Microtech B.V.
NL National Audit & Assurance exam - 30 June 2020

This example is based on the national exams in The Netherlands. This exam is (almost) the last exam prior to graduation for the theoretical part of the audit education. Besides, students need to pass the practical part of their education to become a Dutch chartered accountant.

The full exam lasted one day, including 2 parts of 3 hours.

Credit score:

Question 1: 8 points
Question 2: 12 points
Question 3: 10 points
Question 4: 10 points
Question 5: 10 points

Question 6: 15 points
Question 7: 10 points
Question 8: 5 points
Question 9: 10 points
Question 10: 10 points

Total number of points: 100 points

For any questions, please contact the authors.

Microtech B.V.

General

Microtech B.V. ('Microtech') manufactures advanced microscopes and accessories, such as slide holders, cameras, filters and analytical software. Given its very technological nature, Microtech's head office is on the High Tech Campus Eindhoven. Most of Microtech's customers are based abroad, mainly in the United States and Japan. The micro-technological market has high quality standards and the accuracy and reliability of results are important. The market consists of the material sciences market and the market for microscopes for knowledge institutions. Microtech operates in both sectors.

The material sciences market is made up of manufacturers that incorporate chips in their products. These customers use Microtech's microscopes for reliable, high-speed testing of the quality of the chips. As a result, it is essential that the microscopes these customers purchase always provide the same measurements, and so the microscopes and accessories have to be built to standard specifications using identical materials, suppliers, building and testing methods, etc. every time. Customers in the material sciences market generally place orders for batches of 20 to 30 microscopes.

The market for microscopes for knowledge institutions is made up of universities, universities of applied sciences and other scientific institutions. These customers buy individual microscopes for use in scientific research. Prestige plays a major role for these customers. The microscopes have frequently been used in research that has led to Nobel Prizes. Microscopes in this market are tailor-made for each customer.

Organization

Microtech is a large unlisted company with 700 employees and a world-wide revenue of €375 million. The company has two manufacturing sites. The site in the Netherlands is for customized manufacturing of microscopes for knowledge institutions and the site in Slovakia produces higher volumes for the material sciences market. The majority of the shares are currently held by the Labor family. In early 2000, Mr Labor transferred his shares to his three children, each of whom owned one-third of the shares at the end of 2018. In 2019, they jointly sold 25% of all the issued shares to a private-equity company, after which each child held 25% of the shares. The children intend to sell their remaining shares during 2020, possibly to the private-equity company.

Microtech is managed by a two-member Executive Board. The CEO/COO is responsible for overall strategy, customer acquisition, marketing and operations. The CFO is responsible for accounting and reporting, IT and HR. Neither member of the Executive Board is a member of the Labor family.

There is a management team which reports to the Executive Board. The team consists of eight people who run the following departments: Sales and Marketing, Purchasing, Manufacturing, Warehousing and Logistics, Planning and Operations, Product Development, Back-office and Quality Control. Microtech also has a Supervisory Board.

The Back-office department includes Personnel, Finance and IT. The Finance department is responsible for periodic reports, analyses and financial costings. Internal control of the processes is also part of the Back-office.

There is a large IT department since Microtech uses NANO, a fully-integrated customized ERP application managed and upgraded in-house by the IT department. Microtech issues a new release incorporating both minor and major changes each month. This is a carefully controlled process that allows the functionality in NANO to keep pace with the needs of the business. The application is used by all of Microtech's sites and departments. Where possible, suppliers and service providers are linked to the application to ensure a high degree of process integration. The ERP application includes modules for manufacturing, production planning and purchasing, CAD/CAM[1] (technical drawing, design and manufacturing management programs), logistics planning and financial records.

Microtech has uniform product specifications and standard costs for all products for the material sciences market. The specifications include costed bills of materials and the machine and labour hours for each product. The standard cost includes the standard purchase price for materials and costed rates for machine and labour hours. The product specifications also show the general ledger account number where each amount has to be recorded. Since materials prices fluctuate sharply, NANO updates the standard purchase prices each month using the most recent purchase prices. Personnel/HR calculates the labour-hour rates for costings and Operations is responsible for setting the machine-hour rates each year. The quantities of finished goods are updated in the inventory records and then automatically recorded in the general ledger in NANO using the standard costs in the product specification. Coverage accounts are automatically credited based on the standard costs per unit produced. At the same time, the quantities of materials used are charged to the inventory records and recorded automatically in the general ledger. Hours are also automatically charged to the production costs accounts based on the costed rates.

