and not an explanation; an explanation adds value to a description, and this was lacking in many answers. Many candidates also failed to comment at all on the overtime premium.

The second element of this task asked for an explanation of how the financial statements would be affected by an issue regarding inventory that had been incorrectly labelled. This tested core activity D. Candidates did not appear to appreciate that IAS 2 would be an appropriate standard and when it was used, it was explained in a scattergun and incomplete manner. Only a very few candidates achieved a level 3 because they could explain the principles of IAS 2 and the effect on the financial statements in the context of the case. Excellent answers considered that the net realisable value of the inventory was likely to be below the cost because they knew the average cost of a batch of graphite pencils as detailed in the pre-seen.

The third element of this task asked for an explanation of expected value tables and the limitations of using this information to decide whether to investigate mislabelling with the rest of the inventory. This tested core activity E and was generally well answered. Most candidates were able to correctly interpret and explain the expected value tables. The limitations were also quite well explained and as a result many candidates achieved level 3. Candidates that answered this question but were only awarded a level 2 failed to apply any of the limitations of expected value to the case context.

Task 4

The first element of this task asked for an explanation of how sales price, mix and quantity variances were calculated, what they meant and reasons for the variances. The task also asked for an explanation of the usefulness of these variances for measuring the performance of the sales teams in the month. This tested core activity C. Sales variances, including the subdivision of the volume profit variance into quantity and mix should be an area that candidates are comfortable explaining and interpreting given the large number

of previous questions they could use as practice. However, this appeared to be far from the case. Few candidates achieved a level 3 mark because they failed to address all parts of the task: the calculation, meaning, reasons for and appropriateness of these variances as a performance measure for the sales team. It was disappointing to note how many candidates failed to use the case information to explain the reasons for the variances preferring instead to use generic possible causes. As always, candidates need to apply technical understanding to the facts presented in the case to gain high marks. They also need to understand the difference between a sales profit volume variance and a sales profit quantity variance.

The second element of this task asked for an explanation and justification of three KPIs that could be used to measure the performance of the sales team. This tested core activity C. Future candidates should be aware that when asked for KPIs appropriate to a situation, generic answers will not score above a level 1. In this case the KPIs were required to assess the performance of the sales team and therefore "cost of production", "cost per mileage of distribution" and "quality rejection rates" did not apply to their activities. Also, KPIs that actually contradict the facts presented in the case, such as "discounts on list price offered to customers", are not considered valid. Answers must be applied to the context of the case.

The third element of this task asked for an explanation of how to improve the receivable days for the Feland customers. This tested core activity F. Answers here were disappointing as many candidates did not answer the task and often contradicted the facts presented in the case. A high proportion of answers suggested that outsourcing the credit control function to a factor would improve receivable days. While this may be true, it could not be awarded any marks as the scenario made clear that the company would be keeping the in-house credit control staff. Likewise, many answers suggested invoice discounting and explained how this would improve the liquidity problem, despite the fact that the scenario did not state that there was a liquidity problem.

Task 1

The first element of this task asked for an explanation of the meaning of raw material and fixed production overhead variances and reasons for each variance. This tested core activity C. Most candidates understood how the raw material variances were calculated and the reasons why they may have arisen and therefore scored at level 2 or 3. However, as a point for the future, candidates need to be more precise in their explanation of variances to clearly demonstrate their technical understanding. For example, some candidates did not make it clear that the material price variance was in respect of the actual material purchased or that the standard usage was for the actual level of output. The fixed overhead variances were less well explained, and most candidates were not able to clearly demonstrate technical understanding of the variances. As a result, many struggled to get above a level 1 for this trait. Many candidates failed to recognise that the overhead absorption rate was based on machine hours and when discussing the efficiency variance referred to labour hours rather than machine hours. Understanding of the capacity variance was very weak.

The second element of this task asked for explanation of three decision criteria that could be used to make a decision about which resin supplier to select. This tested core activity E and was less well answered than might have been expected for an area that is regularly assessed. This was partly due to the failure to recognise that the question was about minimising cost rather than maximising contribution, despite that fact that the task clearly stated this. There was also however a significant number of candidates who tried to answer the question based on risk attitude even although the details given did not include any probabilities. In order for candidates to score at level 3, they needed to clearly demonstrate their understanding of the application of the decision criteria to the information given in the scenario. A significant proportion obviously did not clearly understand the criteria and how they are applied. This was particularly evident for the minimax regret criterion where many stated that the quantity with the lowest regret would be chosen or that the regrets would be added and the lowest of the totals chosen.

