Overview
The Core 1 and 2 examinations are a mix of objective format and case questions. The maximum length for an individual case will be 60 minutes. The Core cases must assess the cross-competency integration, problem-solving and communication elements, which will be introduced in Core 1 (see CPA Competency Map for the competency areas being integrated). Core 1 case(s) will reflect mostly routine and low to medium complexity situations (some Core 1 competencies touch on non-routine and more complex transactions within GAAP), and provide candidates with sufficient direction to demonstrate an early level of professional skill development. Since the CPA program builds on prior learnings, Core 1 cases draw on the entry level requirements.

The following Core 1 case is focused on Financial Reporting and Assurance competencies, drawing on entry-level learnings in both these areas.

ATOMIC EXCELLENCE INC.

Suggested time (60 minutes)

You, CPA, are a senior accountant at Danielson & Associates LLP, a mid-size firm specializing in the audit of smaller, high-tech companies. You have recently been assigned to a new client of the firm, Atomic Excellence Inc. (AEI), a publicly-traded Canadian company listed on the TSX Venture Exchange that has been in business for 15 years. AEI dedicates itself to serving the scientific community by providing powerful, easy-to-use, and affordable scientific software. The company’s year-end is December 31.

Today is February 27, 2020. Your audit manager, Joel Cross, has called a meeting to discuss the work that needs to be performed before audit fieldwork can begin in two weeks:

“CPA, I could really use your help in preparing a preliminary audit plan. I have already performed the initial client acceptance procedures and I met with the former auditors last week to review the audit working papers from the prior year. I did not note any areas of concern. However, I did not have time to perform an overall risk assessment for this audit or to think about materiality yet.

“I also met with Anna Simpson, the CFO of AEI, earlier this week and a summary of our discussion is in Exhibit I. Can you please prepare a memo analyzing any new accounting issues that resulted from 2019 events that we should be keeping an eye for during our audit? As you know, AEI reports under IFRS.”
EXHIBIT I
SUMMARY OF DISCUSSION WITH ANNA

Knowledge of the business

AEI helps scientists deal with huge amounts of data by providing software that will perform statistical analysis and identify trends. Science labs purchase individual modules (software) to match the different types of statistical analysis they want to perform. Each module costs anywhere from $500 - $5,000 depending on the complexity of the analysis required.

AEI has done very well with this business model, with profit before tax of approximately $400,000 in 2018 and preliminary profit before tax of $550,000 for 2019. Their sales tend to be very even throughout the year.

That said, the industry has many players and is highly competitive, as labs have limited grant funds to spend and are always looking for the fastest software, and therefore will switch providers if the pricing is more attractive or the software is more powerful.

Events occurring in 2019

Telephone support program

Up until 2019, none of the companies in the industry offered post-sales support to labs. In an attempt to provide better client service and in order to remain competitive, AEI introduced a new aspect to their modules. Starting January 1, 2019, when a lab purchases a module, they now receive a three-year helpline support service. The telephone support program provides them with access to a 1-800 hotline they can call 24 hours a day, 7 days a week for advice from a qualified statistician. In order to cover the costs of running the helpline, AEI increased their pricing on the modules by 10%. After three-years of support service, customers can decide to renew this service for another three years at the same price as included in the initial purchase package. As a result, AEI had sales of $1,430,000 this year, representing a 20% increase in their revenues compared to the prior year, making it was clear that the market liked the new feature and was willing to pay extra for it. Had the modules been sold without the support service, sales would only have been $1,300,000. At year-end, the full $1,430,000 was received and recognized as revenue for the year.
Module Nuclear

At the request of several clients, AEI started “Module Nuclear”, a project on the development of a module specifically for nuclear plants. There was a need for software that would analyze data coming from nuclear reactors in real time in order to continuously assess the reactors’ condition. The timeline related to this project is as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Work completed on project</th>
<th>Amount spent to date (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 2019</td>
<td>Project began</td>
<td></td>
</tr>
<tr>
<td>February 2019 – April 2019</td>
<td>Various algorithms were explored to determine which one would be best for nuclear plants</td>
<td>$30,000</td>
</tr>
<tr>
<td>April 2019 – July 2019</td>
<td>One algorithm was chosen and programming for the module was done</td>
<td>$50,000</td>
</tr>
<tr>
<td>July 2019 – August 2019</td>
<td>Testing of the module. The module often crashed as it needed to provide real-time analysis, 24-hours a day, and this was AEI’s first time creating a module that constantly refreshes</td>
<td>$5,000</td>
</tr>
<tr>
<td>August 2019 – October 2019</td>
<td>Continually testing different fixes to resolve the crashing issue. By mid-October, the programmers finally isolated the problem and developed a solution, which involved additional coding changes to the software. The changes were completed by the end of October.</td>
<td>$15,000</td>
</tr>
<tr>
<td>October 2019 – December 2019</td>
<td>Programming to link the module to the shell.</td>
<td>$20,000</td>
</tr>
</tbody>
</table>

