Item 1

Calculator

Group 1- 2.5 Points

The Drink-Diet Company manufactures two goods (Diet Orange Juice and Green Tea). The company sells the products in tons for other companies that carry out the labelling and packaging.

The manufacturing process is the following:

Direct materials (Oranges and Green Tea Leaves) are processed in the Crushed homogeneous cost pool, resulting in semi-products that pass over to the Mixer homogeneous cost pool. Here, the semi-product is mixed with water to get the final product. The main difference between the two diets is the materials used in production.

The Company also has two more homogeneous cost pools: Maintenance and Power generator.

Accounting elements from the month of April:

1 – Activity of the homogeneous cost pools

Users \ Suppliers	Power Generator	Crushed	Mixer
Maintenance	3 000	-	-
Power Generator	-	-	-
Crushed	7 000	-	-
Mixer	20 000	-	-
Diet Orange Juice	-	200	100
Green Tea	-	200	400
TOTAL	30 000 kw	400 Mh	500 Mh

The Maintenance Homogeneous Cost Pool attributes 30% of its activity to the Power generator, 50% to Crushed and the remaining value to the Mixer Homogeneous Cost Pool.

2 – Direct costs (in Euros) of the homogeneous cost pools:

Maintenance	Power Generator	Crushed	Mixer
1 000€	6 975€	5 000€	6 025€

Knowing the Company uses the simultaneous equation method, the total Maintenance department cost is:

A	1 750 €
B	1 000 €
C	1 697,5 €
D	1 095,5 €
E	None of the others.

Knowing that if the company uses an unknown allocation method and the total cost of the Mixer is 11 477,38 €; the total cost of Crushed is:

A	7 522,62 €
B	6 522,62 €
C	5 722,62 €
D	6 722,62 €
E	None of the others.

Item 2

Group 2- 1 Point

Job Costing System applies when...?

A Masses of identical units are produced, so it is unnecessary to assign costs to individual units to output.

B Each unit of product or service produced is unique so the cost of each unit must be calculated separately. ✓

C The output of the manufacturing departments is homogenous.

D The company uses a single fixed overhead rate to allocate costs across all production units.

Item 3

Calculator

Group 3- 1 Point

The Sarmento de Beires Company produces wine. During the month of January, the direct materials that entered into the manufacturing process were 10 000 litres at a manufacturing cost of 100 000€. There are no opening and closing stocks. The production was 7 000 litres (equivalent to 7 000 bottles of 1 litre each) since the company experienced normal losses of 2 000 litres and abnormal losses of 1 000 litres. The selling price of each bottle of wine is 30€. Assuming that the company has a Scrap Value of 5€ per litre, what is their Profit?

A 110 000 €

B 150 000 €

C 125 000 € ✓

D 135 000 €

Item 4

Calculator

Group 4- 3 Points

The COTSY Company manufactures Product A which is sold in the domestic market.

Concerning January 2023, the following P&L were prepared using 3 different cost accumulating systems:

Description (in Euros)	A	B	C
1. Sales	652 500	652 500	652 500
2. Costs	618 500	629 500	624 500
3. Profit before taxes	**34 000**	**23 000**	**28 000**

Other information:

- Actual production 15 000 units
- Practical capacity of production 33 000 units
- Opening stock of finished goods 0 litres
- Under-recovery of overheads using Full Costing Based on Practical Capacity = 180 000 €

The cost accumulation system used in each P&L is:

Note: TFC = Total full costing, FCPC = Full costing based on practical capacity and VC = Variable costing

A A- TFC, B- VC, and C- FCPC ✓

B A- FCPC, B- VC, and C- TFC

C A- VC, B- FCPC, and C- TFC

D None of the others.

The units of closing stocks of finished goods are:

A	500 units ✓
B	5 000 units
C	18 000 units
D	11 000 units
E	None of the others.

Item 5

Calculator

Group 5- 1.5 Points

A furniture factory produces three types of tables: small, medium and large. Information on each is as follows:

Values per unit	**Small**	**Medium**	**Large**
Selling price	150 €	?	745 €
Manufacturing fixed cost	100 €	150 €	?
Manufacturing variable cost	?	50 €	120 €
Non-manufacturing variable cost	5€	?	50 €
Profit per table	?	?	?

	Small	**Medium**	**Large**
Demand in units	150	120	100
Machine Hours needed per unit	20	40	100

The company has a capacity constraint of 2 880 MH.

Nevertheless, provided that all MH available are allocated, the operating profit of the firm is the same, regardless of the production mix.

Therefore, the unit manufacturing variable cost of the Small table is:

Note: Manufacturing fixed costs were allocated to the products on the assumption that total demand would be met by production.

A 30 €

B 35 €

C 40 €

D 45 €

E None of the others.

Item 6

Group 6- 1 Point

Which of the following options is a possible cause for an unfavorable Sales Margin Volume Variance?

A Unexpected decrease in market demand due to economic recession. ✓

B Unexpected increase in selling prices.

C Increase in market demand as a result of lower selling prices.

D None of the others.

Item 7

Calculator

Group 7- 3 Points

The Flavor Restaurant, which belongs to a restaurant chain, had a loss of 8 400€ in February due to a decrease in meals served, although the actual selling price per meal remained as expected.

The actual and forecast information related to February is as follows:

	Actual	Static Budget
Sales	64 000 €	80 000 €
Ingredients	28 000 €	23 000 €
Personnel costs	14 400 €	18 000 €
Contribution margin	21 600 €	39 000 €
Fixed costs	30 000 €	30 000 €
Operating profit	**- 8 400 €**	**9 000 €**

Other relevant information:

- The ingredients usage variance was 0€.
- The purchase of the ingredients has to be done internally, at the purchasing price set by the managing director of the restaurant chain.
- The expected wage rate per hour paid to personnel is 10€; however, this rate increased by 20% per hour, because there is a shortage of this kind of workers in the market.