The financial statements are prepared in accordance with Part 9 of Book 2 of the Netherlands Civil Code and Dutch Accounting Standards. The draft figures are as follows:

[1] Computer-aided design and computer-aided manufacturing

Balance sheet at 31 December

	2019		2018	
	EUR'000	EUR'000	EUR'000	EUR'000
Fixed assets				
Intangible fixed assets	**58.000**		33.000	
Tangible fixed assets	**41.900**		45.000	
Financial fixed assets	**100**		-	
		100.000		78.000
Current assets				
Inventories (incl. work in progress)	**30.000**		28.000	
Construction projects	**38.000**		34.000	
Receivables	**50.000**		45.000	
Cash and cash equivalents	**95.000**		205.000	
		213.000		312.000
		313.000		390.000
Group equity*		**100.000**		195.000
Provisions		**14.000**		13.000
Non-current liabilities		**85.000**		90.000
Current liabilities		**114.000**		92.000
		313.000		390.000

* A dividend of €216 million was paid in 2019 before the share transaction.

Income statement

	2019		2018	
	EUR'000	**EUR'000**	EUR'000	EUR'000
Income statement				
Revenue	**370.000**		345.000	
Other operating income	**5.000**		7.000	
Total operating income		**375.000**	-	352.000
Cost of raw materials and consumables	**25.000**		20.000	
Work sub-contracted and other external charges	**104.000**		110.000	
Wages and salaries	**48.800**		45.000	
Social security and pension charges	**12.000**		11.250	
Depreciation and amortization	**20.000**		16.000	
Other changes in value of tangible and intangible fixed assets	**-**		-	
Other operating expenses	**500**		650	
Total operating expenses		**210.300**		202.900
Operating profit		**164.700**		149.100
Interest and similar income	**100**		150	
Interest and similar expense	**3.800**		4.000	
		3.700		3.850
Profit before tax		**161.000**		145.250
Tax		**40.000**		35.000
Profit after tax		**121.000**		110.250

Question 1 (8 marks)

Audit firm 007 ('007') audited and issued unqualified independent auditor's reports on the 2017 and 2018 financial statements. You are 007's external auditor for this engagement. Ahead of the 2019 financial statements audit, the audit team, which includes some new members, discuss the materiality limit to be set. What quantitative and qualitative matters do you take into account when determining the materiality and performance materiality for the 2019 financial statements and based on them, which amounts do you regard as appropriate for both?

The Back-office department provides regular management information to the Executive Board and the management team. Key subjects in the monthly management information are:

- The balance sheet, income statement and cash flow statement.
- Revenue and margins for each product category and market compared with the budget and prior-year figures.
- Progress and expected results on each project in progress (cumulative and compared with the preceding period and the project budget).
- Process-related information, including information on waste and failures, and quality control for the manufacturing process for the material sciences market (continuous monitoring of standards).
- Variance analyses for efficiency and capacity utilization in manufacturing for the material sciences market.
- Analyses of price variances for purchasing, purchase discounts, inventory levels and actual employee costs compared with budgeted employee costs.

Question 2 (12 marks)

Describe how the auditor can use the various elements of this management information in each stage of the audit process and the conditions that apply to this.

Material Sciences

For a long time, four standard types of microscope - Io, Europa, Ganymede and Callisto - have been produced for this market. The manufacturing processes for these series have been standardized as far as possible with fixed manufacturing methods for each. Products are manufactured for inventory. There are significant differences in manufacturing methods, working methods, materials and the use of people and machinery between the types of microscope.

Manufacturing has two stages. The first stage is building the microscope, which mainly involves labour hours and materials. This stage is structured using fixed product specifications (which set out the type and quantity of materials), assembly protocols and working methods. This first stage of building a microscope lasts four weeks.

The second stage is intensive calibration of the microscope by performing tests of accuracy. This stage lasts four to eight weeks, depending in part on the realized quality level of the building stage.

Knowledge institutions

Manufacturing for knowledge institutions takes place in the Netherlands. Microscopes for this market are built specifically for each customer. The technology requested by the customer has often not been fully perfected yet by the Product Development department at the time of the request.

The microscopes are constructed iteratively, alternating building and testing. As a rule, this takes one to two years. Building is according to product specifications agreed with the customer and these are different for each microscope. Rapid technological development means that product specifications are often altered at a later stage of construction. Products are delivered when the company's testing shows that the specifications agreed in the contract with the customer have been met.

The notes to the financial statements include the following accounting policies:

- *'Work in progress' is measured at cost of manufacture using average prices consisting of the cost of raw materials and consumables and other costs directly attributable to manufacture.*
- *'Construction projects' comprise the net amount of realized contract costs, attributed profit, recognized losses and billed instalments. Profits on construction projects are recognized by reference to the stage of completion of the contract activity (percentage of completion method). The stage of completion of a contract is determined as the proportion that contract costs incurred for work performed to date bear to the estimated total contract costs. Losses are immediately recognized as an expense.*

The notes on work in progress also state:
Inventories included a net amount of work in progress of €20.6 million at 31 December 2019 (31 December 2018: €18.9 million).

Question 3 (10 marks)
In its financial statements, Microtech classifies material sciences orders as work in progress (covered by RJ 220) and specific orders for knowledge institutions as construction projects (covered by RJ 221). Based on its insights of the entity and its environment, including the internal controls, 007 classifies the internal control system as adequate.