The project team expects the module to be finished within the first three months of 2020. The budget for the remainder of the project is $30,000, $25,000 will be spent on testing the software with various sets of actual client data, and $5,000 will be used for advertising and hosting a client reception to unveil the new module. AEI has capitalized all expenses incurred on the project to date.
Genetic Network Module

AEI’s Genetic Network Module has been one of the company’s top 20 modules in terms of sales. The company spent approximately $240,000 in early 2018 on the development of this module, and has been amortizing it over its estimated useful life of three years. In 2019, a competitor, Beta Gamma Corporation (BGC) came up with a stand-alone software which is very similar to AEI’s module in terms of functionality. It can perform the data analysis in half the amount of time, although not with as much accuracy. When the BGC product came out, BGC offered to purchase AEI’s Genetic Network Module for $50,000. Since the introduction of the competitor software, AEI’s sales of the Genetic Network Module have declined by 90%. At the end of 2019, the net book value of the deferred R&D costs related to this project is $95,000.
MARKING GUIDE
ATOMIC EXCELLENCE INC.

To: Joel Cross
From: CPA
Subject: Atomic Excellence Inc. (AEI) memo

Attached is my memo outlining the risk assessment and materiality for this audit, as well as the analysis of the new accounting issues in 2019.

**CPA Mapping**
1.2.2 Evaluates treatment for routine transactions (Core 1 – Level A):
- Revenue recognition
- Intangible assets
- Impairment
4.3.5 Assesses the risks of the project, or for audit engagements, assesses the risk of material misstatement at the financial statement level and at the assertion level for classes of transactions, account balances, and disclosures. (Core 1 – Level B)
4.3.4 Assesses materiality for the assurance engagement or project (Core 1- Level B)

**Financial Reporting**

Module revenue

(The candidates should identify the new stream of providing telephone support as a revenue recognition issue, apply the relevant IFRS criteria, and conclude on the accounting treatment. Candidates should apply general revenue recognition criteria focusing only on the telephone support program. Candidates should also consider whether the sale of the module and the telephone support are distinct or should be combined.)

AEI offered a new service in relation with the licence of software (modules) in 2019. Customers now obtain a three-year telephone support program with every module they purchase. Anna has recognized all of the revenue related to the three-year telephone support program in the current year. However, step 2 of *IFRS 15 – Revenue from contracts with customers*, requires analyzing the promised goods and services in a contract with a customer to determine whether the promised goods and services are distinct or should be combined:

*IFRS 15.27:*

A good or service that is promised to a customer is distinct if both of the following criteria are met:

(a) the customer can benefit from the good or service either on its own or together with other resources that are readily available to the customer (i.e., the good or service is capable of being distinct); and
(b) the entity’s promise to transfer the good or service to the customer is separately identifiable from other promises in the contract (i.e., the promise to transfer the good or service is distinct within the context of the contract).

IFRS 15 provides further guidance to help assessing whether the criteria in 27 (a) and (b) are met:

IFRS 15.28:
A customer can benefit from a good or service in accordance with paragraph 27(a) if the good or service could be used, consumed, sold for an amount that is greater than scrap value or otherwise held in a way that generates economic benefits. For some goods or services, a customer may be able to benefit from a good or service on its own. For other goods or services, a customer may be able to benefit from the good or service only in conjunction with other readily available resources. A readily available resource is a good or service that is sold separately (by the entity or another entity) or a resource that the customer has already obtained from the entity (including goods or services that the entity will have already transferred to the customer under the contract) or from other transactions or events. Various factors may provide evidence that the customer can benefit from a good or service either on its own or in conjunction with other readily available resources. For example, the fact that the entity regularly sells a good or service separately would indicate that a customer can benefit from the good or service on its own or with other readily available resources.

