

Introduction to accounting

Handout

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Last edited: 2020.09.08.

Preface

Introduction to accounting incorporates two courses: the related lecture and the seminar. The aim of the courses is to entitle the students with the knowledge of the most important terms of accounting and to introduce the bookkeeping of basic economic events. This handout presents introductory parts to the topics, provides case studies for learning purposes and also includes sample tests and exams.

Lecturer: Zsuzsanna KOVÁCS

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Course information

Course title: INTRODUCTION TO ACCOUNTING

Course code:
60A306 Lecture
60A307 Seminar

Credit: 6

Type: lecture and seminar

Contact hours / week: 2+2

Evaluation: Lecture: exam mark (five-grade), Seminar: practical course mark (five-grade)

Semester: 3rd

Prerequisites: Basic management knowledge

Learning Outcomes

a) regarding knowledge, the student

- knows the financial accounting information system: functions and structure*
- knows the process of income and cost measurement*
- knows the content and system of financial statements*

b) regarding competencies, the student

- is capable of describing and interpreting economic events*
- is capable of editing accounting entries and applying the basic rule of double-entry bookkeeping*
- is capable of grasping the accounting tasks occurring during a financial year (opening and closing)*
- composes financial statements (balance sheet and income statement) from bookkeeping data*

c) regarding attitude, the student

- is capable of critical evaluation of accounting data*
- is devoted to performing high quality work in the field of accounting*

d) regarding autonomy, the student

- works individually in the field of accounting with responsibility*
- prepares and presents accounting-related tasks and projects*

Requirements

For the seminar (60A306): the practical course mark (five-grade) is based on the results of the two mid-term tests written during the semester. Opportunity to retake mid-term test: once at the end of the semester. ***60% of the points have to be collected in order to pass.***

Only those students who had passed the seminar (have grade „2“ or better) may take the lecture exam.

For the lecture (60A306): written lecture exam during the examination period. Questions will cover the material of both the lecture and the seminar.

60% of the points have to be collected in order to pass.

Class attendance is not compulsory but recommended as well as continuous (weekly) studying and practicing during the semester.

Grading

- | |
|---|
| <ul style="list-style-type: none">• 0-59%: fail• 60-69%: pass• 70-79%: satisfactory• 80-89%: good• 90-100%: excellent |
|---|

Course topics

The students will acquire knowledge about the basic idea, segments and features of the accounting information system; stakeholders and their information needs; the branches of accounting will be introduced. Students will be informed about the most important terms and definitions in bookkeeping: assets and liabilities, equity. The core of the financial statements, the balance sheet. Economic events and their effects on the balance sheet. The skills acquired during the course includes bookkeeping and composing the profit and loss statement. Adjusting entries: accruals in accounting, theory and practice. The structure of financial statements and the cycle of accounting and reporting are also processed leading the students to be devoted to performing high quality work in the field of financial reporting with responsibility.

Topic 1. The role of accounting and accounting information systems.

Learning outcome of the topic:

The students will learn the definition, function and purpose of accounting. They will be informed about the stakeholder groups and their features. The different branches of accounting – financial and managerial – are also introduced and discussed as well as the structure of accounting information systems.

Introduction to Topic 1.

Each *business entity* (companies, firms) operates in an environment that is full of parties (people, other entities, institutions), which are somehow affected by them. We call these interested parties *stakeholders*¹. Stakeholders have a special role in the life of entities: they require information on how the firms are governed, how effective they are in meeting their strategic goals and how much resources they own. *Accounting* provides a special tool for communication with the stakeholders. *Financial accounting* may be viewed as a communication channel with external stakeholders, while *managerial accounting* collects relevant data for internal decision makers. During this course, we concentrate on the basics of financial accounting.

The main focus of this area is financial-economic information, but today, more and more entities publish non-financial statements. However, traditional accounting information systems are tailored to provide financial information to stakeholders in the form of a *financial statement* (annual reports)². These statements help the stakeholders (primarily investors and creditors) to collect the necessary information to make their financial decisions (e.g., to buy or sell the shares of the respective companies). Financial information usually covers financial performance (profit or loss), the resources owned and liabilities incurred by the entities, along with stakeholder's equity (financial position). Stakeholders can use the data to evaluate the firms and to make estimations about future performance or cash flows. In order to be able to compare the financial statements of several entities, the information presented and disclosed by the reporting units needs to be comparable. To ensure comparability, there are accounting regulations and/or standards³ providing a framework for financial accounting.

¹ Try to list the most important stakeholders!

² Look up the latest financial statements of the manufacturer of your favourite brand!

³ Look up what the IFRS Foundation does! Search the internet!

Topic 2. The Balance Sheet.

Learning outcome of the topic:

The students will learn about the accounting equation: defining assets, liabilities and equity. They will be informed about the recognition criteria. The most important outcome is to be able to prepare a classified balance sheet and to distinguish between short-term and long-term items.

Introduction to Topic 2.

The Balance Sheet is also called the Statement of Financial Position: it is a part of financial statements recording the assets of the entity and the claims against those assets held at a certain date (effective/key date). It has a specific format and contains summarized data in monetary units. By reading the Balance Sheet of an entity, you will be able to tell how much economic resources they own. We call these economic resources *assets*, which are held by the companies with the purpose of collecting economic benefits in the future. Assets form the property of the entities and can take many forms, for example real estate, inventories, property rights or cash. Accounting standards usually require a distinction between short-term assets (current assets) and long-term assets (fixed assets) based on how long they serve the needs of the reporting entity.

By reading the Balance Sheet, you will also find out the *claims against the assets* of the unit. These claims are the *liabilities* owed to third parties and the *shareholder's equity*. Liabilities, similarly to assets are categorized in short-term and long-term classes based on their maturity dates. There is a basic assumption in accounting: the value of assets (economic resources) possessed by an entity is equal to the amount of claims against those assets. This axiom is called the accounting equation and it is very visible in the Balance Sheet, if we list the assets on one side and the claims against those assets on the other side, the totals of both sides will be equal. This is because the two sides represent the same amount only based on different logic (1. in what forms property serves the needs of entities – assets and 2. how it is financed – liabilities and equity).

Accounting standard-setters place great emphasis on setting specific recognition criteria: criteria defining which items can be included in the balance sheet and which ones are excluded (rules to tell which items become ASSETS or LIABILITY or EQUITY). Today, in our knowledge economy there are many items which represent underlying resources for firms but are not reported on the Balance Sheets because they fail to meet general recognition criteria (for example human resource, some innovations or organizational culture)⁴.

⁴ Could you guess why is that?

Seminar 1-2.

Task 1.

Put a mark for each item to the right column!

| Items | Fixed Asset | Current Asset | Equity | Long-term liability | Short-term liability |
|--|-------------|---------------|--------|---------------------|----------------------|
| Finished products | | | | | |
| Bank loan (due in 5 years) | | | | | |
| Capital stock | | | | | |
| Accounts receivable | | | | | |
| Raw material | | | | | |
| Intellectual property rights | | | | | |
| Trading Securities | | | | | |
| Cash | | | | | |
| Merchandise | | | | | |
| Wages payable | | | | | |
| Loans (payable in 6 months) | | | | | |
| Goods in process | | | | | |
| Real estate | | | | | |
| Vehicles | | | | | |
| The entity provided loans to third parties (receivable in 2 years) | | | | | |
| Bank account | | | | | |
| Accounts payable | | | | | |
| Retained earnings | | | | | |
| Other Receivables (3 months) | | | | | |
| Long-term bank deposit | | | | | |
| Social security payable | | | | | |
| Software | | | | | |
| Customer deposits | | | | | |
| Tax payable | | | | | |
| Operational credits (payable in 3 months) | | | | | |

Task 2.

How much **equity** does X Ltd. have if it controls the following items: accounts payable 2 000 000 HUF, accounts receivable 4 000 000 HUF, wages payable 1 000 000 HUF, and the bank account has 8 000 000 HUF?

Task 3.

The items of Monday company are the following on 1st January, 20X4 (data in HUF):

Bank account: 4 500 000, 1 900 000 has been provided as a loan to another firm for 3 years in 20X3, accounts payable: 900 000, wages payable: 1 800 000, raw material: 500 000, operational credits: 1 500 000, accounts receivable: 700 000, tax payable: 900 000, negotiable bonds: 500 000, real estate: 1 000 000, Bank loans: 2 000 000.

Questions:

1. *How much equity and liability does the company have?*
2. *How much resources does the company own?*
3. *What is the amount of the current liabilities and how can these be settled?*

Task 4.

The items of Tuesday company are the following on 1st January, 20X4 (data in HUF):

Raw material: 35 000 000, notes payable: 5 000 000, cash: 4 000 000, stock capital: 270 000 000, long-term bank loan: 12 000 000, goods in process: 16 000 000, accounts payable: 50 000 000, PP&E in-process: 28 000 000, accounts receivable: 85 000 000, wages payable: 15 000 000, finished goods: 30 000 000, notes receivable: 20 000 000, tax payable: 31 000 000, merchandise: 32 000 000, real estate: 70 000 000, retained earnings:, bank account: 50 000 000, short-term loans payable: 40 000 000, intangibles: 30 000 000, technical equipment: 50 000 000, social security payable: 3 000 000, securities held for sale 5 000 000, other long term liabilities: 15 000 000, shares (held as investment): 15 000 000.

Questions:

1. *How much current assets does the company own?*
2. *How much equity does the company own?*
3. *How much does the company owe to other parties?*
4. *How much resources does the company own?*

Task: Create the balance sheet of the company!

| |
|----------------|
| Task 5. |
|----------------|

Is the situation possible?

- a) value of equity equals the value of assets.
- b) value of equity is less than the value of assets.
- c) value of equity is more than the value of assets.
- d) value of current assets is equal to the value of total resources.
- e) value of assets is more than the value of liabilities.
- f) value of assets is less than the value of liabilities.
- g) value of economic resources is more than the value of claims against assets.
- h) value of assets is more than the value of claims against assets.
- i) value of liabilities is more than the value of equity.
- j) value of inventories is more than the value of current assets.
- k) value of inventories is more than the value raw materials.
- l) value of fixed assets is less than the value of PP&E assets.
- m) value of fixed assets is less than the value of current assets.

Worksheets

.....

| ASSETS | Value | CLAIMS A.A. | Value |
|---------------------------|-------|------------------------|-------|
| FIXED ASSETS | | EQUITY | |
| Intangible assets | | | |
| | | | |
| | | | |
| | | | |
| PP&E assets | | PROVISIONS | |
| | | LIABILITIES | |
| | | Subordinated debt | |
| | | Long-term liabilities | |
| Financial investments | | | |
| | | | |
| | | | |
| | | | |
| CURRENT ASSETS | | | |
| Inventories | | Short-term liabilities | |
| | | | |
| | | | |
| | | | |
| | | | |
| Receivables | | | |
| | | | |
| | | | |
| Securities | | | |
| | | | |
| | | | |
| Cash and cash equivalents | | | |
| | | | |
| | | | |
| Total assets | | Total claims a.a. | |

| | | | |
|---------------------------|-------|------------------------|-------|
| ASSETS | Value | CLAIMS A.A. | Value |
| FIXED ASSETS | | EQUITY | |
| Intangible assets | | | |
| | | | |
| | | | |
| | | | |
| PP&E assets | | PROVISIONS | |
| | | LIABILITIES | |
| | | Subordinated debt | |
| | | Long-term liabilities | |
| Financial investments | | | |
| | | | |
| | | | |
| | | | |
| CURRENT ASSETS | | | |
| Inventories | | Short-term liabilities | |
| | | | |
| | | | |
| | | | |
| | | | |
| Receivables | | | |
| | | | |
| | | | |
| Securities | | | |
| | | | |
| | | | |
| Cash and cash equivalents | | | |
| | | | |
| | | | |
| Total assets | | Total claims a.a. | |

| | | | |
|---------------------------|-------|------------------------|-------|
| ASSETS | Value | CLAIMS A.A. | Value |
| FIXED ASSETS | | EQUITY | |
| Intangible assets | | | |
| | | | |
| | | | |
| | | | |
| PP&E assets | | PROVISIONS | |
| | | LIABILITIES | |
| | | Subordinated debt | |
| | | Long-term liabilities | |
| Financial investments | | | |
| | | | |
| | | | |
| | | | |
| CURRENT ASSETS | | | |
| Inventories | | Short-term liabilities | |
| | | | |
| | | | |
| | | | |
| | | | |
| Receivables | | | |
| | | | |
| | | | |
| Securities | | | |
| | | | |
| | | | |
| Cash and cash equivalents | | | |
| | | | |
| | | | |
| Total assets | | Total claims a.a. | |

Solutions

Task 2.

