

## Item 1

 Calculator

## Group 1 (1 Question, 2 points)

The Zang Manufacturing Company manufactures two products (A and B) by order. The overhead costs (58 000€) have been divided into three cost pools that use the following activity drivers:

Product	Number of orders	Number of labour transactions	Labour hours
A	15	50	500
B	10	150	2 000
Cost per activity	10 000€	8 000€	40 000€

The company accepted a request for product A, which implies direct costs of 20 000€. If the company wishes to make a profit of 5 000€ in this order (there are no other costs besides those mentioned in the text), what is the price to be notified to the client?

- A 83 000€
- B 67 000€
- C 41 000€
- D 25 000€
- E None of the others.

## Item 2

 Calculator

**Group 2 (2 Questions, 2 Points)**

The Hungarian Company manufactures 2 products: A and B. Regarding the month of December, the following information is available:

A. The P&L of the company using the **total full costing system** (in Euros):

Description	Product A	Product B	Total
Sales	45 000	22 000	67 000
COGS	(27 660)	(14 817)	(42 477)
Gross margin	17 340	7 183	24 523
Non-manufacturing variable costs	(5 240)	(2 200)	(7 440)
Non-manufacturing fixed costs			(11 035)
Profit			6 048

B. Inventories

	Product A	Product B
Opening inventories	0	0
Sales	2 000 units	1 100 units
Closing inventories	0	700 units

C. The unit Cost of Goods manufactured (CGM) based on variable costing is:

Product A	Product B
12,18€	11,60€

D. The practical capacity for each product is 2 000 units.


2.1. The total Manufacturing Fixed Costs are (**Note:** Use two decimals' places in all your calculations):

- A 6 666€
- B 5 357€
- C 7 040€
- D 20 520,85€
- E None of the others.

**2.2.** Complete the following sentence: «In this particular case, the Global Profit using Full Costing based on Practical Capacity is \_\_\_\_\_ than using the Total Full Costing»

- A Higher
- B Lower
- C The same
- D Depends on other data not mentioned.
- E None of the others.

### Item 3

 Calculator

**Group 3 (3 Questions, 4 Points)**

Adams Company, a merchandising firm that sells one product, estimates it will sell 19 000 units of its product at 80 € per unit in December. In November, the company prepared the budget for December, as shown below:

<b>Merchandise inventory, December 1st</b>	1 000 units
<b>Desired merchandise inventory for December 31st</b>	3 000 units
<b>Cost per unit of merchandise purchases</b>	60€
<b>Selling and administrative expenses</b>	600 000€
<b>November sales</b>	18 000 units at 80€ each

- The company estimates that 10% of each month's sales is collected in the month of the sale and that the remaining 90% is collected in the month after the sale.
- The 600 000 € of selling and administrative expenses include 292 000€ of depreciation.
- The company pays for half of merchandise purchases during the month of purchase and pays the remainder during the month following purchase. Estimated merchandise purchases for November are 340 000 €.
- All other out-of-pocket expenses are paid for in cash.

**3.1.** How many units of merchandise will Adams expect to purchase in December?

- A** 19 000 units
- B** 21 000 units
- C** 20 000 units
- D** 18 000 units
- E** None of the others.

**3.2.** The expected operating cash balance for December is:

- A 48 000€
- B 340 000€
- C 412 000€
- D 480 000€
- E None of the others.

**3.3.** The budgeted operating profit for December is:

- A +72 000€
- B -220 000€
- C +48 000€
- D -48 000€
- E None of the others.

#### Item 4

 Calculator

**Group 4 (4 Questions, 4 Points)**

From the New Energy Company, we obtained the following information, concerning its expected activity for the next financial year:

	1 200 tonnes
<b>Sales</b>	10 800€
<b>Direct materials</b>	3 960€
<b>Variable conversion costs</b>	4 800€
<b>Contribution margin</b>	2 040€
<b>Fixed costs</b>	1 640€
<b>Profit before taxes</b>	400€

The expected resources to be used for one unit of product are as follows:

Direct materials used..... 3 units

Conversion costs.....4 DLh

The General Director is very happy because even though Sales units were only **960 tonnes**, actual profit increased **210%**.