IFRS 15.29:
In assessing whether an entity’s promises to transfer goods or services to the customer are separately identifiable in accordance with paragraph 27(b), the objective is to determine whether the nature of the promise, within the context of the contract, is to transfer each of those goods or services individually or, instead, to transfer a combined item or items to which the promised goods or services are inputs. Factors that indicate that two or more promises to transfer goods or services to a customer are not separately identifiable include, but are not limited to, the following:

(a) the entity provides a significant service of integrating the goods or services with other goods or services promised in the contract into a bundle of goods or services that represent the combined output or outputs for which the customer has contracted. In other words, the entity is using the goods or services as inputs to produce or deliver the combined output or outputs specified by the customer. A combined output or outputs might include more than one phase, element or unit.

(b) one or more of the goods or services significantly modifies or customises, or are significantly modified or customised by, one or more of the other goods or services promised in the contract.

(c) the goods or services are highly interdependent or highly interrelated. In other words, each of the goods or services is significantly affected by one or more of the other goods or services in the contract. For example, in some cases, two or more goods or services are significantly affected by each other because the entity would not be able to fulfil its promise by transferring each of the goods or services independently.
The modules are delivered before the telephone support program and remain functional without the telephone support, as deduced by the fact that in previous years, no telephone support was provided. Moreover, customers can benefit from the telephone support with the software licence (the modules) transferred at the start of the contract and the telephone support could be purchased separately. Thus, customers can benefit from the modules and the telephone support either on their own (for the modules) or together with the other good that is already available (for the telephone support) and as such, the criterion in paragraph 27 (a) of IFRS 15 is met.

The telephone support does not significantly modify or customize the modules and AEI is not providing a significant service of integrating the modules and the telephone support into a combined output. Furthermore, the modules and the telephone support do not significantly affect each other and, therefore, are not highly interdependent or highly interrelated. This is because AEI would be able to fulfil its promise to transfer the modules independently from its promise to subsequently provide the telephone support. Hence, the promise to transfer the modules and the service of the telephone support is separately identifiable from each other promise. Thus, the criterion in paragraph 27 (b) of IFRS 15 is met.

On the basis of this assessment, two performance obligations are identified:

1) The modules (the software licence); and
2) The telephone support.

Step 4 of IFRS 15, allocation of the transaction price, should also be considered.

IFRS 15.74:
To meet the allocation objective, an entity shall allocate the transaction price to each performance obligation identified in the contract on a relative stand-alone selling price basis in accordance with paragraphs 76–80, except as specified in paragraphs 81–83 (for allocating discounts) and paragraphs 84–86 (for allocating consideration that includes variable amounts).

IFRS 15.77:
The stand-alone selling price is the price at which an entity would sell a promised good or service separately to a customer. […]

IFRS 15.78:
If a stand-alone selling price is not directly observable, an entity shall estimate the stand-alone selling price at an amount that would result in the allocation of the transaction price meeting the allocation objective in paragraph 73. […]

IFRS 15.79:
Suitable methods for estimating the stand-alone selling price of a good or service include, but are not limited to, the following:

(a) Adjusted market assessment approach — an entity could evaluate the market in which it sells goods or services and estimate the price that a customer in that market would be willing to pay for those goods or services. […]
Using the adjusted market assessment approach, the stand-alone selling price of the modules could be estimated at $1,300,000. The observable stand-alone selling price of the telephone support is $130,000. As the total transaction price is also $1,430,000, no further calculation is required.

Lastly, step 5 of IFRS 15 needs to be considered in order to determine when the revenues related to the telephone support should be recognized.

IFRS 15.31:
An entity shall recognise revenue when (or as) the entity satisfies a performance obligation by transferring a promised good or service (i.e., an asset) to a customer. An asset is transferred when (or as) the customer obtains control of that asset.

IFRS 15.35:
An entity transfers control of a good or service over time and, therefore, satisfies a performance obligation and recognises revenue over time, if one of the following criteria is met:
(a) the customer simultaneously receives and consumes the benefits provided by the entity’s performance as the entity performs (see paragraphs B3–B4);
(b) the entity’s performance creates or enhances an asset (for example, work in progress) that the customer controls as the asset is created or enhanced (see paragraph B5); or
(c) the entity’s performance does not create an asset with an alternative use to the entity (see paragraph 36) and the entity has an enforceable right to payment for performance completed to date (see paragraph 37).

For the three-year telephone support program, the performance obligation is satisfied over time because the customer simultaneously receives and consumes the benefits of AEI’s performance (rendering available the telephone helpline). Hence, during three years, customers will be able to seek advice from a qualified statistician, 7 days a week, 24 hours a day.

