ACCOUNTING, FINANCE AND CONTROL

MULTIPLE CHOICE TEST

Call June 14th, 2023

Please state in CAPITAL LETTERS your Name and Surname in the following spaces

NAME	
SURNAME	
STUDENT ID	

Available Time: 60 minutes

In taking multiple-choice tests, you want to keep in mind the basics of test taking: read each question carefully, and have a systematic approach to the whole exam.

In the following, two very well-known strategies for approaching multiple-choice questions are reminded briefly.

Choose the Best Response, there is only one correct answer per question!

Many options in a multiple-choice answer may have some truth to them. You want to identify the *best* response from the *good* responses. If you have eliminated other answer options and have narrowed it down to two, and both seem true, try to pick the answer option that is in some way better than one that is just good. Be sure to read once again the question when selecting the *best* answer.

Mark only "Sure Things" first, and make 3 "Passes" through the test.

Go through the test first and answer all the questions for which the answers come easily. For the questions that seem more difficult, eliminate as many options as you can. This will give you a head start for your second pass. You may come across another question that gives you a clue about the one that stumped you. On your second pass spend extra time to figure out the "best" of the rest of the answer options. On your third pass, take an educated guess at the ones that are still elusive because any answer is better than no answer.

There are no penalties for wrong answers.

In the following questions, consider

- **1k€ = 1 thousand euros** and **1M€ = 1 million euros;**
- **the international convention for decimal and thousand separators is used – i.e., the comma is used to separate groups of thousands and the dot is used to separate decimals;**
- **calculations in the exercises need to be rounded up to the second decimal place**

If you read the text above, turn the page and begin your test

QUESTION 1A – (4 POINTS)

Flex is an Italian company which manufactures and sells shoes mainly in Europe. You know the following data referred to the last fiscal year (ending on December 31st, 2022):

Balance Sheet Data (December 31st, 2022)

- Total Assets: 669,992 k€
- Property Plant & Equipment: 81,326 k€
- Non-current Intangible assets: 52,061 k€
- Non-current Financial assets: 29,928 k€
- Cash and cash equivalent: 75,616 k€
- Current Financial Assets held for sale or trade: 2,110 k€
- Long-term borrowings: 16,062 k€
- Provisions for liabilities and charges (non-current): 5,110 k€
- Pension and similar obligations (non-current): 2,698 k€
- Other non-current financial liabilities: 7,339 k€
- Current borrowings: 67,064 k€
- Assets held for sale: 0 k€

You also know that the value of trade receivables, inventories, trade payables and other current liabilities is not provided in the text, but it is not negligible. Conversely, all items composing non-current assets and liabilities are provided above.

Income statement data (December 31st, 2022)

- Revenues: 878,000 k€
- Net profit: 15,383 k€
- Cost Of Goods Sold (COGS): 456,000 k€ (of which, D&A: 15,000 k€)
- There are no changes in the value of inventories of finished goods
- Other operating income is equal to 0

Accounting-based indicators (December 31st, 2022)

- ROE: 4.40%
- DSO: 50.03 days
- NPM: 1.75%
- ROA: 4.50%

Based on the available data, which one of the following sentences is CORRECT?

A. Although the Current Ratio equals 1.75, Flex might have to face liquidity issues in the short term, as inventories represent the 61% of current assets.
B. Current assets are 1.75 times current liabilities, and inventories cover 85% of current assets.
C. The Current Ratio is 1.16 and this means that the company will not face liquidity issues in the short term
D. None of the other answers is correct

SOLUTION

To answer the question, the Current Ratio (CR = Current Assets / Current Liabilities) and the level of inventories need to be calculated.

These values cannot be calculated by summing directly available data, as the text indicates that trade payables, while receivables, inventories and other current liabilities are missing (but they are not negligible).