Balance Sheet, X. Ltd., 20XX.01.01. (1 000 HUF)

| Assets | Value | Claims a.a. | Value |
|---------------------------|--------|--------------------------|--------|
| FIXED ASSETS | | EQUITY | 9 000 |
| Intangible assets | | | |
| | | | |
| PP&E assets | | PROVISIONS | |
| | | LIABILITIES | |
| Financial investments | | Subordinated liabilities | |
| | | Long-term liabilities | |
| CURRENT ASSETS | | | |
| Inventories | | Short-term liabilities | |
| | | - accounts payable | 2 000 |
| Receivables | | - wages payable | 1 000 |
| - accounts receivable | 4 000 | | |
| Securities | | | |
| | | | |
| Cash and cash equivalents | | | |
| - bank account | 8 000 | | |
| TOTAL ASSETS | 12 000 | TOTAL CLAIMS a.a. | 12 000 |

Task 3.

Balance Sheet, Monday Ltd., 20X4.01.01. (1 000 HUF)

| ASSETS | VALUES | CLAIMS a.a. | VALUE |
|---------------------------|--------|------------------------|-------|
| FIXED ASSETS | 2 900 | EQUITY | 2 000 |
| Intangible assets | 0 | | |
| | | | |
| PP&E assets | 1 000 | PROVISIONS | 0 |
| - real estate | 1 000 | LIABILITIES | 7 100 |
| Financial investments | 1 900 | Subordinated debt | 0 |
| - provided loans | 1 900 | Long term liabilities | 2 000 |
| CURRENT ASSETS | 6 200 | - Bank loans | 2 000 |
| Inventories | 500 | Short term liabilities | 5 100 |
| - raw material | 500 | - accounts payable | 900 |
| Receivables | 700 | - wages payable | 1 800 |
| - accounts receivable | 700 | - operational credit | 1 500 |
| | | - tax payable | 900 |
| Securities | 500 | | |
| - negotiable bonds | 500 | | |
| Cash and cash equivalents | 4 500 | | |
| - bank account | 4 500 | | |
| TOTAL ASSETS | 9 100 | TOTAL CLAIMS a. a. | 9 100 |

Task 4.

Balance Sheet, Tuesday Ltd., 20X4.01.01. (1 000 HUF)

| ASSETS | VALUE | CLAIMS a.a. | VALUE |
|---------------------------|---------|-------------------------------|---------|
| FIXED ASSETS | 193 000 | EQUITY | 299 000 |
| Intangible assets | 30 000 | Stock capital | 270 000 |
| PP&E assets | 148 000 | Retained earnings | 29 000 |
| - in-process PPE | 28 000 | | |
| - real estate | 70 000 | | |
| - technical equipments | 50 000 | PROVISIONS | 0 |
| Financial investments | 15 000 | LIABILITIES | 171 000 |
| - shares | 15 000 | Subordinated debt | 0 |
| | | Long-term liabilities | 27 000 |
| CURRENT ASSETS | 277 000 | - Bank loan | 12 000 |
| Inventories | 113 000 | - Other long term liabilities | 15 000 |
| - raw material | 35 000 | | |
| - goods in process | 16 000 | | |
| - finished goods | 30 000 | | |
| - merchandise | 32 000 | | |
| | | Short term liabilities | 144 000 |
| Receivables | 105 000 | - notes payable | 5 000 |
| - accounts receivable | 85 000 | - accounts payable | 50 000 |
| - notes receivable | 20 000 | | |
| Securities | 5 000 | - Wages payable | 15 000 |
| - securities for sale | 5 000 | - tax payable | 31 000 |
| Cash and cash equivalents | 54 000 | - short term loans | 40 000 |
| - cash | 4 000 | - social security | 3 000 |
| - bank account | 50 000 | | |
| TOTAL ASSETS | 470 000 | TOTAL CLAIMS a.a. | 470 000 |

Topic 3. Bookkeeping

Learning outcome of the topic:

The students will learn about bookkeeping: definition, function and forms of bookkeeping and T-accounts. They will be informed about asset and liability accounts. The most important outcome is to be able to post basic and complex economic events, and to compute balances and turnovers. The general ledger and the general journal are also introduced and discussed as well as synthetical and analytical accounting.

Introduction to Topic 3.

In accounting, the financial year is the cycle of reporting. During the financial year, *bookkeeping* is the dynamic system for processing transactions. These transactions are formalized in this handout as economic events that occur during the operating process which can be expressed in economic units and are verifiable. The events trigger changes in assets, liabilities, and/or equity of the business by resulting in an entry in the accounting information system. The changes need to be verified, processed and recorded. Verification happens with the help of evidences which are documents supporting an entry (for example an invoice, payroll or contract). Processing involves accounting personnel determining the monetary value attached to the event and also specifying which items of the financial statements are affected and how (increase or decrease). Recording occurs with the help of *accounts*: tools for recording economic events under determined rules (double-sided records of debit-credit entries).

- Recording on the left side of an account: *Debit entry*.
- Recording on the right side of an account: *Credit entry*.
- Sum of the debit entry values during a period is the *Debit Turnover* (DT).
- Sum of the credit entry values during a period is the *Credit Turnover* (CT).
- Difference of actual Debit turnover and Credit turnover: *Balance* of an account.
 - Debit Balance if $DT > CT$
 - Credit Balance if $DT < CT$

During bookkeeping, the *basic rule of double-entry bookkeeping* needs to be followed: each economic event induces an entry with at least two accounts with the same amount recorded on the debit and credit sides. This rule helps us to avoid some mistakes (for example increasing or decreasing two assets in an entry) but does not prevent every type of accounting failure. Today, bookkeeping generally happens with the help of accounting software or even integrated information systems like enterprise resource planning systems⁵. But even in that case, processes are not fully automatized and sometimes mistakes happen. When accounting mistakes are discovered, cancellation entries are applied to neutralize their effects to bring the books to balance.

There are two forms of bookkeeping which carry the same content but organize the data based on different logic. These two forms are *chronological bookkeeping* and *ledger-type bookkeeping*. The former means recording the events in a chronological order in the *general journal*, which is a good start for bookkeeping purposes as it gives a clear picture about the

⁵ Look up some famous ERP systems on the internet!

transactions that occur during a specific period. However, when it comes to preparing financial statements, we need information that is organized in order to support that. Ledger-type bookkeeping is just perfect for that as it involves recording the economic events on the respective ledger accounts (accounts representing an item in the Balance Sheet or Income Statement). The *general ledger* itself is a registry of each account necessary to compose the financial statements. Ledger-type bookkeeping provides the up-to-date balances for the ledger accounts.

Seminar 3.

CASE STUDY

The opening accounts of the „Beginner“ Ltd for 20X4 are the following (€):

Assets: PP&E assets: 40 000, Raw material: 5 000, Merchandise: 500, Finished goods: 7 000, Accounts receivable: 800, Cash: 200, Bank account: 2 500

Claims against assets: Capital stock: 45 000, Retained earnings: 4 900, Long term bank loan: 1 000, Operational credits: 1 300, Accounts payable: 2 100, Wages payable: 1 000, Tax payable: 700.

Task: Prepare the opening Balance Sheet for the company! Use the worksheet on the next page.

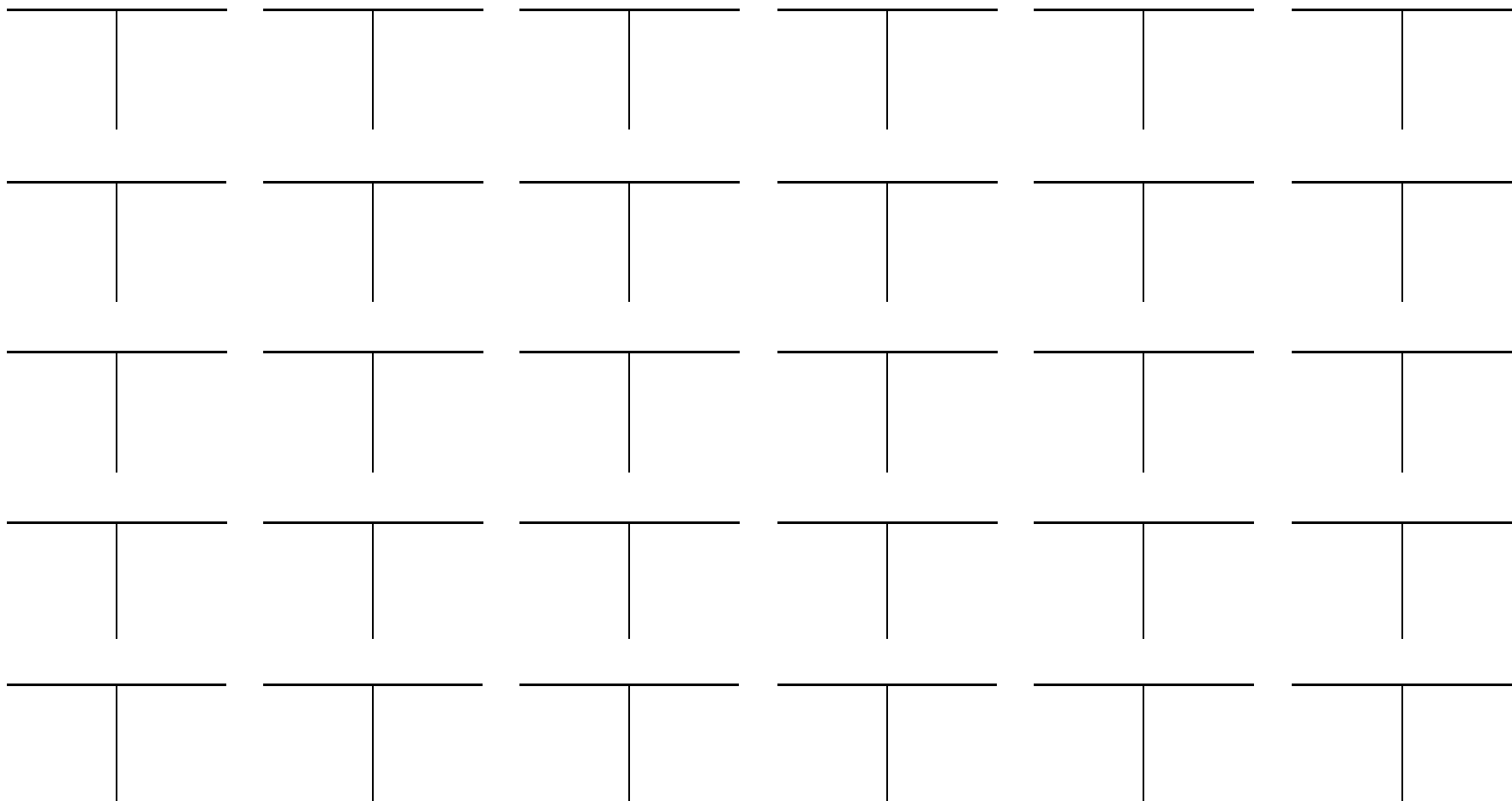
The following economic events occurred during the financial year:

1. 600 € have been collected from Accounts receivable. The bank has sent the certification of the transfer.
2. Purchasing raw material. The invoice has arrived, the price is 200 €, payable in 8 days.
3. Buying a computer device for the central office for 200 € cash.
4. 150 € operational credits have been paid back from the bank account. The bank has sent the certification of the transfer.
5. Withdrawing from the bank account the amount of wages payable.
6. Transferring 100 € long term bank loan to the bank. The bank has sent the certification of the transfer.
7. Paying wages payable in cash.
8. Buying merchandise for 500 € on credit. The invoice has been received.
9. Transferring tax payable from bank account. The bank has sent the certification of the transfer.
10. Sending back merchandise of 50 € due to quality problems. Adjustment invoice has been received.
11. Withdrawing new operational credits to pay entire Accounts Payable.
12. Lending 200 € for a partner for six months. The bank has sent the certification of the transfer.