The third element of this task asked for explanation of two non-financial factors to be considered before contracting with a new supplier. This tested core activity E. Most candidates were able to clearly explain two non-financial factors to be considered and consequently this part of the task scored highly with many candidates achieving a level 3.

Task 2

The first element of this task asked for an explanation of how two asset disposals and expenditure incurred on reconditioning a third asset should be treated in the financial statements. This tested core activity D. Most candidates were able to demonstrate a good

knowledge of the recognition criteria in IFRS 5: Assets held for sale, although some descriptions of these criteria were incomplete. The application of these recognition criteria to the specific scenario was less well answered. Many candidates did not seem to appreciate that the question required the position at 31 December 2020 (which is when the financial statements would need to be prepared) and therefore discussed whether the assets could be classified now as held for sale. This meant that the production conveyor was often described as not being sold within 12 months and so should not be held for sale. The packing equipment was better dealt with as most candidates noted that it would be sold soon, although candidates forgot to depreciate up to the point of reclassification/sale and so described a gain of G$75,000 - G$70,000. The accounting treatment was described well with most candidates understanding that depreciation stops once the asset is classified as held for sale, although the description of where in the financial statements to present the assets held for sale was often inaccurate. The treatment of the additional expenditure on the mixing machinery was generally well answered, although it was not always clearly explained why the G$6,000 "moving" costs were added to the capital cost. Candidates need to be more precise in their answers if they want to score at level 3.

The second element of this task asked for an explanation of how the current costing system works, how digital costing might change this and the benefits of doing this for the business. This tested core activity A and was very poorly answered. Many candidates did not seem to understand what the question was about and made some very general points about the benefits of improved systems. Most candidates explained the current system in terms of an absorption costing system and sometimes then explained the weakness of a traditional absorption costing system. Few candidates explained how standards were set and could then link this to a digital costing system. Some candidates confused digital costing systems with the costing of digital products which resulted in an answer that was completely irrelevant. Other candidates thought that a digital costing system was similar to an activity-based costing system.

Task 3

The first element of this task asked for an explanation of the effect of changing assumptions on budgeted profit and why "what if" analysis was more appropriate than sensitivity analysis in the situation. This tested core activity B. Few candidates scored highly here, with many only achieving level 1. The explanations of the revised profit figures were generally very limited with many candidates merely restating the figures in the table. Better answers discussed the impact of cost behaviour on the revised figures. Most candidates understood the difference between what-if analysis and sensitivity analysis but failed to relate this to the specific scenario.

The second element of this task asked for explanation of expected values based on two different courses of action and how risk attitude would affect the decision about which course of action was most appropriate. This tested core activity E and answers here were mixed. Some candidates tried to apply decision criteria for dealing with uncertainty to the figures despite the fact that the question was clearly about risk attitude. Most candidates could describe how the expected values were calculated and that a risk-neutral decision-maker would base their decision on expected value. Some also knew the approach that would be taken by a risk-taker although many stated

that they would choose to reduce the selling price by 10% since this gave the highest expected value of E$1,889 at a 15% volume change. Few candidates were able to explain the approach that a risk-averse decision-maker would take. As a result, very few candidates scored at level 3 for this task.

The third element of this task asked for explanation of how the budget for maintenance employee cost in the new production facility could be established using an activity-based budgeting approach. This tested core activity B. Many candidates could explain the steps involved in activity-based costing in general terms, however this scored few marks because the task was about creating a budget for maintenance staff costs using activity-based budgeting. Most candidates failed to consider the information given in the scenario about the number of services and of those that did, few then considered the need for estimates of time taken for each type of service and the number of services required each period. Those few candidates that explained the process of building up the budget for the cost pool (rather than establishing a cost driver rate for product costing) scored at level 3. However, the vast majority of candidates scored at level 1.

Task 4

The first element of this task asked for explanation of how two events after the reporting period would affect the financial statements for the year ended 31 December 2020. This tested core activity D. Most candidates clearly explained how to determine an adjusting and a non-adjusting event and applied the definitions correctly to the scenario. Unfortunately, how these events affected the financial statements was not so well explained, especially the adjusting event, which was often thought to relate to an irrecoverable debt rather than a dispute with a supplier.