Equity = Net Profit / ROE = 349,614 k€

Third Part Liabilities = Total Assets – Equity = 320,378 k€

Current Liabilities = Third Part Liabilities (TPL) – Non current Liabilities = TPL – long term borrowings – provisions for liabilities and charges (non current) – pensions and similar (non current) – other non current financial liabilities = 289,169 k€

Current Assets = Total assets (TA) – Non current assets = TA – PPE – non current intangible assets – non current financial assets and other non current assets = 506,677 k€

CR= CA/CL = 1.75

Inventories can be calculated from current assets, subtracting all other current assets. To do so, the non-negligible level of trade receivables must be calculated.

DSO = trade receivables / net sales * 365 → trade receivables = DSO*net sales /365 = 120,346 k€

Inventories = CA – trade receivables – cash and cash equivalent – current financial assets held for sale or trade = 308,605 k€, which represents the 61% of current assets

QR = Current Assets – Inventories / Current liabilities = (506,677-308,605) /289,169 = 0.68

A. It is CORRECT

B. It is WRONG, as the level of inventories is calculated without considering trade receivables

C. It is WRONG, as current assets and liabilities are calculated by summing the items available in the text (thus overlooking the missing ones)

D. A is CORRECT

QUESTION 1B - (2 POINTS)

You also know the following forecasts for the fiscal year 2023 about Flex:

- Revenues will increase by 10% compared to 2022.
- The Cost Of Goods Sold (D&A excluded) will increase by 10% compared to 2022.
- Period costs, other operating income and changes in the value of inventories of finished goods will remain stable from 2022 to 2023.
- New machinery used for producing shoes is acquired on January 1st, 2023 for 800 k€ and depreciated linearly on a useful life of 5 years starting from the acquisition date.
- The value of depreciation of assets incurred in 2022 remains the same also in 2023. The assets already depreciated in 2022 keep on being depreciated in the same way also in 2023 (no fair value, impairment, divestment or useful life equal to zero occur in 2023).

Based on the information and data available on Flex in questions 1a and 1b, which one of the following sentences is CORRECT?

A. EBIT MARGIN in 2023 is equal to EBIT MARGIN in 2022, as Revenues and Costs Of Goods Sold increase proportionally.
B. 2023 EBIT MARGIN is 7.6% and 2022 EBIT MARGIN is 3.43%
C. 2023 EBIT is 72,182k€ and 2023 EBIT MARGIN is 7.5%
D. None of the other answers is correct

SOLUTION

First, it is necessary to calculate EBIT MARGIN in 2022. We know the values of Net profit, Cost of Goods sold, and Revenues. We cannot directly calculate EBIT from these data, as we do not know the value of period costs.

We can calculate EBIT from ROA and Total assets→ EBIT = ROA * Total Assets = 30,150 k€

Period costs 2023 = Revenues – costs of goods sold – EBIT = 391,850 k€ (being other operating income = 0)

EBIT margin 2022 = EBIT/Revenues = 3.43%

In 2023

- Revenues 2023 = 1,1*Revenues 2022 = 965,800 k€
- Costs of Goods sold (D&A excluded) 2023 = Costs of Goods sold (D&A excluded) 2022*1,1 = (456,000 – 15,000)*1,1= 485,100 k€
- The Cost of Goods sold comprises a quota of D&A, that in 2023 can be calculated as = 15,000k€+ 800k€/5 = 15,160 k€
- Total costs of Goods sold 2023 = 500,260 k€
- Period costs 2023 = Period costs 2022 = 391,850 k€
- EBIT 2023 = Revenues 2023 – Total costs of goods sold 2023 – Period costs 2023 = 73,690 k€

EBIT MARGIN 2023 = 7.6% (122,2% increase)

WRONG ANSWERS

A. It is WRONG as EBIT margin increases from 2022 to 2023, as period costs remain stable.

B. It is CORRECT

C. 2023 Costs of goods sold is calculated by multiplying all costs of goods sold 2022 (D&A included) by 1.1

D. B is CORRECT

QUESTION 2A - (4 POINTS)

Today you are calculating the EQUITY VALUE of Company Beta. The analytical period covers the fiscal years 2024, 2025, and 2026. After 2026, you cannot produce reliable estimations of the financial reports. You are calculating the terminal value assuming perpetuity without growth.
The following data about the fiscal year 2026 are available:

- Bank debts on January 1st = 8,000 k€
- Bank debts repaid during 2026 (the amount is repaid on December 31st) = 2,000 k€
- Capital expenditures = 1,400 k€
- Delta Accounts Payable (final – initial) =200 k€
- Delta Accounts Receivable (final – initial) = 400 k€
- Delta Inventories (final – initial) = 100 k€
- Depreciation & amortization = 400 k€
- Dividends paid = null
- EBIT = 8,100 k€
- Equity on January 1st = 2,000 k€
- Financial revenues = null
- Issue of new share capital = null
- There are no other financial liabilities (other than bank debts)

You have also the following data:

- Average yearly cost of debt = 2,5%
- Beta unlevered of the industry = 1.2
- Corporate tax rate = 50%
- Market return = 5%
- Risk free rate = 1%

Knowing that:

- kd is calculated as the average cost of debt held during the year;
- the financial leverage (D/E) is computed using the starting values of Equity and Financial Liabilities

What is the value of Terminal Value on December 31st, 2026?

A. Around 4,221 k€
B. Around 3,571 k€
C. Around 8,117 k€
D. None of the other answers

SOLUTION

TV (2026) = FCFE (2026) / ke (2026)

FCFF = EBIT+ D&A – delta AR (fin-in) + delta AP (fin-in) – delta INV (fin-in) – taxes (calculated on EBIT) - CAPEX

FCFF = 8,100 + 400 – 400 + 200 – 100 – (8,100*50%) – 1,400 = 2,750 k€

FCFE = FCFF + net financial revenues – net financial costs – debt repayment + new debt + new share capital – dividends

FCFE = 2,750 + 0 – (6,000+2,000) * 2,5% * (1-50%) – 2,000 + 0 + 0 –0 = 650

where financial costs are calculated considering the bank debts held during 2026 (8,000 k€)

ke can be calculated using the CAPM approach

ke = rf + BL (rm – rf)

where BL can be determined using the Beta unlevered of the industry

BL = BU * (1+ (1 – tax) * D/E) = 1.2 * (1+ (1 – 50%) * (8,000 / 2,000) = 3,6

→ke = rf + BL (rm – rf) = 15,4%

TV (2026) = FCFE (2026) / ke (2026) = 650 / 0,154 = 4,221 k€

Answers B is wrong because cash outflows for financial interests are included without considering tax savings. FCFE must be calculated including cash outflows for financial interests net of tax savings.

Answer C is wrong because in the calculation of FCFF, the impact of the net working capital is included with the wrong sign.

Answer D is wrong because answer A is correct.

QUESTION 2B - (2 POINTS)

Considering all data about company Beta in the previous exercise. In addition, you know that:

- Beta will collect, on January 1st, 2026, 4,000k€ from banks to sustain the investment strategy at a cost of 4%. This debt will be held for 10 years;
- Beta shareholders change their expectations about ke; the new expectation is ke = 15%.

Furthermore:

- kd is calculated as the average cost of debt held during the year
- the value of the financial leverage is computed using the starting value of Equity and the total amount of bank debts used by the company during 2026

What is the WACC for Company Beta in year 2026?

A. Around 3.75%
B. Around 3.43%
C. Around 3.86%
D. None of the other answers

SOLUTION

WACC = ke * E/(E+D) + kd * D/(E+D) * (1-tax)

E = 2,000

D = 8,000 + 4,000 = 12,000

ke = 15%

kd can be calculated as financial costs sustained in 2026 divided bank debts held in 2026

financial costs of the bank debts opened before 2026 = 8,000 * 2.5% = 200 k€

financial costs for the new debt = 4,000 * 4% = 160k€

total financial costs = 200+160 =360k€

total bank debts held in 2026 = 8,000+4,000=12,000

average cost of debt (kd) in 2026 = 360/12,000 = 3%

WACC = 15% * (2,000/(12,000+2,000) + 3% * (12,000/(12,000+2,000))*(1-50%) = 3.43%

Answer A is wrong because the calculation of D takes into account the repayment of bank debts for 2,000 k€ at the end of the year

Answer B is correct.