Explain with reasons the risks of a material misstatement you have identified with respect to work in progress and construction projects and relate them to the relevant assertions.

Question 4 (10 marks)
Describe the audit procedures for the risks identified in question 3 with respect to both items.

Question 5 (10 marks)
007's audit procedures show that 100% of the profit on some major projects for knowledge institutions had already been recognized on the reporting date although testing of whether the specifications had been met was not performed until after the reporting date. What are 007's considerations with respect to this finding, and what additional procedures will 007 decide on?

The standard costs have not been automatically updated for changes in the purchase price of the materials since the NANO release at the end of July 2019. The Finance department discovered this in October's monthly reporting as there were considerable favourable price variances on items for which the purchase price had fallen. The IT department could not immediately discover the reason why the standard costs were not being updated, and so it was decided that Operations would manually enter the new standard costs each month from then on.

During the audit procedures related to the 'Materials price variances' general ledger account, the auditor noted the price variances recorded in October 2019. On asking about this, the auditor was told about the

problems that had arisen following the release at the end of July 2019. The auditor also discovered that hourly labour rates had not been updated in the costings for some time.

Question 6 (15 marks)
What audit procedures will 007 have to perform and what will 007 report to those charged with governance as a result of these findings?

The Product development department is responsible for developing new technologies and incorporating them in commercial products. These may be completely new microscopes, new accessories or development of the functionality of existing microscopes.

The notes on development costs (part of intangible assets) state:

- *'Development costs' are capitalized to the extent that they relate to commercially viable technologies. Development costs are measured at cost of production less accumulated amortization and impairment. Straight-line amortization is applied from the time that sales of microscopes that use this technology start. Research costs and other costs of development are charged to the income statement in the period in which they are incurred.*

The note on movements in this item is as follows:

	Development costs	Total Intangible fixed assets
	EUR '000	EUR '000
Balance at 1 January 2019		
Cost of production	50.000	50.000
Accumulated amortization	-17.000	-17.000
Carrying amount	33.000	33.000
Movements in carrying amounts:		
Additions	37.000	37.000
Amortization	-12.000	-12.000
Net	25.000	25.000
Balance at 31 December 2019		
Cost of production	87.000	87.000
Accumulated amortization	-29.000	-29.000
Carrying amount	58.000	58.000

007 has identified a risk of a material misstatement with respect to the existence and valuation of capitalized development costs. 007 determines a significant risk which requires special attention during the audit. The main concern is that management bases the valuation on a complex estimate involving a high degree of subjectivity.

Question 7 (10 marks)
Describe the audit procedures that 007 will perform related to this risk.

Microtech has two warehouses where it stores the standard microscopes and accessories. The microscopes and accessories are stored separately in the warehouses. Proper storage conditions are crucial since microscopes are very sensitive to external factors such as vibration and humidity. The warehouses are equipped for this, but the space available is limited and so Microtech has stored a material part of its inventories at a third party.

During the planning phase 007 decided to ask for third-party confirmation of these inventories. 007 has noted differences between the quantities in the inventory confirmed by the third party and the quantities in Microtech's inventory records.

Question 8 (5 marks)
What additional audit procedures will 007 perform to obtain sufficient appropriate audit evidence on the existence of the inventories held at third parties?

The purchase of materials is centralized in the Netherlands. Microtech purchases from regular suppliers for material sciences manufacturing. As exact conformity and quality of materials is required, there are long-term contracts precisely defining the standards for the materials. Fixed annual discounts based on the quantities taken have been agreed with the fifty largest suppliers.

Materials for the manufacturing of microscopes for knowledge institutions are usually purchased from regular suppliers, but since materials for these microscopes are often specific, there are also frequent one-off purchases from suppliers operating in specialized niche technologies.

The quality of the materials supplied is essential for both markets. Sometimes the quality of one-off supplies is not adequate.

During the 2018 balance sheet audit, Microtech received a claim from a customer who was unhappy about the quality of a material sciences product that had been supplied. When finalizing the 2018 financial statements, management's view was that this claim would not have a material impact on the financial statements. Consequently, it was not disclosed (in the figures or notes) in the 2018 financial statements and 007 paid limited attention to it during the 2018 audit. As noted above, 007 issued an unqualified independent auditor's report on the 2018 financial statements. The claim was settled in 2019 for an amount well above the materiality limit set for the financial statements in 2018 and 2019. Several complaints were received from other material sciences customers during 2019 and 2020. One of the new 007 team members believes that this is a deficiency in the previous financial statements and that correction of an error is needed. The engagement manager is in doubt.

Question 9 (10 marks)
What audit procedures will 007 perform to decide whether or not there is a material error that needs to be corrected?

Question 10 (10 marks)
What audit procedures will 007 perform during the 2019 financial statements audit with respect to the claims and complaints received in 2019 and 2020?