Task: Open the accounts and record the economic events of the period on T-accounts! Compose the closing Balance Sheet!

You can find worksheets on the next pages.

| | | | |
|---------------------------|-------|------------------------|-------|
| ASSETS | Value | Claims a.a. | Value |
| FIXED ASSETS | | EQUITY | |
| Intangible assets | | | |
| | | | |
| | | | |
| PP&E assets | | PROVISIONS | |
| | | LIABILITIES | |
| | | Subordinated debt | |
| | | Long-term liabilities | |
| Financial investments | | | |
| | | | |
| | | | |
| | | | |
| CURRENT ASSETS | | | |
| Inventories | | Short-term liabilities | |
| | | | |
| | | | |
| | | | |
| | | | |
| Receivables | | | |
| | | | |
| | | | |
| Securities | | | |
| | | | |
| | | | |
| Cash and cash equivalents | | | |
| | | | |
| | | | |
| Total assets | | Total claims a.a. | |



| | | | |
|---------------------------|-------|------------------------|-------|
| ASSETS | Value | Claims a.a. | Value |
| FIXED ASSETS | | EQUITY | |
| Intangible assets | | | |
| | | | |
| | | | |
| PP&E assets | | PROVISIONS | |
| | | LIABILITIES | |
| | | Subordinated debt | |
| | | Long-term liabilities | |
| Financial investments | | | |
| | | | |
| | | | |
| CURRENT ASSETS | | | |
| Inventories | | Short-term liabilities | |
| | | | |
| | | | |
| | | | |
| Receivables | | | |
| | | | |
| | | | |
| Securities | | | |
| | | | |
| | | | |
| Cash and cash equivalents | | | |
| | | | |
| | | | |
| Total assets | | Total claims a.a. | |

Solution

| ASSETS | | | | | | CLAIMS A.A. | | | | | |
|---------------------|-----------|----------------|----------|-------------------|----------|---------------|-----------|---------------------|-----------|-------------------|----------|
| PP&E assets | | Raw material | | Bank account | | Stock Capital | | Bank loan | | Retained earnings | |
| OE 40 000 | | OE 5 000 | | OE 2 500 | 4. 150 | | OE 45 000 | 6. 100 | OE 1 000 | | OE 4 900 |
| 3. 200 | | 2. 200 | | 1. 600 | 5. 1 000 | CE 45 000 | | | | | |
| | CE 40 200 | | CE 5 200 | | 6. 100 | | | CE 900 | | CE 4 900 | |
| | | | | | 9. 700 | | | | | | |
| Merchandise | | Finished goods | | | | Wages payable | | Operational credits | | Accounts payable | |
| OE 500 | 10. 50 | OE 7 000 | | | 12. 200 | 7. 1 000 | OE 1 000 | 4. 150 | OE 1 300 | 10. 50 | OE 2 100 |
| 8. 500 | | | | | CE 950 | | | | 11. 2 750 | 11. 2 750 | 2. 200 |
| | CE 950 | | CE 7 000 | | | | | CE 3 900 | | | 8. 500 |
| Accounts receivable | | Cash | | Other Receivables | | | | Tax payable | | | |
| OE 800 | 1. 600 | OE 200 | 3. 200 | 12. 200 | | | | 9. 700 | OE 700 | | |
| | | 5. 1 000 | 7. 1 000 | | | | | | | | |
| | CE 200 | | | | CE 200 | | | | | | |

Opening Balance Sheet 20X4. 01.01 (€)
Beginner Ltd.

| ASSETS | Value | Claims a.a. | Value |
|----------------------------------|--------|-------------------------------|--------|
| FIXED ASSETS | 40 000 | EQUITY | 49 900 |
| <i>Intangible assets</i> | 0 | Stock Capital | 45 000 |
| | | Retained earnings | 4 900 |
| | | | |
| PP&E assets | 40 000 | PROVISIONS | |
| | | LIABILITIES | 6 100 |
| | | <i>Subordinated debt</i> | 0 |
| | | <i>Long-term liabilities</i> | 1 000 |
| <i>Financial investments</i> | 0 | Bank loan | 1 000 |
| | | | |
| | | | |
| | | | |
| CURRENT ASSETS | 16 000 | | |
| <i>Inventories</i> | 12 500 | Short-term liabilities | 5 100 |
| Raw material | 5 000 | Operational credits | 1 300 |
| Merchandise | 500 | Accounts payable | 2 100 |
| Finished goods | 7 000 | Wages payable | 1 000 |
| | | Tax payable | 700 |
| <i>Receivables</i> | 800 | | |
| Accounts receivable | 800 | | |
| <i>Securities</i> | 0 | | |
| | | | |
| | | | |
| Cash and cash equivalents | 2 700 | | |
| Cash | 200 | | |
| Bank account | 2 500 | | |
| Total assets | 56 000 | Total claims a.a. | 56 000 |

Closing Balance Sheet 20X4. 12.31 (€)

Beginner Ltd.

| ASSETS | Value | Claims a.a. | Value |
|----------------------------------|--------|-------------------------------|--------|
| FIXED ASSETS | 40 200 | EQUITY | 49 900 |
| <i>Intangible assets</i> | 0 | Stock Capital | 45 000 |
| | | Retained earnings | 4 900 |
| | | | |
| PP&E assets | 40 200 | PROVISIONS | |
| | | LIABILITIES | 4 800 |
| | | <i>Subordinated debt</i> | 0 |
| | | <i>Long-term liabilities</i> | 900 |
| <i>Financial investments</i> | 0 | Bank loan | 900 |
| | | | |
| | | | |
| | | | |
| CURRENT ASSETS | 14 500 | | |
| <i>Inventories</i> | 13 150 | Short-term liabilities | 3 900 |
| Raw material | 5 200 | Operational credits | 3 900 |
| Merchandise | 950 | | |
| Finished goods | 7 000 | | |
| | | | |
| <i>Receivables</i> | 400 | | |
| Accounts receivable | 200 | | |
| Other Receivables | 200 | | |
| <i>Securities</i> | 0 | | |
| | | | |
| | | | |
| <i>Cash and cash equivalents</i> | 950 | | |
| Bank account | 950 | | |
| | | | |
| Total assets | 54 700 | Total claims a.a. | 54 700 |

Topic 4. The model of four account classes

Learning outcome of the topic:

The students will learn about the operational accounts, e.g. cost of merchandise sold and sales revenue. They will be informed about the system of four account classes. The most important outcome is to be able to understand the meaning of realized income and operational income.

Introduction to topic 4.

The model of four account classes is a generally used accounting model which includes *operational accounts*. It is based on the following assumption:

$$\text{Assets} + \text{Costs} = \text{Claims against assets} + \overbrace{\text{Revenues} - \text{Expenses}}^{\text{Income}}$$

We define *costs* as the value of resources used by the reporting entity for production and for administrative purposes during a period (costs must be expressed in monetary units). *Revenue* is generated by the firms when they sell some kind of output to the customers on the market (i.e. goods or services). *Expenses* represent the negative side of income and related to sales they are defined as the cost of the goods sold.

To run the model of four account classes in bookkeeping, we need the so called *operational or temporary accounts*. These accounts are used to record the economic events related to the circle of production (costs) and the circle of income (revenues and expenses). Operational accounts are always opened during the period (they do not have opening balances) and closed at the end of the period (they do not have a DIRECT relation to the balance sheet, their summarized remaining balances are transferred to retained earnings).

So how does this affect what we learned so far? The opening balances and the opening process will remain the same: some asset, liability and equity balances will be listed at the beginning of the case studies and we will bring their balances forward to T-accounts. Then, during bookkeeping, whenever there is an event that impacts new expenses or revenues, we will open operational accounts to record the changes. These operational accounts are related to the income of the current period. When we are finished with processing the events, the case studies will require closing the operational accounts. At this point, a certain technical account will be necessary: *Income Summary* will be opened. This account will be used to summarize the balances of the expense and revenue accounts with the purpose of determining our realized income (profit or loss of the period). Closing operational accounts means removing their balances and transferring them to Income Summary. Here, the basic rule of double-entry bookkeeping is still followed. Remember, if an expense account has debit balance (as usual), then it can be closed (=zeroed out) by crediting it – and debiting Income Summary. Hence, the debit side of Income Summary will be filled up with the expenses.

On the other hand, revenues are passive accounts, they have credit balances and will be closed on the debit sides, so Income Summary will mirror their balances on its credit side. What is the result of all that? We will have an account that summarizes the impact of all expenses and revenues: thus the actual balance of Income Summary is profit (loss) before tax! If the entity operated in a profitable way, then its revenues exceed the expenses and Income

Summary has credit balance. On the contrary, if there were more expenses than revenues, then Income Summary shows a debit balance.

What happens after calculating profit before tax is calculating and recording the distribution of income. Certain percentage of the profit is generally required by tax laws to be paid in as corporate income tax. After deducting tax from the profit, what remains with the company's shareholders is profit after tax. Still, there are two more accounting entries in the end: corporate income tax and profit after tax must be debited on Income Summary and credited on Corporate Income Tax Payable (a short-term liability to be opened) and Retained Earnings (as part of Equity). Now, Income Summary is in balance, its debit and credit turnover is equal. Note that the account is only used for summarizing balances and calculating income, it has a technical role.

Once all of the above described tasks are done, we will return to having only Balance Sheet-related accounts to be closed (this is not required in the case studies). Their balances are disclosed in the closing Balance Sheet of the period and will be the opening balances of the next period.

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Seminar 4.