Answer C is wrong because the cost of bank debt refers just to the new bank debt and does not consider the mix between the previous bank debts and the new one.

Answer D is wrong because answer B is correct.

QUESTION 3A - (2 POINTS)

BLISS is a not listed online retail company for Home and Living goods. The company sells (but does not produce) a wide range of carefully selected products from the full range of Home and living categories, such as textile furnishings or home accessories or small furniture (sofas, chairs, beds, etc.). BLISS operates on a European scale, with headquarters in the Netherlands and three logistic hubs respectively in Italy, U.K. and Spain. The strategy of BLISS is to sell its products at affordable prices to suit every pocket, and the Marketing department is repeatedly developing promotions and discounts to increase sales. This allows for enlarging the customer base with keeping under control the products’ average sitting on the warehouse’s shelves. Indicators such as Inventory Turnover Ratio are thus insightful for BLISS.

You know the following data about BLISS as of December 31st, 2022:

- Revenues’ growth rate = + 21% in 2022 compared to the year 2021
- Yearly sales = 50 M€
- EBITDA = 38 M€
- Net Profit = 12 M€
- Number of shares= 1,000,000
- Unitary share price = 5 €/share
- Debt to Equity (D/E) ratio, with Debt considered as Financial Liabilities = 0.6
- ROE = 8.5%
- Cash & Cash equivalents= 56 M€

You know the following information about potential comparable companies. All these companies operate in the same online retail sector of Home and Living goods. Data refer to the year 2022:

	NORDEC	STYLISH	LUXLUX	SHINE
Revenues' growth rate (2022 vs 2021)	16%	18%	22%	20%
Number of shares	1,100,000	1,300,000	2,000,000	1,500,000
Sales	45 M€	51 M€	120 M€	49 M€
Debt to equity ratio, with Debt as financial liabilities only	1.2	0.8	0.7	0.72
EBITDA	39 M€	36 M€	79 M€	40 M€
Net Profit	11 M€	13 M€	28 M€	10 M€
Enterprise Value	231 M€	389 M€	897 M€	410 M€
Market Capitalization	159 M€	261 M€	348 M€	273 M€
Market served	All Europe	All Europe	Global market	All Europe
Products	High-end Nordic style décor goods	Stylish home goods at cheap prices	Low-priced furniture products	Convenient and affordable homewares and interiors

Based on the available data, which of the following are comparable companies of BLISS?

A. Companies Nordec, Stylish and Shine
B. Companies Stylish, LuxLux and Shine
C. Companies Stylish and Shine
D. Companies Nordec and Stylish

SOLUTION

The correct answer is letter C. The two companies share the same market with BLISS . Further, they also have the same profile of BLISS considering risk (i.e., D/E), growth (i.e., the growth rate) and cash (considering EBITDA as proxy of cash).

Option A is not correct because NORDEC has a different profile for risk compared to BLISS . Debt to equity ratio is 1.2 against the 0.6 of BLISS.

Option B is not correct because LUXLUX is not a comparable company of BLISS. LUXLUX is present in a different market, which is the entire globe. In addition, LUXLUX is also different in terms of cash (EBITDA of LUXLUX is more than double that of BLISS).

Letter D is not correct because it includes NORDEC, which is not a comparable company for the reasons explained in option A, while it is excluding STYLISH which is instead comparable to BLISS Ltd for products and market and under risk, growth, and cash profile

QUESTION 3B - (4 POINTS)

You know that the Equity Value of BLISS, estimated through Relative Valuation using an asset-side approach, on the selected comparable companies, is around 371.29 M€. Which multiple has been used for the computation?

A. EV/FCFF
B. EV/Sales
C. P/E
D. None of the other answers is correct

SOLUTION

Answer B is correct. EV/Sales is an asset-side multiple and, if applied as multiple in the Relative Valuation of BLISS, it returns an EV value for BLISS equal to the one given by the text.

	Stylish	**Shine**	**Average**
EV/Sales	7.63	8.37	8,00

The Enterprise Value of BLISS Ltd is thus: Average multiple* Sales of BLISS.