IFRS 15.39:
For each performance obligation satisfied over time in accordance with paragraphs 35–37, an entity shall recognise revenue over time by measuring the progress towards complete satisfaction of that performance obligation. The objective when measuring progress is to depict an entity’s performance in transferring control of goods or services promised to a customer (i.e., the satisfaction of an entity’s performance obligation).

IFRS 15.41:
Appropriate methods of measuring progress include output methods and input methods. Paragraphs B14–B19 provide guidance for using output methods and input methods to measure an entity’s progress towards complete satisfaction of a performance obligation. In determining the appropriate method for measuring progress, an entity shall consider the nature of the good or service that the entity promised to transfer to the customer.
IFRS 15.B15: Output methods recognise revenue on the basis of direct measurements of the value to the customer of the goods or services transferred to date relative to the remaining goods or services promised under the contract. Output methods include methods such as surveys of performance completed to date, appraisals of results achieved, milestones reached, time elapsed and units produced or units delivered. [...].

Customers benefit from AEI’s telephone support evenly throughout the year (that is, customers benefit from having the helpline available, regardless of whether customers use it or not). Consequently, the best measure of progress towards complete satisfaction of the service of the telephone support is time-based measure. As such, AEI should recognize revenue allocated to the telephone support on a straight-line basis throughout the three-year period. For the first year, 2019, that means that revenue of $43,333 ($130,000 / 3 years = $43,333) should have been recognized instead of the whole $130,000. [Note: $130,000 is $1,430,000-$1,300,000.] Thus, the revenue are currently overstated by $86,667 ($130,000 - $43,333 = $86,667). Therefore, $86,667 should be removed from revenue, and the amount deferred and subsequently recognized evenly over the remaining two-year period. Note: Since the sales are even throughout the year, not all of the Year 1 support sales should be recognized. Candidates may defer another half a year, in which case the deferral would be $108,334 (($43,333 x 6/12) + $86,667).

Module Nuclear

(Candidates should identify that Module Nuclear went from the research phase to the development phase in 2019, and thus not all costs can be capitalized. They should apply the relevant IFRS criteria, and conclude on the accounting treatment. Candidates should apply the R&D deferred costs criteria and use the appropriate case facts. Candidates could also recognize that a portion of the planned costs in 2020 cannot be capitalized.)

Approximately $120,000 has been spent at year-end on Module Nuclear. This is an internally generated intangible asset, as AEI will be able to sell the module to various clients in the new year and thus will provide future economic benefit for AEI.

Costs for this project need to be separated into research costs, and development costs, as IAS 38 – Intangible assets does not allow the capitalization of research costs. Development costs can only be recognized when the following criteria have been met:

(a) the technical feasibility of completing the intangible asset so that it will be available for use or sale.
(b) its intention to complete the intangible asset and use or sell it.
(c) its ability to use or sell the intangible asset.
(d) how the intangible asset will generate probable future economic benefits. Among other things, the entity can demonstrate the existence of a market for the output of the intangible asset or the intangible asset itself or, if it is to be used internally, the usefulness of the intangible asset.
(e) the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset.

(f) its ability to measure reliably the expenditure attributable to the intangible asset during its development.

At the end of October 2019 was when all the above criteria were met. At that point, they have finished the programming of the module without any crashing when used. There is clearly a market for the product as several clients have requested this module. Given that AEI had net income of $550,000 ($463,333 considering the above adjustment on revenue recognition of the telephone support) in the current year, there are sufficient resources to finish the module. Therefore, all costs before that date cannot be capitalized, and $100,000 of costs will have to be expensed, as AEI has currently capitalized these costs.

In addition, it should be noted that the $5,000 of advertising and the client reception (expected to be incurred in 2020) cannot be capitalized, as IAS 38 paragraph 67 specifically prohibits “selling, administrative and other general overhead expenditure unless this expenditure can be directly attributed to preparing the asset for use”.

Genetic Network Module

(The candidates should identify that there is an impairment issue associated with the Genetic Network Module, apply the relevant IFRS criteria, and conclude on the accounting treatment. Candidates are expected to recognize the trigger for impairment and calculate the impairment amount based on the independent valuation. Candidates could also consider the fact that recoverable amount could also be calculated through value-in-use, but that it is unlikely that value-in-use would be higher than fair value less costs of disposal.)