The fixed costs variance was zero.

**4.1.** The actual contribution margin is:

- A** 2 880€
- B** 1 632€
- C** 2 040€
- D** 4 080€
- E** None of the others.

**4.2.** The sales margin volume variance is:

- A 408€ UNF
- B 840€ FAV
- C 2 160€ UNF
- D 840€ UNF
- E None of the others.

**4.3.** Knowing that the material usage variance was favourable in 528€ and the actual direct materials cost is 2 880€, the actual unit price/cost of each unit of Direct Material is:

- A 1,20€
- B 1,10€
- C 1,00€
- D 1,25€
- E None of the others.

4.4. Knowing the sales price variance is favourable in 960€, the actual unit selling price is:

- A 10,00€
- B 10,50€
- C 9,50€
- D 12,25€
- E None of the others.

### Item 5

 Calculator

#### Group 5 (1 Question, 1.5 Points)

The Brown company sells three products, X, Y and Z. Product X has a contribution to sales ratio of 10%, product Y has a contribution to sales ratio of 20% and product Z has a contribution to sales ratio of 50%.

For every 5 units of product X, 5 units of product Y and 5 units of product Z are expected to be sold.

The selling price is the same for all products.

If total sales are 300 000€, the expected profit is 20 000€.

What will be the expected break-even sales revenue?

**ANSWER ON PAPER**

## Item 6

 Calculator
**Group 6 (2 Questions, 3 Points)**

Fashion Company manufactures 3 products: shirts, coats and pants. All of them are made of a special fabric supplied by an Australian company.

Next year it will not be possible to order more fabric units. The available quantities are 250 000 meters and the cost of the fabric is 1 250 000€.

The forecast in units of internal demand for next year is:

Shirts	Coats	Pants
25 000	30 000	27 000

Other data:

	Shirts	Coats	Pants
<b>Unit selling price</b>	22€	30€	50€
<b>Fabric needed per unit</b>	2 meters	3 meters	5 meters
<b>Direct labour needed per unit</b>	10 minutes	20 minutes	30 minutes

- Direct labour is a variable cost and the company pays 6€ per hour.
- The company pays a sales commission of 5% of the sales.
- The manufacturing overhead fixed costs are 290 000€ and the company allocates them in equal parts to the products.
- The non-manufacturing fixed costs are 500 000€.

**6.1.** What is the production plan that allows the company to have the maximum operational profit?

**ANSWER ON PAPER**


**6.2.** After the definition of the production plan, but before the company starts production, an external client ordered 25 000 units of pants. Knowing that for this order the company doesn't have to pay sales commission, what will be the minimum selling price (per unit) that will allow the company to accept this order?

**ANSWER ON PAPER**

## Item 7

 Calculator**Group 7 (2 Questions, 3.5 Points)**

Company Sea and Budget, Lda., is preparing its budget for the 1st quarter of 2024.

The Company manufactures Product R from Material S.

Regarding the year to be estimated, the following elements are known:

1 – The budgeted Operating Cash Balance:

	January	February	March
Operating cash balance	-2 000€	500€	4 650€

2- Other information:

- The opening cash on the 1st of January is 2 000€.
- The company aims to keep the monthly cash balance at a minimum of 3 000€.
- The company can borrow monthly loans, always in multiples of 1 000€, to solve treasury problems. For budgeting purposes, loans are considered to be taken out on the 1st day of the month in which they are expected to be needed. Interest payments are made monthly, at a monthly interest rate of 5%, with the payment being made on the 1st day of the following month.
- Whenever the company has cash surpluses, it can repay loans in multiples of 1000€, on the first day of the month in which the surplus is verified.
- Whenever the company has cash surpluses and the loans are 0€, the Company can make Financial Applications on the 1st day of the month, in multiples of 1000€. The interest received is paid monthly, at a monthly interest rate of 2%, taking place on the 1st day of the following month.

7.1. What will be the cash amount on the Balance Sheet on March 31st?

**ANSWER ON PAPER**

7.2. What will be the financial revenues and costs amount in the P&L for the 1st quarter?

**ANSWER ON PAPER**