EV of BLISS = 8.00*50 M€= 400.00 M€

For the computation of the Equity Value of BLISS, the equation EV = E+ NFD is applied, with NFD as Financial Liabilities – Cash & cash equivalents.

The information on Cash & cash equivalents is already given by the text, and it is of 56 M€, while the financial liabilities can be derived from the Debt-to-equity ratio and the Equity. In turn, the equity of BLISS can be derived from the inversed formula of ROE.

The equity of BLISS is: Net Profit/ ROE.

Equity of BLISS = 12.000.000 €/ 0.085 = 141.18 M€

Now it is possible to compute the Financial Liabilities of BLISS from the inversed formula of Debt-to-equity ratio. Financial Liabilities of BLISS Ltd = 141.18 M€* 0.6= 84.71 M€.

Consequently, the Net Financial Debt is equal to Financial Liabilities – Cash & cash equivalents.

NFD of BLISS = 84.71 M€ - 56 M € = 28.71 M€

All the data for the Equity Value of BLISS are now available.

Equity Value of BLISS = Enterprise Value – NFD = 400 - 28.71 = 371.29 M€ → which confirms the Equity Value given by the text.

Answer A is not correct. Indeed, EV/FCFF cannot be computed since the data on FCFF of comparable companies and BLISS are missing.

Answer C is not correct. Indeed, the text is saying that the Relative Valuation is implemented with an asset-side approach while P/E is an equity-side multiple.

QUESTION 4 - (2 POINTS)

LOMBO and TUSCI are two Business Units (BUs) of the company ITALY, both based in Italy and operating on the Italian market. The BUs are branches on the territory, without dedicated (i.e., direct) corporate costs. LOMBO has revenues = 600 M€ and a “gross” EBIT margin (i.e. EBIT computed before allocating corporate costs) = 25%. TUSCI has revenues = 600 M€ and a “gross” EBIT margin = 50%. Corporate costs are 165 million and are allocated to the two BUs based on revenues.

In the case of a decrease of 100 M€ of the revenues of LOMBO that does not modify the gross EBIT margin of the two BUs, which one of the following statements is CORRECT?

A. EBIT of LOMBO computed after corporate cost allocation = 125 M€
B. EBIT of LOMBO computed after corporate cost allocation = 210 M€
C. EBIT of LOMBO computed after corporate cost allocation = 50 M€ and EBIT of TUSCI computed after corporate cost allocation = 300 M€
D. None of the other answers is correct.

SOLUTION

Allocation basis = sales = 500 + 600 = 1,100 M€

Allocation coefficient = 165 M€ / 1,100 M€ = 0.15

CC_LOMBO = 0.15* 500 = 75 M€

CC_TUSCI= 0.15 * 600 = 90 M€

LOMBO -> EBIT (before CC allocation) = 500 * 25% = 125 -> EBIT (after CC allocation) = 125 –75 = 50

TUSCI-> EBIT (before CC allocation) = 600 * 50% = 300 > EBIT (after CC allocation) = 300 – 90 = 210

The correct answer is D = None of the other answers is correct, as it is visible from the solution.

QUESTION 5 - (2 POINTS)

The management of company COMBO wants to introduce performance indicators for the first time and then provide incentives to managers at the level of operational (responsibility) centres. COMBO decided to focus the attention on cost centres first. COMBO has two production Departments, which are responsible for the production of similar products. Each production department has a production manager. They are responsible for the manufacturing organisation and its results. Both Departments participate in budgeting preparation providing the needed capacity for the coming year, considering new investments already approved. In addition, they provide the future monthly production planning (production budget), considering the inventories. The planning for the production is based on sales. The planned sales are defined by the Sales Department.

Given that it is the first experimentation of the incentive scheme, based on performance indicators, the company prefers to be prudent and choose indicator that can be linked clearly to the Production Managers’ responsibility.

Considering the situation described which of the following statements is TRUE?

A. The most appropriate indicator to be assigned to the two Production Managers is COMBO Economic Value Added
B. The most appropriate indicator to be assigned to the two Production Managers is COMBO Ebit Margin.
C. The most appropriate indicator to be assigned to the two Production Managers is COMBO net profit.
D. None of the other answers is correct

SOLUTION

The correct answer is D. All other answers propose an indicator that includes the responsibility of other COMBO departments, thus violating the principle of specific responsibility (i.e. what production managers are responsible for).