The second element of this task asked for suggestions for three KPIs to monitor the performance of suppliers. This was generally well answered with a significant minority of candidates scoring a high level 2 or level 3. The tested core activity C. The majority of candidates described three relevant issues relating to suppliers that an entity would want to monitor and could explain why these were important for the business. In many cases however, the actual description of the KPI was not given. For example, many mentioned that quality was an issue and went on to describe why it was important to monitor quality. However clear explanations about how quality would be measured were often missing.

The third element of this task asked for an explanation of a potential supplier's working capital position and the risks associated with this that might affect the decision to use them as a supplier. This tested core activity F and was also well answered. Candidates that scored poorly failed to provide an evaluation of the supplier's financial position and simply described the trends. It is not enough to just restate the figures in the question. Stronger candidates explained why the supplier may have different figures (for example, operating JIT or having longer credit periods to generate revenue). Risks were not always clearly identified as risks for Lottie Graphics and were

more general. Most candidates spotted the fact that the supplier was overtrading but did not go on to explain how this would affect Lottie Graphics if they used them.

Task 1

The first element of this task asked for explanation of the difficulties associated with establishing a cost per app for the S-Pencil and the types of cost still to be incurred for the app. This tested core activity A. Most candidates appeared well prepared for this type of task (especially in respect of the future costs) and given that this is a new area in the P1 syllabus, this was very pleasing to see. Stronger candidates separated their answers into two clear parts and could clearly identify the costing issues and future costs. Indeed, many candidates scored at level 3 in respect of the future costs part of their answers. Weaker candidates confused these two criteria and tried to answer them together. Other weaker candidates, failed to realise that the subject of the task was the app, choosing to explain costings for the tangible S-Pencil product instead.

The second element of this task asked for explanation of what given time series information on the PEXECO and HB graphite pencils meant and how useful it would be to predict sales volumes for the S-Pencil. This tested core activity B. The first part of this was not as well answered as might have been expected given that this type of task has been set many times before. Many candidates approached this poorly, with few candidates able to expand further than explaining the seasonal variations in a general sense (often explanations of the trend were inaccurate). Some candidates were able to apply the scenario to explain why there were peaks and troughs in the seasons, but only a small proportion considered further the implications these fluctuations would have on Lottie Graphite. As a result, most candidates could only score at level 1 or 2 for this part. The second part of this was better answered. The majority of candidates were able to understand that the S-Pencil would have a different market, and would likely be a one-off purchase, so therefore, the previous data could not predict the future sales. Weaker candidates did not apply the scenario to their solution and just discussed the positive factors about using time series data in general.

Task 2

The first element of this task asked for an explanation of Line A on a profit volume chart and the information that this gave based on the original budget. It also asked for explanation of how the revised budget, represented by Line B, changed the analysis. This tested core activity E and was well answered. Many candidates demonstrated a good understanding of the profit-volume charts and what was shown in relation to the scenario and data provided. Weaker candidates were able to only identify the fixed costs but were unable to clearly demonstrate their understanding of what the breakeven points showed.

The second element of this task asked for explanation of how expenditure associated with new baking equipment will be initially recorded in the statement of financial position and how to depreciate the asset. This tested core activity D and was broken down into two marking traits. Many candidates scored level 3 for the first trait on recognition of the expenditure, showing that candidates were well prepared for this topic. However, for the second trait, other than explaining how depreciation would work, most candidates were not able to identify that there were different components to the asset that would have different depreciation treatments. As a result, many candidates could only achieve a level 2.

The third element of this task asked for explanation of how disposal of the warehouse building would affect both the tax charge for the year and the financial statements for the year ended 31 December 2020. This tested core activity D and was generally poorly answered. Most candidates were able to demonstrate their accounting knowledge, however, very few candidates were able to show how a capital gain would arise and be treated, displaying a lack of ability to apply their understanding when tested together. Candidates should be better prepared for tasks on tax treatments.

Task 3

The first element of this task asked for explanation of what sales price, mix and quantity variances meant and the reasons for their occurrence. It also asked for explanation of whether two actions undertaken by the Sales & Marketing Director had been successful in relation to two customer groups. This tested core activity C and was surprisingly poorly answered. Few candidates were able to accurately explain the variances beyond the price variance. Most candidates demonstrated a clear lack of technical understanding in respect of the sales mix and quantity variances, which is disappointing given that this has been tested many times before. Some candidates ignored the second part of this about the success of the actions taken and therefore did not score well here.