The opening values of the ledger accounts of „Practice“ Ltd. are the following on 1st January 20X4 (€):

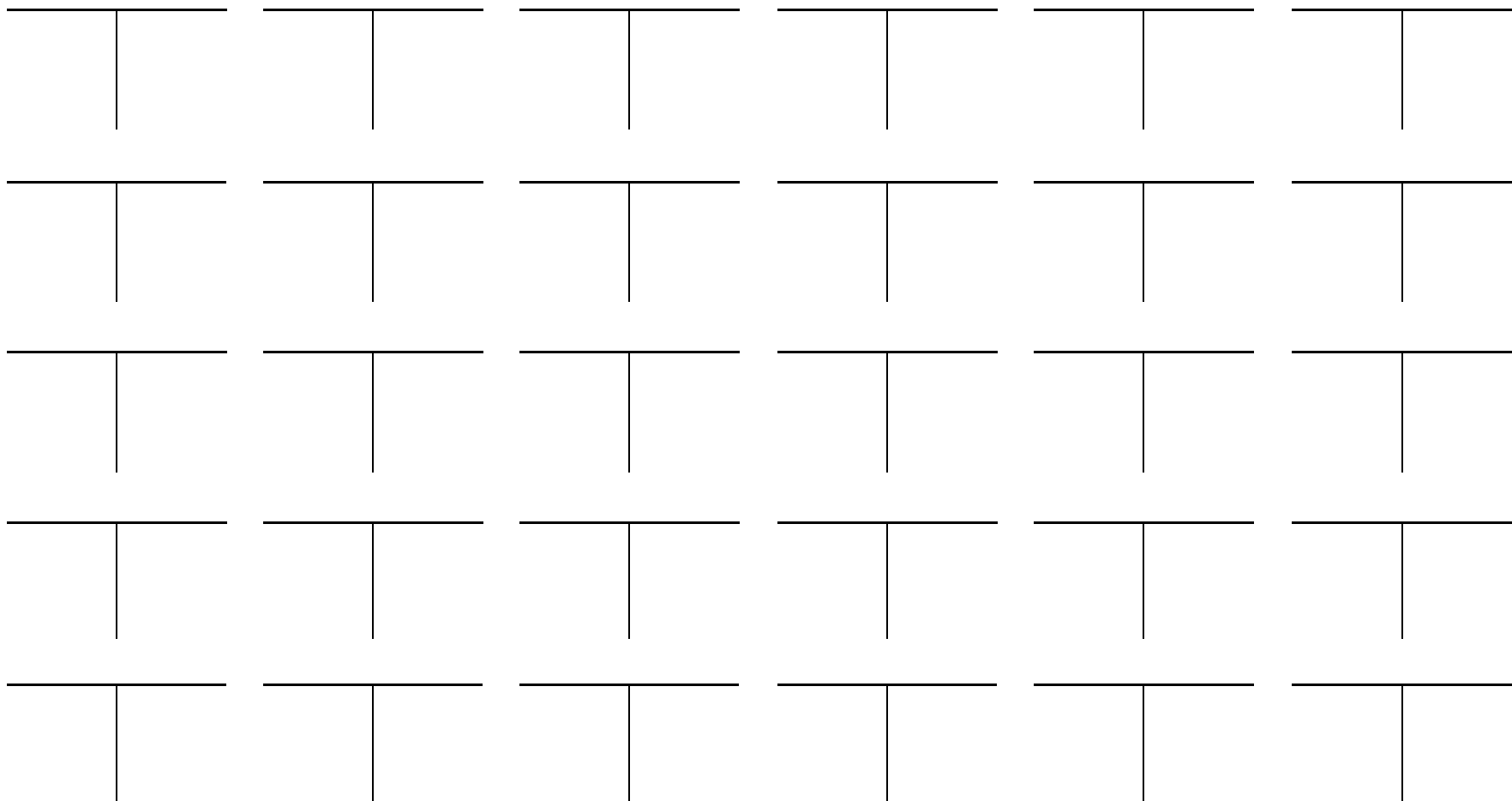
| | |
|---------------------------|--------|
| Raw material | 18 000 |
| Merchandise | 4 000 |
| Goods in process | 2 000 |
| Accounts receivable | 11 500 |
| Bank loans | 30 000 |
| Bank account | 13 000 |
| Stock capital | 28 000 |
| Wages payable | 2 700 |
| Finished goods | 9 500 |
| Retained earnings | 1 800 |
| Cash | |
| Shares held as investment | 2 000 |
| Accounts payable | 8 000 |
| Tax payable (local) | 1 500 |
| Depreciation of PP&E | 5 000 |
| PP&E assets | 15 000 |

Economic events of the year:

1. Opening the accounts.
2. Paying the wages payable from the bank account. The bank has sent the certificate of the transfer.
3. Purchasing raw material for 5 000 €. The invoice of the supplier has arrived.
4. Transferring 4 000 € to the suppliers from the bank account. The bank has sent the certificate of the transfer.
5. Selling merchandise on credit (buyer has not paid yet). Cost of merchandise sold: 2 000 €. Selling price: 3 000 €.
6. 2 000 € s have been paid back. The bank has sent the certificate of the transfer.
7. 1 000 € has been collected from customers of event 5. The bank has sent the certificate of the transfer.
8. 200 € discount has been given to the customers of event 5. The invoice has been corrected.
9. Buying merchandise for 500 € cash.
10. 7 000 € have been borrowed from the bank for operational purposes. The amount has been transferred to our bank account.
11. 7 000 € have been collected from the customers in cash.
12. Selling merchandise (buyer has paid in cash). Cost of merchandise sold: 1 500 €. Selling price: 2 800 €.

Task: *Prepare the opening Balance Sheet and record the events on T-accounts!
Record Corporate income tax if it is 1 100 €! Prepare the closing Balance Sheet as well!*

| | | | |
|---------------------------|-------|------------------------|-------|
| ASSETS | Value | Claims a.a. | Value |
| FIXED ASSETS | | EQUITY | |
| Intangible assets | | | |
| | | | |
| | | | |
| PP&E assets | | PROVISIONS | |
| | | LIABILITIES | |
| | | Subordinated debt | |
| | | Long-term liabilities | |
| Financial investments | | | |
| | | | |
| | | | |
| | | | |
| CURRENT ASSETS | | | |
| Inventories | | Short-term liabilities | |
| | | | |
| | | | |
| | | | |
| | | | |
| Receivables | | | |
| | | | |
| | | | |
| Securities | | | |
| | | | |
| | | | |
| Cash and cash equivalents | | | |
| | | | |
| | | | |
| Total assets | | Total claims a.a. | |



| | | | |
|---------------------------|-------|------------------------|-------|
| ASSETS | Value | Claims a.a. | Value |
| FIXED ASSETS | | EQUITY | |
| Intangible assets | | | |
| | | | |
| | | | |
| PP&E assets | | PROVISIONS | |
| | | LIABILITIES | |
| | | Subordinated debt | |
| | | Long-term liabilities | |
| Financial investments | | | |
| | | | |
| | | | |
| CURRENT ASSETS | | | |
| Inventories | | Short-term liabilities | |
| | | | |
| | | | |
| | | | |
| Receivables | | | |
| | | | |
| | | | |
| Securities | | | |
| | | | |
| | | | |
| Cash and cash equivalents | | | |
| | | | |
| | | | |
| Total assets | | Total claims a.a. | |

Solution

Opening Balance Sheet, 20X4. 01.01 (€), Practice Ltd.

| Assets | Value | Claims a.a. | Value |
|----------------------------------|---------------|-------------------------------|---------------|
| FIXED ASSETS | 12 000 | EQUITY | 29 800 |
| Intangible assets | 0 | Stock Capital | 28 000 |
| | | Retained earnings | 1 800 |
| | | | |
| PP&E assets | 10 000 | PROVISIONS | 0 |
| | | LIABILITIES | 42 200 |
| | | Subordinated debt | 0 |
| | | Long-term liabilities | 30 000 |
| Financial investments | 2 000 | Bank loans | 30 000 |
| Shares | 2 000 | | |
| | | | |
| | | | |
| CURRENT ASSETS | 60 000 | | |
| Inventories | 33 500 | Short-term liabilities | 12 200 |
| Raw material | 18 000 | Accounts payable | 8 000 |
| Merchandise | 4 000 | Wages payable | 2 700 |
| Goods in process | 2 000 | Tax payable | 1 500 |
| Finished goods | 9 500 | | |
| Receivables | 11 500 | | |
| Accounts receivable | 11 500 | | |
| | | | |
| Securities | | | |
| | | | |
| Cash and cash equivalents | 15 000 | | |
| Cash | 2 000 | | |
| Bank account | 13 000 | | |
| Total assets | 72 000 | Total claims a.a. | 72 000 |

| Assets (permanent) | | | | Equity/Liabilities (Permanent) | | | |
|---------------------|-----------|----------------|-----------|--------------------------------|-----------|----------------------|-----------|
| Raw material | | Merchandise | | Investment cr. | | Stock capital | |
| oe 18 000 | | oe 4 000 | 5. 2 000 | 6. 2 000 | oe 30 000 | | oe 28 000 |
| 3. 5 000 | | 9. 500 | 12. 1 500 | | | | |
| | ce 23 000 | | ce 1 000 | ce 28 000 | | ce 28 000 | |
| Accounts rec. | | Bank account | | Retained earnings | | Acc. Payable | |
| oe 11 500 | 7. 1 000 | oe 13 000 | 2. 2 700 | | oe 1 800 | 4. 4 000 | oe 8 000 |
| 5. 3 000 | 8. 200 | 7. 1 000 | 4. 4 000 | | 15. 1 000 | | 3. 5 000 |
| | 11. 7 000 | 10. 7 000 | 6. 2 000 | | | | |
| | ce 6 300 | | ce 12 300 | ce 2 800 | | ce 9 000 | |
| Cash | | Shares | | | | Wages payable | |
| oe 2 000 | 9. 500 | oe 2 000 | | | | 2. 2 700 | oe 2 700 |
| 11. 7 000 | | | | | | | |
| 12. 2 800 | | | | | | | |
| | ce 11 300 | | ce 2 000 | | | | |
| Goods in proc. | | Finished goods | | Tax payable | | Operational credit | |
| oe 2 000 | | oe 9 500 | | | oe 1 500 | | 10. 7 000 |
| | ce 2 000 | | ce 9 500 | ce 1 500 | | ce 7 000 | |
| PP&E assets | | Depr. Of PP&E | | Income summary | | Corporate Income tax | |
| oe 15 000 | | oe 5 000 | | 13. 3 500 | 13. 5 600 | | 14. 1 100 |
| | ce 15 000 | ce 5 000 | | 14. 1 100 | | | |
| | | | | 15. 1 000 | | | |
| Temporary accounts | | | | Calculation of Income | | | |
| Cost of merch. sold | | Sales Revenue | | Revenue | | | |
| 5. 2 000 | 13. 3 500 | 8. 200 | 5. 3 000 | 5 600 | | | |
| 12. 1 500 | | 13. 5 600 | 12. 2 800 | Expenses | | | |
| | | | | 3 500 | | | |
| | | | | Profit before tax | | | |
| | | | | 2 100 | | | |
| | | | | Corporate income tax | | | |
| | | | | 1 100 | | | |
| | | | | Net Profit after tax (PAT) | | | |
| | | | | 1 000 | | | |
| | | | | oe= opening entry | | | |
| | | | | ce=closing entry | | | |

Closing Balance Sheet, 20X4. 12.31 (€), Practice Ltd.

| Assets | Value | Claims a.a. | Value |
|----------------------------------|---------------|-------------------------------|---------------|
| FIXED ASSETS | 12 000 | EQUITY | 30 800 |
| Intangible assets | 0 | Stock Capital | 28 000 |
| | | Retained earnings | 2 800 |
| | | | |
| | | | |
| PP&E assets | 10 000 | PROVISIONS | |
| | | LIABILITIES | 46 600 |
| | | Subordinated debt | 0 |
| | | Long-term liabilities | 28 000 |
| Financial investments | 2 000 | Bank loans | 28 000 |
| Shares | 2 000 | | |
| | | | |
| | | | |
| CURRENT ASSETS | 65 400 | | |
| Inventories | 35 500 | Short-term liabilities | 18 600 |
| Raw material | 23 000 | Accounts payable | 9 000 |
| Merchandise | 1 000 | Operational credits | 7 000 |
| Goods in process | 2 000 | Tax payable | 1 500 |
| Finished goods | 9 500 | Corporate income tax | 1 100 |
| Receivables | 6 300 | | |
| Accounts receivable | 6 300 | | |
| | | | |
| Securities | | | |
| | | | |
| Cash and cash equivalents | 23 600 | | |
| Cash | 11 300 | | |
| Bank account | 12 300 | | |
| Total assets | 77 400 | Total claims a.a. | 77 400 |

Topic 5. Cost accounting

Learning outcome of the topic:

The students will learn about cost classification: costs by nature, direct and indirect costs. The most important outcome is to be able to use the accounts of Costs Classified by Nature. Cost objects and overheads (direct and indirect cost) are also introduced and discussed.