AEI currently has deferred R&D costs related to the Genetic Network Module of $95,000. IAS 36 – Impairment of assets paragraph 9 requires that an entity “assess at the end of each reporting period whether there is any indication that an asset may be impaired. If any such indication exists, the entity shall estimate the recoverable amount of the asset.” There is an indicator of impairment at year-end as a competitor has come out with a similar product that can be faster while doing the same task. In addition, sales have decreased 90% in 2019 related to the product.

As there is an indicator of impairment, IAS 36 requires the entity to calculate the impairment loss, which is the amount by which the carrying amount of an asset or a cash-generating unit exceeds its recoverable amount. An asset’s recoverable amount is the higher of its fair value less costs of disposal and its value in use. The asset’s value in use (present value of future cash flows) has significantly declined as sales have decreased 90%. Therefore, the fair value less costs of disposal for the asset is likely higher. BGC offered $50,000 for the purchase of the module. Therefore, an impairment loss of $45,000 ($95,000 - $50,000) should be recorded in the financial statements.
Assurance

Risk of material misstatement

(The candidates should identify some risk factors that would support a higher risk assessment, and conclude on the overall risk of the audit. Candidates should discuss generic risks associated with a high-tech public company. Candidate could also consider the additional case facts that would confirm the generic risks, e.g., the Genetic Network Module was improved upon by a competitor, so the industry is highly competitive.)

I recommend that the risk of material misstatement for the AEI audit be assessed as high. The following are factors that support this assessment:

- AEI is a public company. This increases risk due to the increased number of users of the financial statements, and the pressure to increase earnings as stock price is often dependent on financial results.
- The software industry for scientists is extremely competitive. There are very few barriers to entry due to the low cost to start a software company. Clients will often switch software providers if another company can deliver the same analysis more quickly, or provide better analysis. For example, a software similar to the Genetic Network Module was offered by a competitor in early 2019, and it can perform the work in half the time. This increases risk.
- There have been several new transactions during 2019, including a new business model with the telephone support program component of sales, as well as expenditures made on Module Nuclear. This increases risk as they are new to AEI and they may not be familiar with how to account for these items.
- This is a new client for the firm. Although you have not noted any areas of concern in reviewing the prior year audit file, this increases risk, as we are not familiar with the client and their business. Therefore, we may not notice anomalies as it pertains to their industry.
- There have been several accounting errors noted with the treatment of accounting issues, as noted above. This increases the risk of material misstatement, as there may be additional errors in the financial statements.

Materiality

(Candidates should calculate materiality and discuss related implications. Candidates should calculate materiality on original net income or only include one or two accounting issues. Candidates could also consider the performance materiality, or the fact that a decreased materiality has implications on the amount of testing to be performed.)

Given that this is a public company, the main users of the financial statements would be the shareholders of the company. Thus, they will be mainly interested in the profitability of the company. Therefore, profit before tax would be the most appropriate benchmark for the
calculation of materiality. For profit-oriented entities, 5% is a common percentage to apply to profit before taxes to determine materiality.

However, there have been some accounting issues that have not been considered in the preliminary profit before taxes. Therefore, these adjustments should be included:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary profit before taxes</td>
<td>$550,000</td>
</tr>
<tr>
<td>Less: Revenue related to the telephone support program</td>
<td>(86,667)</td>
</tr>
<tr>
<td>Less: Module Nuclear R&amp;D costs</td>
<td>(100,000)</td>
</tr>
<tr>
<td>Less: Impairment of Genetic Network Module</td>
<td>(45,000)</td>
</tr>
<tr>
<td>Adjusted profit before taxes</td>
<td>318,333</td>
</tr>
<tr>
<td>Materiality @ 5%</td>
<td>5%</td>
</tr>
<tr>
<td>Planning materiality</td>
<td>$15,917</td>
</tr>
</tbody>
</table>

Therefore, planning materiality should be set at $15,917.

In addition, we should consider performance materiality for individual account balances, to ensure that the aggregate of uncorrected and undetected misstatements does not exceed materiality for the financial statements as a whole. Performance materiality is subject to professional judgment, but is typically set at around 70%. I recommend performance materiality be lower than this for AEI, based on the fact that this is a new client for us, so we have limited understanding of the entity and limited experience, as we have not performed the prior year audits. In addition, the overall risk assessment is high, so a lower performance materiality is appropriate. The lower performance materiality could be applied to line items of higher risk, such as revenue and R&D costs, as we have already identified several errors in the accounting.

The decrease in materiality will impact the amount of work we will need to perform, as additional testing will be required. We should plan to increase the amount of fieldwork time to ensure we can complete the audit within the required public company reporting deadlines.