The second element of this task asked for explanation of how the profile of aged receivables had changed over the last three months, reasons for these changes, the potential implication of these changes and two measures that could be taken to manage these implications. This tested core activity F. Many candidates answered this fairly well, demonstrating good understanding of what the aged receivables report showed. Weaker candidates assumed that the customers were paying late due to extended credit terms which would not be a factor. Many candidates had a reasonable understanding of the implications that this would have for the company and ways in which these impacts could be reduced.

Task 4

The first element of this task asked for explanation of how to decide which provider of IT administrative services to use under different attitudes to risk, what the decision would be under each risk attitude and the limitations of this analysis for selecting the provider. This tested core activity E. Given that this is a common type of task in the Operational case exam, it was surprising how few candidates

were able to correctly interpret the data that was presented to them. As already noted for variant 2, some candidates tried to apply decision criteria for dealing with uncertainty to the figures despite the fact that the question was clearly about risk attitude, this is disappointing. A distinct lack of understanding of the coefficient of variation (COV) was displayed by most candidates and indeed many candidates ignored it altogether. Regarding the limitations of the analysis, many candidates did little more than comment on the limitations of expected values, when they could have commented on the subjectivity of the data and non-financial factors as well. This narrow focus limited many to a low level 2 here.

The second element of this task asked for suggestions and justifications for three KPIs to measure the performance of the IT administrative services provider for the S-Pencil app. This tested core activity C and was answered well by many candidates who had clearly thought about the nature of what the IT administrative services provider would be doing. Weaker candidates, however, did not use the scenario and looked at KPIs for the app itself rather than for the provider of administrative services.

The third element of this task asked for explanation of what beyond budgeting is and how it might be applied. This tested core activity B and was once again well answered. Most candidates demonstrated a good understanding of beyond budgeting and how it would be useful for Lottie Graphite to adopt rather than its current incremental budgeting processes. Clearly candidates were prepared for this and many scored at level 3 here.

Tips for future candidates

There are a number of key points to take into account when preparing for future Operational case study examinations. These points are:

- Key to achieving a score at level 2 and above is to ensure that:

    o You have the technical knowledge and understanding of all topics included in each of the core activities. It is not sufficient to rely on the fact that you remember it from the OTQ exams, because the chances are you won't. You need to revise technical material: if you don't have the knowledge, you can't possibly to score well.

    o You are able to apply your technical knowledge and understanding within the case study context. Simply reproducing rote-learned answers or pure knowledge of a topic area will score very few, if any, marks. Similarly taking a scattergun approach to an issue and commenting on everything that you know about it from a theoretical point of view will score few marks.

    o You are able to explain with clarity and comprehensively rather than making unsupported statements. Writing comments such as, "this improves decision making", "this graph is essential" or "planning is enhanced" is not enough to gain any marks. Candidates must explain "how" and "why" this is the case. Explanations can quite often be improved by adding "because of …." at the end of a sentence. Explanations should also utilise the information given to you within the case study itself, especially financial information. For example, reasons for variances are often given to you in the unseen information, the skill is to pick this out and use it.

- To help you achieve this you need to:

    o Study the pre-seen material in depth. Ensure that you are very familiar with the business, especially the financial information, before the exam as this will help you with applying your knowledge and will save you time. Similarly, an awareness of the industry that the business is in will help you to think of the wider issues that might impact on decisions that you could be asked to comment on.

    o Practise, practise, practise past OCS exam tasks. Whilst this is a new syllabus and a new blueprint, many of the old P1 tasks and a number of the old F1 tasks are still relevant. Practising past tasks and then checking against the published answers will help you to understand what the examiner is looking for.

- On the exam day:
  - It is important to take time to plan your answer so that you are able to apply your knowledge to the specifics of the case. I suggest that for certain tasks you plan your answers in the answer screen itself. For example, if you are asked for the potential benefits and problems of activity-based costing, I suggest that you first note down headings for benefits and problems. Under each heading list your benefits and problems; these will become your sub-headings. Then you can write a short paragraph under each sub-heading. This will allow you time to think about all of the points that you want to make and will help to give your answer a clear format. Ultimately, it should save you time.
  - Please take care over how your answer looks. Whilst this examination is not a test of English, some answers are difficult to read because of poor spelling and grammar. It is important that answers are presented well so that markers can see that you have demonstrated a clear understanding of the issues.