QUESTION 6 - (2 POINTS)

In case of negotiated transfer prices to adapt the price of a slightly customized product (i.e., a product very similar to the "standard" version usually provided by the internal supplier - i.e., the upstream business unit -), which one of the followings statements is TRUE?

A. The market price of similar products and the unitary cost of the standard version of the product (if existing) are never taken into account when a negotiated transfer prices system is in place (i.e.: the two parts are always totally free to negotiate the price, with no reference values);
B. The buying and selling units are free to negotiate, but the market price of similar products and/or the unitary cost of the standard version of the product (if existing) can be used as reference values by corporate controllers, to prevent from opportunistic behaviours by the selling or buying business unit (in case one of the two parts has much more bargaining power than the other)
C. The price range (i.e. the min and max transfer price) is always provided by corporate controllers
D. None of the other answers is correct

SOLUTION

Answers a) is FALSE. Market prices for "standard" products and/or the standard unitary costs (if existing) can be used during the negotiation process (although it is not mandatory to use them). Also the third answer is FALSE, since negotiated transfer price can be used when a market price and /or a standard cost for similar (but not identical) products are available (see answer b))

QUESTION 7 - (2 POINTS)

Consider a company whose competitive strategy is based on product/service innovation. With regard to the performances (i.e., the value of KPIs) achieved by the R&D unit in a reporting period, which one of the following statements is FALSE?

A. They may affect the overall financial performances of the company in the next reporting periods
B. They may have affected the overall financial performances of the company in the same reporting period
C. They may affect performances of the R&D unit in the next reporting periods
D. All the other answers are false

SOLUTION

In this type of companies R&D activities are “mission-critical”. So, R&D performances can be considered as “value drivers” (i.e. they affect financial performances of the company and, then, its (enterprise) value). The link can be both in the short and in the long term (depending on company specific factors: for example, if the the average duration of new product development processes/projects are very short – for ex: 2 or 3 months -, and the product is launched on the market (i.e. starts being sold) in the same year, the performance of that NPD process can affect the financial performances (according to the market success of that product). If, instead, a new product takes a longer time to be developed (for ex: 12 months or more), the performances of that process is supposed to affect performances of the company in the next year(s). So both answers a) and b) are correct. As for answer c), following last example: if a NPD process/project lasts more than one year, the performances reached in the first year (i.e. in the first stages of the project) may affect the overall performances of that project.

QUESTION 8 - (2 POINTS)

Which of the following statements regarding the lines of credit as a financing option is CORRECT?

A. Lines of credits are used mostly to cover short-term imbalances
B. Interest rates of line of credits are always floating
C. Lines of credit are always the least expensive among short term financing possibilities
D. Lines of credit are a good instrument for investment activities

SOLUTION

A is correct since lines of credits are mainly used to cover short-term imbalances

B is not correct since lines of credits can be associated to different typologies of interest rates

C is not correct since lines of credit are one of the most expensive financing possibilities

D is not correct since lines of credit are not used as investing tool

QUESTION 9 - (2 POINTS)

Consider the preparation of consolidated financial statements. Which of the following sentences is CORRECT?

A. The equity method should be applied when the investor exercises the full control over the investee
B. An investor controls an investee only if it exercises power over the investee
C. In the consolidation process intra-group transactions are eliminated
D. In the consolidation process, the difference between the acquisition cost of a company and its book value (if positive, i.e. greater than 0) is accounted for as a revaluation reserve in the consolidated balance sheet

SOLUTION

A is not correct since the equity method is applied when the investor holds significant influence over investee, but does not exercise full control over it, as in the relationship between parent and subsidiary

B is not correct since three conditions should exist to exercise control over an investee: power, the exposure to variable return and the ability to affect return

C is correct since intragroup transactions are eliminated during the consolidation process

D is not correct since the difference between the acquisition cost of a company and its book value are accounted as goodwill in the consolidated balance sheet.