Introduction to Topic 5.

Cost accounting involves the recognition, classification and recording of the costs incurred during a period. There are two main cost classification methods in accounting. The costs-by-nature method classifies the costs based on what types of resources are being consumed when they are incurred. During problem-solving, we will use the cost-by-nature classification on classes:

1. *Material expenses*: the historical value of the material used during the period: basic and other material, fuel, energy, water, tools, work wear, printing matter, stationery, etc.
2. *Purchased services*: the value of the purchased services during the financial year: freight, delivery, travel, loading, sorting, postal, telephone, reparation-maintenance, subscription, rent, advertisement-marketing, membership fees, education, accounting, heating, cable, cleaning, etc.
3. *Salary-related costs*:
 - a. The amount of the total gross wages in the payroll of the period: basic wage, supplements, premium, bonus.
 - b. Other employee related costs: those payments that do not qualify for wages (benefits and compensations): travel compensation, food allowance, housing support, payments related to sick leave, dismissing, etc.).
 - c. Contributions: all items payable related to wages according to the law, calculated on the basis of wages or the number of workforce, e.g. social security contribution.
4. *Depreciation*: Cost related to the regular use (consumption) of PP&E and intangible assets (the contribution of these assets to the operation of the period): scheduled (planned) writing-off (reduction of net value) of the assets.

The other type of cost classification (Cost of Sales method) is based on how the costs can be allocated between the different *functions* of entities (production, sales-distribution, central-administrative). This method requires more sophisticated records and cost allocation but gives better information to stakeholders about the profitability of the reporting units. In order to do that, some cost objects need to be defined. A *cost object* can be a product or a service that is being sold to customers. It can also be a project, for example constructing a new plant for a manufacturing company. Anything that requires separate cost measurement can be defined as a cost object. Some costs can be associated with a cost object immediately after they are incurred (for example the material consumed to build a product or the salaries of the personnel engaged in providing the service). These costs are called *direct costs*.

Cost allocation is the process of matching the incurred costs of the period with the respective cost object. However sophisticated the method is, some costs will remain indirect because it is impossible to associate them with any cost object. These will be linked to *cost centers* instead. Just think about those expenditures made to run the central administrative functions of a company: some resources are used with the purpose of running the business. Direct and indirect costs and cost allocation is not included in this course, but will be explained in other courses (Controlling).

Seminar 5.

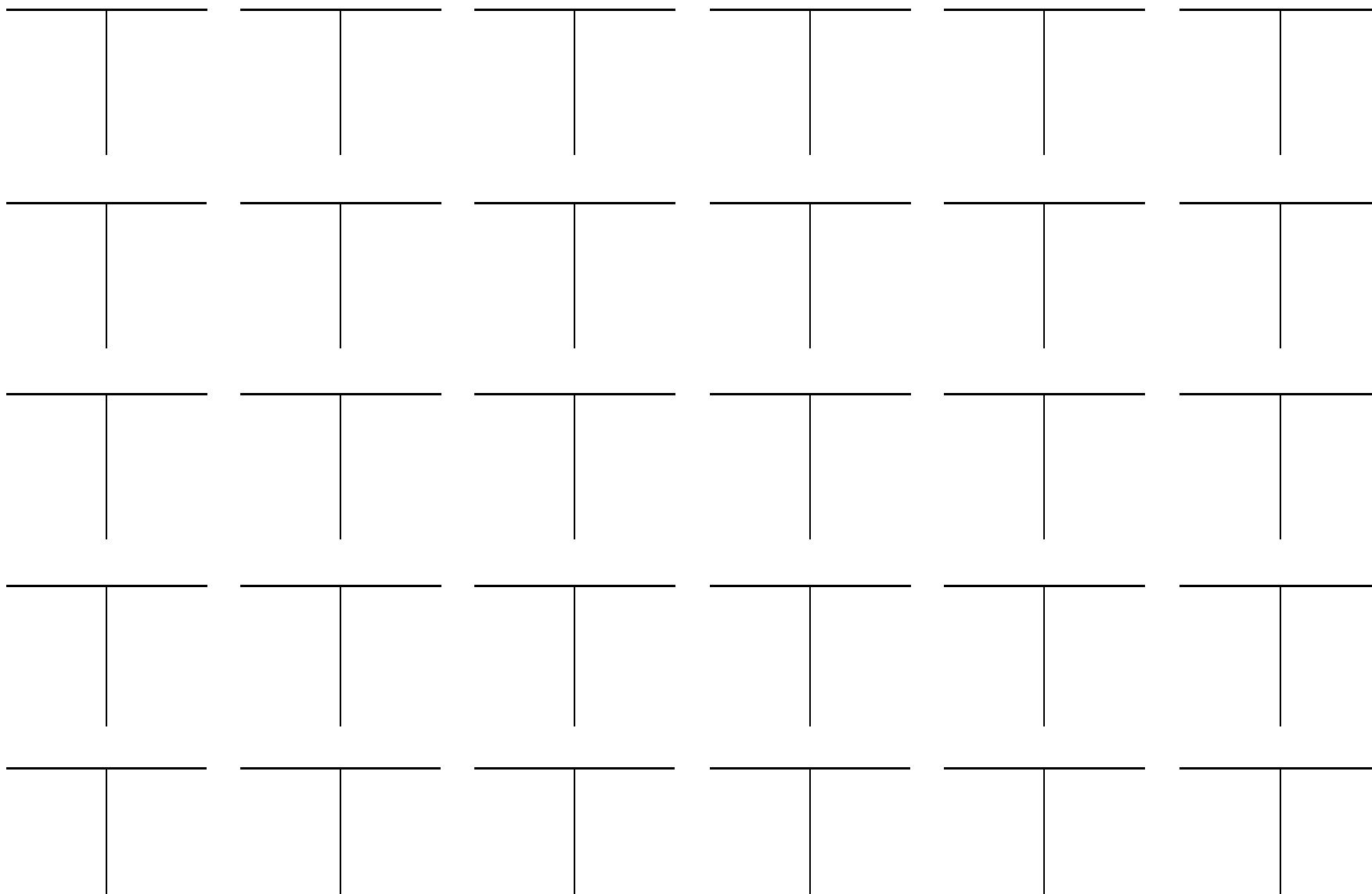
The known opening balances of the ledger accounts of „COSTLY” Ltd., 20X6.01.01 (€):

| | | | |
|-----------------------------|--------|-------------------------|--------|
| Real estate | 15 500 | Social security payable | 3 000 |
| Depreciation of real estate | 3 500 | Raw material | 7 500 |
| Machinery | 20 000 | Accounts receivable | 7 000 |
| Depreciation of machinery | 10 000 | Cash | 250 |
| Retained earnings | 6 000 | Wages payable | 6 000 |
| Accounts payable | 11 000 | Bank account | 12 750 |

Task: Open the accounts and record the economic events of the period using the total cost method!

Economic events of the period:

1. Purchasing raw material. The invoice has arrived, the price is 10 000 €, payable in 8 days.
2. Transferring wages payable. The bank has sent the certification of the transfer.
3. 4 000 € have been collected from the customers. The bank has sent the certification of the transfer.
4. We have received an invoice of a rent of 700 € (we are renting a storehouse).
5. The local radio has sent its invoice (500 €) of the advertisement we have ordered.
6. We have received the following bills:
 - a) power (energy) 200 €
 - b) telephone 150 €
 - c) heating service 80 €.
7. The bank has charged our bank account with a 30 € fee.
8. Paying for postal services in cash: 15 €.
9. Transferring insurance fees (from bank account): 75 €. The bank has sent the certification of the transfer.
10. The use of our internal resources in the period:
 - a) raw material 10 000 €
 - b) gross wages 5 000 €
 - c) contribution (social sec.) 2 050 €
 - d) depreciation of real estate 200 €
 - e) depreciation of machinery 1 000 €.
11. All finished products of the period have been sold. Selling price: 25 000 €, invoice has been issued.
12. Determine the net income of the period! Close the operational accounts!
13. Calculate and record the distribution of income! Corporate income tax is 10%.



| ASSETS | | | | | | CLAIMS AGAINST ASSETS | | | | | |
|--|------------|----------------------|-------------|---------------------|-----------|-----------------------|------------|-------------------|------------|------------|--------------|
| Real estate | | Depr. of real estate | | Machinery | | Accounts payable | | Retained earnings | | | |
| oe 15 500 | | | oe 3 500 | oe 20 000 | | | oe 11 000 | | oe 6 000 | | |
| | | | 10d. 200 | | | | 1. 10 000 | | 13b. 4 500 | | |
| | | | | | | | 4. 700 | | | | |
| | | | | | | | 5. 500 | | | | |
| | | | | | | | 6a. 200 | | | | |
| Depr. of machinery | | Raw material | | Accounts receivable | | | | Wages payable | | | |
| | oe 10 000 | oe 7 500 | 10a. 10 000 | oe 7 000 | 3. 4 000 | | 6b. 150 | 2. 6 000 | oe 6,000 | | |
| | 10e. 1 000 | 1. 10 000 | | 11. 25 000 | | | 6c. 80 | | 10b. 5 000 | | |
| | | | | | | | | | | | |
| Cash | | Bank account | | | | Corporate income tax | | Income summary | | | |
| oe 250 | 8. 15 | oe 12 750 | 2. 6 000 | | | | 13a. 500 | | 12. 1 550 | 12. 25 000 | |
| | | 3. 4 000 | 7. 30 | | | | | | 12. 10 200 | | |
| | | | 9. 75 | | | | | | 12. 7 050 | | |
| | | | | | | Social sec. payable | | | 12. 1 200 | | |
| | | | | | | | oe 3 000 | | 13a. 500 | | |
| | | | | | | | 10c. 2 050 | | 13b. 4 500 | | |
| | | | | | | | | | | | |
| OPERATIONAL (temporary for the period) | | | | | | | | | | | |
| Purchased service exp. | | Material expense | | Depreciation exp. | | Salaries expense | | Sales Revenue | | | |
| 4. 700 | | 6a. 200 | | 10d. 200 | | 10b. 5 000 | | | 11. 25 000 | | Profit 5 000 |
| 5. 500 | | 10a. 10 000 | | 10e. 1 000 | | 10c. 2 050 | | | | | Inc. Tax 500 |
| 6b. 150 | | | | | | | | | | | PAT 4 500 |
| 6c. 80 | | | 12. 10 200 | | 12. 1 200 | 12. 7 050 | 12. 25 000 | | | | |
| 7. 30 | | | | | | | | | | | |
| 8. 15 | | | | | | | | | | | |
| 9. 75 | 12. 1 550 | | | | | | | | | | |

Topic 6. The accounting cycle – Case Study

Learning outcome of the topic:

The most important outcome is to synthesize the knowledge acquired so far. Single-step income statements are also introduced and discussed as well the method of preparing the trial balance.