The ingredient price variance is:

A 6 600 € Unfavourable

B 9 600 € Unfavourable ✓

C 6 000 € Unfavourable

D 5 000 € Unfavourable

E None of the others.

The personnel costs efficiency variance is:

A 0 € Favourable

B 2 400 € Favourable ✓

C 700 € Favourable

D 3 600 € Favourable

E None of the others.

The sales margin volume variance is:

A 17 400 € Unfavourable

B 7 800 € Unfavourable ✓

C 7 000 € Unfavourable

D 16 000 € Unfavourable

E None of the others.

Item 8

Group 8- 1.5 Points

Which direct material price per unit must be used to calculate the direct material usage variance? The budgeted/standard or the actual? Why?

Budgeted/Standard Price

To isolate the effect of changes in the volume of DM consumed from changes in the price of the DM. (If the actual price was used there would be 2 sources of variance)

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Item 9

Group 9- 2.5 Points

The Old Company manufactures product X. The following data is available for the next period:

Selling price per unit	10 €
Units variable cost	5,5 €
Fixed manufacturing costs	400 000 €
Sales commission	5% of the selling price
Fixed non-manufacturing costs	150 000 €
Expected sales	175 000 units

9.1 By how much sales may decrease in the next period before a loss occurs?

ANSWER ON PAPER

Now assume that the marketing manager could also approve an advertising campaign for the next period.

Compared with the situation before, the break-even point would increase by 25 000 units.

9.2 What is the amount that must be spent on the advertising campaign?

ANSWER ON PAPER

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Calculator

Item 10

Calculator

Group 10- 3 Points

Company BESTSELLER is a new company that plans to start its activity in year N+1. Its cash budget for year N+1 is the following :

Description	Semester 1	Semester 2	Balance Sheet	Sales collection period
Receipts				
Sales of product A	60 000 €	?	75 000 €	90 days
Sales of product B	?	181 250 €	50 000 €	45 days
Payments				**Suppliers payment period**
Purchases of Direct Materials	35 000 €	50 416,(6) €	?	60 days
Variable conversion costs	14 000 €	?	20 000 €	75 days
Fixed conversion costs	?	30 000 €	5 000 €	30 days
Non-manufacturing costs	?	32 500 €	2 500 €	15 days

Other relevant information:

- The company uses total full costing;
- There are no working-in-progress stocks;
- Opening stocks are:
  - Finished goods: 0 units
  - Direct materials: 0 tonnes
- Closing stocks are:
  - Finished goods: 1 month of annual sales
  - Direct materials: 1 month of annual purchases
- Annual depreciation is:
  - Manufacturing: 17 500 €
  - Non-manufacturing: 20 000 €
- The company's activity (production, sales, purchases and cost centres) is regular only within each semester;
- For simplification reasons, assume that there is no VAT under any of the items presented in the table above.
- The company contracted a loan on the 1st June of N+1 with a principal amount of 100 000 €, annual interest payments of 7.5% and a maturity of 5 years.
- Assume that all months have 30 days.

10.1 Based on Total Full Costing, compute the estimated consumption (in euros) of direct materials in year N+1.

ANSWER ON PAPER

10.2 Based on Total Full Costing, compute the Operating Profit to consider in the Budgeted Profit and Loss Account of year N+1;

[Note: Assume that the budgeted consumption of direct materials for year N+1 is 100 000 €]

ANSWER ON PAPER

0 / 1 Word Limit

Group 9

9.1) (1.5 Points)

VC = 5.5€ + 0.05 * 10€ = 6€

CM Unit = 10€ - 6€ = 4€

FC = 400 000€ + 150 000€ = 550 000€

BEP Units = 550 000€ / 4€ = 137 500 Units

SM = (Sales – BEP) / Sales = 1 – 137 500/175 000 = 21.43%

9.2) (1 Point)

BEP = (FC + Advertising Spend)/ CM Unit
⇔ 137 500 + 25 000 = (550 000€ + Advertising Spend) / 4€
⇔ Advertising Spend = 100 000€

Group 10

10.1) (2 Point)

Closing DM = 1/12 Purchases DM

Purchases DM = 35 000€/4 * 6 + (50 416.(6) – 35 000€/4 * 2)/4 * 6
= 52 500€ + 49 375€ = 101 875€

Opening DM + Purchases DM – Consumption DM = Closing DM
⇔ 0 + Purchases DM – Consumption DM = Closing DM
⇔ 101 875€ - Consumption = 1/12 * 101 875€
⇔ Consumption = 93 385,42€

10.2) (1 Points)

[Working In Months]

Sales Product A = 60 000€ * 6/3 + 75 000€ * 6/3 = 270 000€
Sales Product B = 50 000€ * 6/1.5 (181 250€ - 50 000€ * 4.5/1.5) * 6/1.5 = 325 00€

Consumption DM's = 100 000€
VCC = 14 000€ * 6/3.5 + 20 000€ * 6/2.5 = 72 000€
FCC = 5 000€ * 6/1 + (30 000€ – 5 000*5/1)* 6/1 = 60 000€
NMC = 2 500€ * 6/0.5 + (32 500€ - (2 500€ * 5.5/0.5)) * 6/0.5 = 90 000€

COGM = DM + VCC + FCC + MOH (Depreciation) = 249 500€

Sales	270 000€ + 325 000€	595 000€
COGS	12/13 * COGM	230 307,69€
Gross Profit		**364 692,31€**
NMC (inc. Depreciation)	90 000€ + 20 000€	110 000€
EBIT		**254 692, 31€**
Financial Expenses	100 000* 0.075 * 7/12	4 375€
PBT		**250 317,31€**