Seminar 6.

Opening assets and claims against assets of 'ACCOUNTING IS FUN' Ltd, 20X4.01.01 (€):

| | |
|----------------------------|--------|
| Accounts payable | 5 000 |
| Accounts receivable | 5 000 |
| Bank account | 8 500 |
| Cash | 500 |
| PP&E assets | 46 000 |
| Depreciation of PP&E | 16 000 |
| Finished goods | 7 000 |
| Merchandise | 5 000 |
| Operational credits | 13 000 |
| Provided loans (for 2 yrs) | 8 000 |
| Raw material | 16 000 |
| Retained earnings | 7 000 |
| Social security payable | 2 000 |
| Stock Capital | 50 000 |
| Wages payable | 3 000 |

TASKS

1. Prepare the opening Balance Sheet!
2. Record the opening entries on T-accounts!
3. Record the economic events of the period using the total cost method!
4. Prepare a trial balance!
5. Prepare the Income Statement for the period! Corporate income tax is 10%.
6. Prepare the closing entries! Record the distribution of income! How does this change the Trial Balance?
7. Prepare the closing Balance Sheet!

1. Buying merchandise for 6 000 €. The invoice has arrived.
2. 2 000 € collected from provided loans. The bank has sent the certification.
3. Social security payable has been transferred. The bank has sent the certification.
4. 3 500 € have been withdrawn from the bank account. The bank has sent the certification.
5. The supplier of event 1. provided 500 € discount. The adjusting invoice has arrived.
6. Wages payable has been settled (in cash).
7. The following invoices on purchased services have arrived:
 - a) rent 2 000 €
 - b) telephone, internet 500 €

- c) accounting 300 €
 - d) maintenance of cars 200 €.
8. The following expenses have been paid in cash:
 - a) postal service 80 €
 - b) insurance 120 €.
 9. 12 000 € of raw material has been used for production.
 10. Buying fuel for 400 € in cash.
 11. Total gross wages of the period: 8 000 €; Related payable contributions (social security): 2 500 €.
 12. 2 000 € personal income tax and 1 200 € social security have been deducted from gross wages.
 13. Depreciation of PP&E assets: 3 000 €.
 14. Selling price of finished goods produced and sold in the period: 32 000 €, invoice issued.
 15. Selling merchandise, cost of merchandise sold is 1 500 €, selling price is 2 000 €. The invoice has been issued.
 16. Close the temporary accounts!

Task 1.

| | | | |
|---------------------------|-------|------------------------|-------|
| ASSETS | Value | Claims a.a. | Value |
| FIXED ASSETS | | EQUITY | |
| Intangible assets | | | |
| | | | |
| | | | |
| | | | |
| PP&E assets | | PROVISIONS | |
| | | LIABILITIES | |
| | | Subordinated debt | |
| | | Long-term liabilities | |
| Financial investments | | | |
| | | | |
| | | | |
| | | | |
| CURRENT ASSETS | | | |
| Inventories | | Short-term liabilities | |
| | | | |
| | | | |
| | | | |
| | | | |
| Receivables | | | |
| | | | |
| | | | |
| Securities | | | |
| | | | |
| | | | |
| Cash and cash equivalents | | | |
| | | | |
| | | | |
| Total assets | | Total claims a.a. | |

Task 2,3,6.

| | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|
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Task 4. Solution:

.....

.....

| | | ACCOUNT TITLE | BALANCE | |
|--|--|--------------------------|---------|--------|
| | | | DEBIT | CREDIT |
| | | PP&E assets | | |
| | | Depreciation of PP&E | | |
| | | Provided loans | | |
| | | Raw material | | |
| | | Merchandise | | |
| | | Finished goods | | |
| | | Accounts receivable | | |
| | | Cash | | |
| | | Bank account | | |
| | | Stock capital | | |
| | | Retained earnings | | |
| | | Operational credit | | |
| | | Accounts payable | | |
| | | Wages payable | | |
| | | Social security | | |
| | | Personal Income Tax | | |
| | | Purchased services (exp) | | |
| | | Material expenses | | |
| | | Salaries expenses | | |
| | | Cost of merchandise sold | | |
| | | Depreciation expenses | | |
| | | Sales revenue | | |
| | | Total | | |

Task 5 Solution:

| Income Statement | | | |
|------------------|----------------------|--|--|
| | | | |
| Year ended | | | |
| | Revenues: | | |
| | | | |
| | Expenses: | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | Profit before tax | | |
| | Corporate income tax | | |
| | Profit after tax | | |

Task 7 Solution:

| ASSETS | Value | Claims a.a. | Value |
|------------------------------|-------|---------------------------|-------|
| <i>FIXED ASSETS</i> | | <i>EQUITY</i> | |
| Intangible assets | | | |
| | | | |
| | | | |
| PP&E assets | | <i>PROVISIONS</i> | |
| | | <i>LIABILITIES</i> | |
| | | Subordinated debt | |
| | | Long-term liabilities | |
| Financial investments | | | |
| | | | |
| | | | |
| | | | |
| <i>CURRENT ASSETS</i> | | | |
| Inventories | | Short-term liabilities | |
| | | | |
| | | | |
| | | | |
| Receivables | | | |
| | | | |
| | | | |
| Securities | | | |
| | | | |
| | | | |
| Cash and cash equivalents | | | |
| | | | |
| | | | |
| Total assets | | Total claims a.a. | |

Topic 7. Income measurement

Learning outcome of the topic:

The students will learn about accrual accounts: accrued and deferred income and expenses. The most important outcome is to be able to post the adjusting entries and to calculate adjusted realized income.

Introduction to topic 7.

The *Income statement* is a part of financial statements that includes the factors influencing the net income (profit before tax) of an entity for a certain accounting period by expressing classified revenues and expenses in monetary units. When we talk about income, we always refer to the profit or loss of a company for a certain period of time (e.g. a year, a quarter, a month). To calculate income, it is inevitable to determine which revenues and which expenses are related to the period in question. In accounting, the revenue recognition principle and the matching principle state the rules to be followed when doing so.

Adjusting is an underlying task in financial reporting. During this process, revenues and expenses are moved to the correct period (in which they were earned or incurred) with the help of adjusting entries. In accrual accounting, profit is always calculated based on the adjusted realized income, regardless of the cash flows related to revenues and expenses. The adjusting process involves opening each necessary account from the following list:

- accrued revenues (classified as receivables)
- accrued expenses (classified as liabilities)
- deferred expenses (classified as a receivables)
- deferred revenues (classified as liabilities).

After the adjusting entries are completed, the adjusted Trial Balance can be prepared which provides a basis for composing the core of financial statements in the following order:

1. Income Statement
2. Statement of Retained Earnings
3. Balance Sheet

The closing Balance Sheet date of the current accounting period becomes the opening balances of the next period, and the accounting cycle starts again.

Seminar 7.

Some of the opening assets and claims of 'ACCRUAL IS FUN' Ltd, 20X5.01.01 (€):

| | | | |
|---------------------|--------|-----------------------------|--------|
| Accounts receivable | 5 000 | Cash | 1 000 |
| PP&E assets | 10 000 | Raw material | 13 000 |
| Accounts payable | 18 000 | Depreciation of PP&E assets | 4 000 |
| Wages Payable | 2 000 | | |

TASK

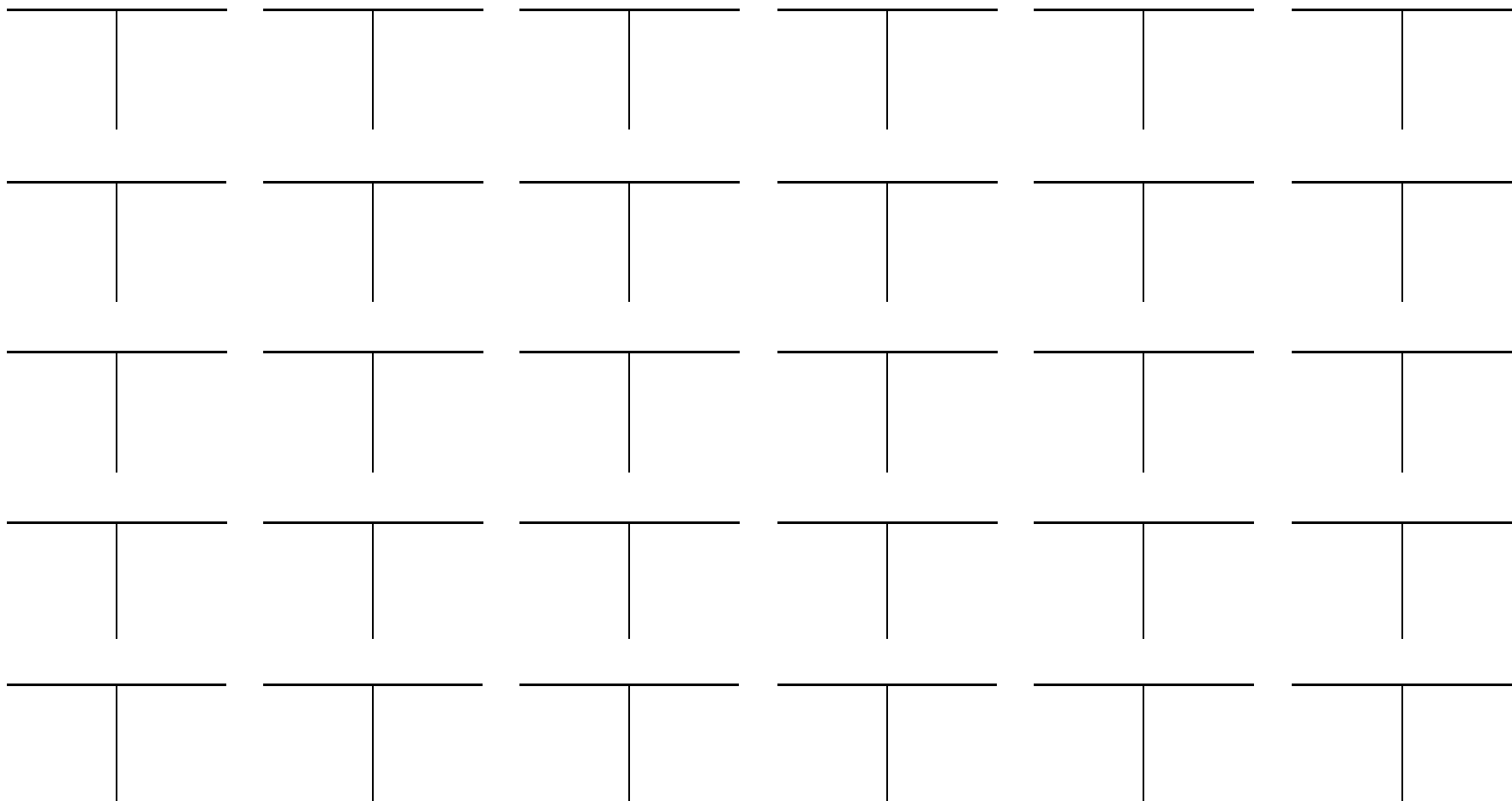
1. Record the economic events of the period using the total cost method!
2. Prepare the Income Statement for 20X5!

1. Open the accounts!
2. 3 000 € collected from Accounts receivable. The bank has sent the certification.
3. Buying merchandise for 5 000 €. The invoice has arrived.
4. Wages payable has been transferred. The bank has sent the certification.
5. Buying raw material for 2 000 €. The invoice has arrived.
6. Incurred cost of the period:

| Type | Total |
|--------------------|--------|
| Raw material | 10 400 |
| Purchased service* | 900 |
| Gross wages | 9 000 |
| Social security | 2 900 |
| Depreciation | 700 |
| Total | 23 900 |

* Transferred from bank account

7. 2 000 € personal income tax and 1 500 € social security have been deducted from gross wages.
8. 600 € insurance fee is paid in cash on November 1, 20X5. The fee covers 4 months (November-February).
9. Telephone bill for 20X5 December will arrive in January, 20X6. The amount is 250 €.
10. Selling price of finished goods produced and sold during the period: 30 850 €. The invoice has been issued.
11. The invoice is issued on provided service of 20X5. September – 20X6. February. Selling price is 900 €.
12. Close the operational accounts! Determine the net income of the period!
13. Calculate and record the distribution of income! Corporate income tax is 10%.



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| Seminar 7: Accrual is Fun Ltd. | | | | | |
|---------------------------------------|------------|----------------------------|----------|-----------------------------|------------|
| Accounts receivable | | PP&E assets | | Accounts payable | |
| oe 5 000 | 2. 3 000 | oe 10 000 | | | oe 18 000 |
| 10. 30 850 | | | | | 3. 5 000 |
| 11. 900 | | | | | 5. 2 000 |
| Raw material | | Depreciat. of tang. | | Social security | |
| oe 13 000 | 6a. 10 400 | | oe 4 000 | | 6d. 2 900 |
| 5. 2 000 | | | 6e. 700 | | 7. 1 500 |
| Cash | | Deferred expense | | Wages payable | |
| oe 1 000 | 8. 600 | 8. 300 | | 4. 2,000 | oe 2 000 |
| | | | | 7. 3,500 | 6c. 9 000 |
| Merchandise | | Bank account | | Income summary | |
| 3. 5 000 | | 2. 3 000 | 4. 2 000 | 12. 10,400 | 12. 31 450 |
| | | | 6b. 900 | 12. 1,450 | |
| | | | | 12. 11,900 | |
| | | | | 12. 700 | |
| | | | | 13a. 700 | |
| | | | | 13b. 6,300 | |
| | | | | Retained earnings | |
| | | | | 13b. 6 300 | |
| | | | | Personal Inc. Tax | |
| | | | | 7. 2 000 | |
| | | | | Corporate Income tax | |
| | | | | 13a. 700 | |
| | | | | Accrued expense | |
| | | | | 9. 250 | |
| | | | | Deferred revenue | |
| | | | | 11. 300 | |

| TEMPORARY ACCOUNTS | | | |
|--------------------|------------|-------------------|------------|
| Material expenses | | Purchased service | |
| 6a. 10 400 | | 6b. 900 | 8. 300 |
| | | 8. 600 | |
| | | 9. 250 | |
| | 12. 10 400 | | 12. 1 450 |
| Depreciation exp. | | Sales revenue | |
| 6e. 700 | | | 10. 30 850 |
| | | 11. 300 | 11. 900 |
| | 12. 700 | 12. 31 450 | |
| Salaries exp. | | | |
| 6c. 9 000 | | | |
| 6d. 2 900 | | | |
| | 12. 11 900 | | |

Seminar 8.

Some of the opening accounts of Ready Ltd, 20X5.01.01 (€) are the following:

| | | | |
|---------------------|--------|-----------------------------|--------|
| PP&E assets | 11 000 | Raw material | 15 000 |
| Bank loans | 18 000 | Bank account | 16 000 |
| Accounts payable | 8 000 | Depreciation of PP&E assets | 5 000 |
| Accounts receivable | 9 000 | Goods in process | 1 200 |
| Finished goods | 6 000 | Wages Payable | 3 000 |
| Retained earnings | 3 000 | Cash | 7 000 |

TASKS

Record the economic events of the period using the total cost method!

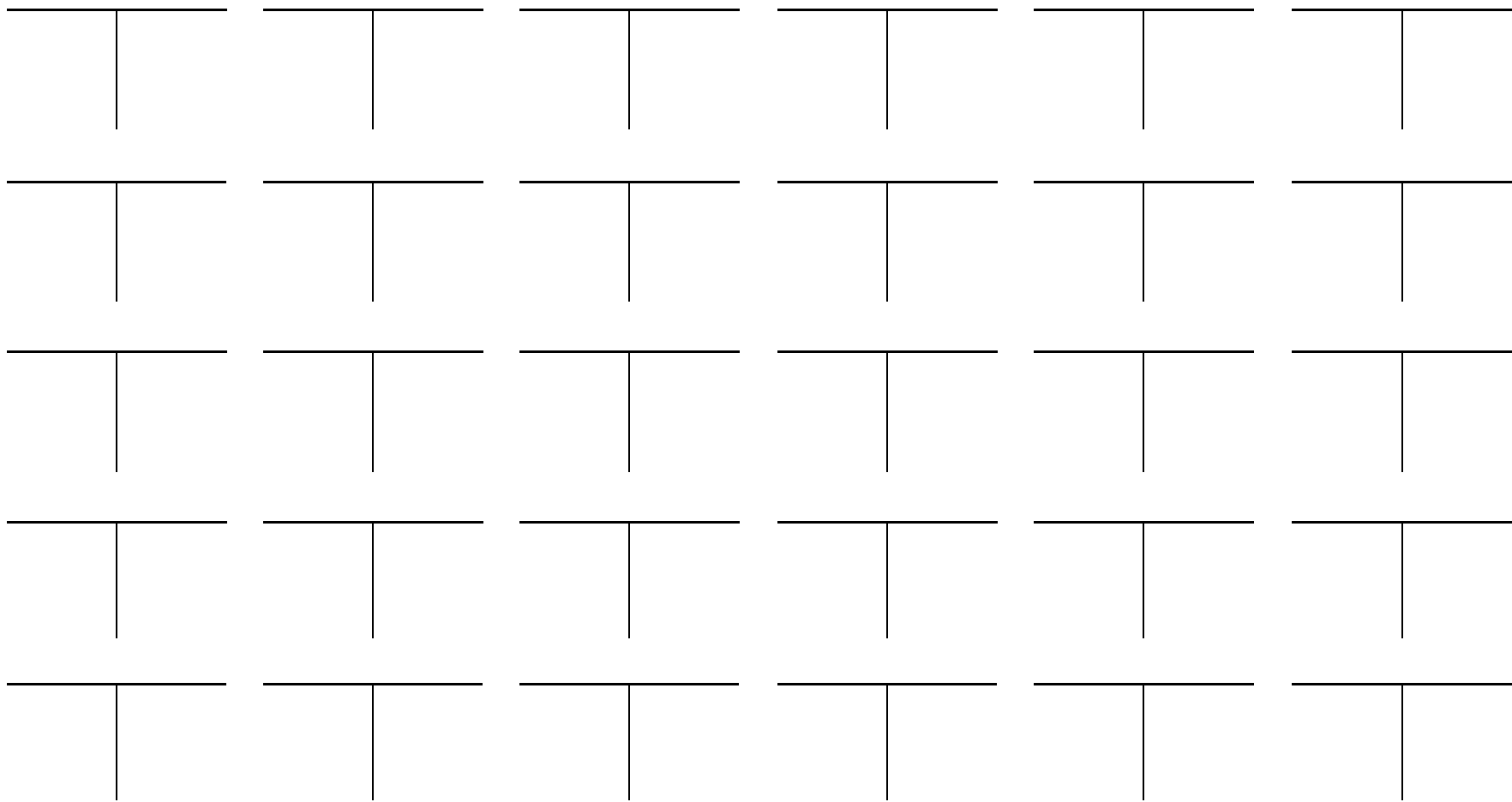
Prepare the Income Statement for the company!

1. Open the accounts!
2. Buying merchandise for 10 000 €. The invoice has arrived.
3. 4 000 € bank loan has been transferred to the bank. The bank has sent the certification.
4. Buying raw material for 5 000 €. The invoice has arrived.
5. Incurred cost of the period:

| Type | Total |
|--------------------|--------|
| Raw material | 8 600 |
| Purchased service* | 500 |
| Gross wages | 7 000 |
| Social security | 4 500 |
| Depreciation | 2 400 |
| Total | 23 000 |

* Invoice has been received

6. The opening Wages payable has been transferred (3 000€). The bank has sent the certification.
7. 400 € personal income tax and 500 € social security have been deducted from gross wages.
8. Selling merchandise, cost of merchandise sold is 5 500 €, selling price is 7 000 €. The invoice has been issued.
9. 500 € insurance fee is transferred on October 1, 20X5. The fee covers 5 months (October 1 – February 28.). The bank has sent the certification.
10. Invoice on rent that covers the period from 20X5 December 1 to 20X6 March 31 will arrive in 20X6. The amount is 800 €.
11. Selling price of finished goods produced and sold during the period: 40 000 €. The invoice has been issued.
12. The invoice is issued on provided service of 20X5. November 1 – 20X6. March 31. Selling price is 1 000€.
13. Close the operational accounts! Determine the net income of the period!
14. Calculate and record the distribution of income! Corporate income tax is 10%.



| Ready Ltd. | | | |
|------------------------------|--------------------------|--------|--------|
| Income Statement | | | |
| Year ended December 31, 20X5 | | | |
| | Revenue: | | |
| | Sales Revenue | | 47 400 |
| | Expenses: | | |
| | Cost of merchandise sold | 5 500 | |
| | Material expenses | 8 600 | |
| | Purchased service | 1 000 | |
| | Salaries expense | 11 500 | |
| | Depreciation Expense | 2 400 | |
| | Total Expenses | | 29 000 |
| | Net Income | | 18 400 |
| | Corporate Income Tax | | 1 840 |
| | Profit after tax | | 16 560 |

Sample tests and exam guide*

*This section applies under circumstances of normal classroom education. In those semesters of online or hybrid education, ask the teacher about current rules.

In this section you can find some sample tests for the first and second mid-terms and the lecture exam. The actual mid-terms and lecture exams will have the same structure but will include different data and questions. The tests cover theoretical and practical parts. Theoretical questions include definitions, true or false questions, recognition of concepts, etc. Practical tasks are based on the seminars.

The necessary tools for all occasions – tests and exams – are a pen and a calculator. Please bring a regular calculator, no cell phones or other types of devices are allowed to be used. When you prepare for accounting tests and exams please make sure you take enough time to understand the material and to practice the tasks. You need a routine in bookkeeping to be able to reach good grades. I generally suggest the students to practice the case studies by taking the tasks from the handout and using empty sheets for the solution. It is not enough to just browse through the solutions and try to memorize the entries, it is inevitable to solve the tasks from the beginning to the end without looking into the solution. Then when you are finished, you can compare the work with the solution for checking. This is the only way to find out the typical mistakes made during practicing.

When the tests and exams are being evaluated, each mistake counts only once. Because of the nature of the case studies, a mistake made at the beginning of the case study may result in a whole series of other mistakes as consequence, but no additional scores will be deducted for these.

Please always feel free to contact me regarding questions about this handout or the classes, the material or the exams.

Thank you for reading.

| |
|-----------------------|
| First mid-term sample |
|-----------------------|

PART 1.

The 'EASY' company has the following balances 20X4.01.01 (€):

| | |
|--|--------|
| Raw material | 11 000 |
| Goods in process | 3 000 |
| Investments | 3 400 |
| Provisions | 2 000 |
| Bank account | |
| Real estate | 20 000 |
| Reserve funds | 10 000 |
| Securities held for sale | 600 |
| Loan provided for long term | 12 000 |
| Receivables against employees (short term) | 3 000 |
| Bank loans (long-term) | 27 000 |
| Stock capital | 50 000 |
| Wages payable | 1 000 |
| Finished goods | |
| Inventories | 22 000 |
| Retained earnings | 6 000 |
| Cash | 500 |
| Accounts payable | 2 500 |
| Shares held as investment | 15 000 |
| Machinery | 2 000 |
| Intellectual property rights | 4 000 |
| Accounts receivable | 7 000 |
| Tax payable | 1 500 |

Task: Prepare the Balance Sheet and calculate the missing values (use the table given)!

Questions:

1. What is the amount of resources owned by the entity?
2. What is the amount of the current liabilities and how can these be settled?

| | | | |
|------------------------------|-------|---------------------------|-------|
| ASSETS | Value | CLAIMS a.a. | Value |
| <i>FIXED ASSETS</i> | | <i>EQUITY</i> | |
| Intangible assets | | | |
| | | | |
| | | | |
| | | | |
| PP&E assets | | <i>PROVISIONS</i> | |
| | | <i>LIABILITIES</i> | |
| | | Subordinated debt | |
| | | Long-term liabilities | |
| Financial investments | | | |
| | | | |
| | | | |
| | | | |
| <i>CURRENT ASSETS</i> | | | |
| Inventories | | Short-term liabilities | |
| | | | |
| | | | |
| | | | |
| | | | |
| Receivables | | | |
| | | | |
| | | | |
| Securities | | | |
| | | | |
| | | | |
| Cash and cash equivalents | | | |
| | | | |
| | | | |
| Total assets | | Total claims a.a. | |

PART 2.

Answer the following questions:

1. Define '*balance sheet*'!

2. Define *owners' equity*!

3. The vertical articulation of the balance sheet is related to the number of value columns.

True / False, because.....

4. Define *fixed asset*!

5. Define *merchandise*!

Solution

Balance Sheet Easy Co. 20X4.01.01 (€)

| ASSETS | Value | Claims a.a. | Value |
|----------------------------------|---------|-------------------------------|---------|
| <i>FIXED ASSETS</i> | 56 400 | <i>EQUITY</i> | 66 000 |
| Intangible assets | 4 000 | reserve funds | 10 000 |
| intellectual property rights | 4 000 | stock capital | 50 000 |
| | | retained earnings | 6 000 |
| PP&E assets | 25 400 | <i>PROVISIONS</i> | 2 000 |
| investments | 3 400 | <i>LIABILITIES</i> | 32 000 |
| real estate | 20 000 | Subordinated debt | 0 |
| machinery | 2 000 | Long-term liabilities | 27 000 |
| Financial investments | 27 000 | Bank loans | 27 000 |
| loan provided | 12 000 | | |
| shares held as investment | 15 000 | | |
| | | | |
| <i>CURRENT ASSETS</i> | 43 600 | | |
| Inventories | 22 000 | Short-term liabilities | 5 000 |
| raw material | 11 000 | wages payable | 1 000 |
| goods in process | 3 000 | accounts payable | 2 500 |
| finished goods | 8 000 | tax payable | 1 500 |
| | | | |
| Receivables | 10 000 | | |
| other receivables | 3 000 | | |
| accounts receivable | 7 000 | | |
| Securities | 600 | | |
| securities held for sale | 600 | | |
| | | | |
| Cash and cash equivalents | 11 000 | | |
| bank account | 10 500 | | |
| cash | 500 | | |
| Total assets | 100 000 | Total claims a.a. | 100 000 |

Total Resources: 100 000 €.

Second mid-term sample

Some of the Opening accounts of Getting Ready Ltd, 20X5.01.01 (€):

| | | | |
|---------------------|--------|-----------------------------|--------|
| Accounts payable | 18 000 | Depreciation of PP&E assets | 4 000 |
| Accounts receivable | 5 000 | Wages Payable | 2 000 |
| Retained earnings | 1 000 | Cash | 5 000 |
| PP&E assets | 10 000 | Raw material | 13 000 |
| Operational credits | 8 000 | Bank account | 10 000 |

TASKS

1. Record the economic events of the period using the total cost method!

1. Make the opening entries on T-accounts!
2. 5 000 € operational credits have been transferred. The bank has sent the certification.
3. Buying merchandise for 8 000 €. The invoice has arrived.
4. Wages payable has been transferred. The bank has sent the certification.
5. Buying raw material for 4 000 €. The invoice has arrived.
6. Incurred costs of the period:

| Type | Total |
|--------------------|--------|
| Raw material | 7 600 |
| Purchased service* | 1 500 |
| Gross wages | 8 000 |
| Social security | 3 500 |
| Depreciation | 1 400 |
| Total | 22 000 |

* Transferred from bank account

7. 1 000 € personal income tax and 2 500 € social security have been deducted from gross wages.
8. Selling price of finished goods produced and sold during the period: 30 000 €. The invoice has been issued.
9. Selling merchandise, cost of merchandise sold is 3 500 €, selling price is 5 000 €. The invoice has been issued.
10. Close the operational accounts! Determine the net income of the period!
11. Calculate and record the distribution of income! Corporate income tax is 10%.

Answer the following questions:

1. Define 'cost'!

2. Describe *the model of four account classes*!

3. 'Gains' and 'revenues' mean the same.

True / False, because.....

4. Define cancellation!

5. Define depreciation expense!

Sample lecture exam

Task 1. (14 points)

The following data is known about the 20X5 operations of the 'Perfect_day_for_test' Ltd (€):
Task: Prepare the Income Statement for 20X5!

| | |
|-----------------------------------|--------|
| Amount paid for insurance | 1 200 |
| Selling price of sold merchandise | 55 000 |
| Social Security related to wages | 6 000 |
| Material expenses | 28 600 |
| Depreciation | 6 000 |
| Gross Wages | 10 000 |
| Cost of goods sold | 30 000 |
| Selling price of services | 32 000 |
| Amount paid as rent | 800 |
| Amount paid for cleaning | 600 |
| Corporate Income tax | 10% |

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| <p>Example 1.</p> | | <p>Example 2.</p> |
| <p>600 Insurance fee is paid in cash (invoice received) on Sept.1., 20X4. The fee covers the following six months (Sept-Feb).</p> | | <p>1000 sales revenue is earned during December 1. 20X4 - March 31. 20X5. Invoice will be issued in March, 20X5.</p> |
| <p>20X4</p> | | <p>20X4</p> |
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| <p>Example 3.</p> | | <p>Example 4.</p> |
| <p>900 € telephone bill is received in January, 20X5. The bill covers 3 months (20X4 November 1 – 20X5 January 31).</p> | | <p>An invoice on 600 sales revenue is issued on Nov.1, 20X4. Revenue is earned during November 20X4 - January 20X5.</p> |
| <p>20X4</p> | | <p>20X4</p> |
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Task 2: Name the T-accounts and complete them with the relevant entries/balances! (16 points)

| |
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| Task 3. Questions related to the lectures (20 points) |
|--|

1. What is the purpose of accounting?

2. Who are the stakeholders? How would you classify stakeholders?

3. True or false?
 1. Merchandise is classified in the Balance sheet as Inventory. True / False
 2. Cash-based accounting recognizes revenue when cash is paid out, and recognizes expenses when cash is received. True / False
 3. Current assets are long term assets used for the day-to day operations. True / False
 4. Equity = assets + liabilities. True / False
 5. Book value = Historical value +/- Adjustments. True / False

4. Define Balance Sheet!

5. Define Cost object! List some examples!

6. What does the definition refer to?
- a. is the balance at the beginning of the period (generally 1st January).
 - b.: neutralizing the impacts of the errors in bookkeeping.
 - c.is a form of bookkeeping that sorts accounting entries based on a chronological order.
 - d. the historical value of the material used during the period.
 - e. is also called net assets because it is the residual interest in the assets of the entity after deducting all of its liabilities.

Solution for Tasks 1-2.

| Perfect Day for a test | | | |
|----------------------------------|----------------------|--------|--------|
| Income Statement | | | |
| Year ended December 31, 20X5 (€) | | | |
| | Revenue: | | |
| | Sales Revenue | | 87 000 |
| | Expenses: | | |
| | Cost of goods sold | 30 000 | |
| | Material expenses | 28 600 | |
| | Purchased service | 2 600 | |
| | Salaries expense | 16 000 | |
| | Depreciation Expense | 6 000 | |
| | Total Expenses | | 83 200 |
| | Profit before tax | | 3 800 |
| | Corporate Income Tax | | 380 |
| | Profit after tax | | 3 420 |

| | | | | | |
|--|--------|--------------------------|------|--------------------------|--------|
| Example 1. | | | | | |
| 600 Insurance fee is paid in cash (invoice received) on Sept.1., 20X4. | | | | | |
| The fee covers the following 6 months (Sept-Feb). | | | | | |
| 20X4 | | | | | |
| Purchased service (exp.) | | Cash | | Deferred expense (asset) | |
| 600 | 200 | | 600 | 200 | |
| | | | | | |
| | | | | | |
| 20X5 | | | | | |
| Deferred expense (asset) | | Purchased service (exp.) | | | |
| OE 200 | 200 | 200 | | | |
| | | | | | |
| | | | | | |
| Example 3. | | | | | |
| 900 € telephone bill is received in January, 20X5. | | | | | |
| The bill covers 3 months (20X4 November 1 - 20X5 January 31). | | | | | |
| 20X4 | | | | | |
| Purchased service (exp.) | | Accrued expenses (liab.) | | | |
| 600 | | | 600 | | |
| | | | | | |
| | | | | | |
| 20X5 | | | | | |
| Purchased service (exp.) | | Accounts payable | | Accrued expenses (liab.) | |
| 900 | 600 | | 900 | 600 | OE 600 |
| | | | | | |
| | | | | | |
| Example 2. | | | | | |
| 1000 sales revenue is earned during December 1. 20X4 - March 31. 20X5. | | | | | |
| Invoice will be issued in March, 20X5. | | | | | |
| 20X4 | | | | | |
| Accrued revenue (asset) | | Sales revenue | | | |
| 250 | | | 250 | | |
| | | | | | |
| | | | | | |
| 20X5 | | | | | |
| Accounts receivable | | Sales revenue | | Accrued revenue (asset) | |
| 1000 | | 250 | 1000 | OE 250 | 250 |
| | | | | | |
| | | | | | |
| Example 4. | | | | | |
| An invoice on 600 sales revenue is issued on Nov.1, 20X4. | | | | | |
| Revenue is earned during November 20X4 - January 20X5. | | | | | |
| 20X4 | | | | | |
| Accounts receivable | | Sales revenue | | Deferred revenue (liab.) | |
| 600 | | 200 | 600 | | 200 |
| | | | | | |
| | | | | | |
| 20X5 | | | | | |
| Deferred revenue (liab.) | | Sales revenue | | | |
| 200 | OE 200 | | 200 | | |
| | | | | | |
| | | | | | |

This teaching material has been made at the University of Szeged, and supported by the European Union. Project identity number: EFOP-3.4.3-16-2016-00014