Item 1

Calculator

[1 point]

Management accounting information is generally prepared for:

A	Stockholders
B	Creditors
C	Managers ✔
D	Regulatory agencies
E	None of the others.

Item 2

Calculator

[1 point]

Both direct materials and indirect materials are:

A	Product costs ✔
B	Manufacturing overheads
C	Merchandise inventory
D	Sold directly to customers by a manufacturing company
E	Period costs

Item 3

Calculator

[1 point]

A process cost accounting system is most appropriate when

A	a variety of different products are produced, each one requiring different types of materials, labor, and overhead.
B	the focus of attention is on a particular job or order.
C	similar products are mass-produced. ✔
D	individual products are custom made to the specification of customers.

Item 4

Calculator

[1 point]

Under absorption costing and variable costing, how are fixed manufacturing costs treated?

A	Absorption: Product Cost | Variable: Product Cost	
B	Absorption: Product Cost | Variable: Period Cost	✔
C	Absorption: Period Cost | Variable: Product Cost	
D	Absorption: Period Cost | Variable: Period Cost	

Item 5

Calculator

[1 point]

Company **Yellow Mark** manufactures ice cream. We have the following information regarding the company's financials for the month of September:

P&L by nature	**September**
Sales	200 000.00 €
Change in inventories	3 000.00 €
Operating revenues	203 000.00 €
CMSMU	35 250.00 €
Miscellaneous	105 000.00 €
Personnel	25 000.00 €
EBITDA	37 750.00 €
Depreciation	5 000.00 €
EBIT	32 750.00 €
Financial Costs	600.00 €
EBT	32 150.00 €

It is known that the total monthly base wage for employees' work time amounts to 20 000.00 €. The total social charges for the year are 114 400.00 €. Yellow Mark personnel policy includes a one-month paid holiday per year to all employees.

The difference in the monthly profit between the P&L by nature and P&L by function (Profit F.A. – Profit M.A.) and the percentage of Theoretical Social Charges are respectively:

A 5 400.00 € and 52% ✔

B – 5 400.00 € and 52%

C 7 480.00€ and 62.4%

D – 7 480.00€ and 62.4%

E None of the others.

Item 6

Cempor is a Portuguese cement manufacturer. The information below was collected in February:

1 – Inventory Movements

- Changes in WIP: - 500€

DM Inventory	Q	Unit Cost
Open	1 000	4.78 €
Purchases	3 000	5.50 €
Closing	750	

FG Inventory	Q	Unit Cost
Open	3 000	20 €
Production	5 000	
Sales	6 000	

2 – Costs in February

Costs (€)	Factory	Stores	Headquarters	Total
Insurance	8 000 €	2 000 €	1 000 €	**11 000 €**
Security Service	1 500 €	500 €	100 €	**2 100 €**
Electricity & Water	5 000 €	1 000 €	550 €	**6 550 €**
Depreciation	25 000 €	15 000 €	60 000 €	**100 000 €**
Personnel	50 000 €	30 000 €	120 000 €	**200 000 €**
Total	**89 500 €**	**48 500 €**	**181 650 €**	**319 650 €**

Based on the information above, and assuming that the company is using **LIFO** as its inventory method, the COGM and COGS are, respectively:

A 107 155.00 € and 124 293.00 €

B 107 695.00 € and 127 695.00 € ✓

C 107 290.00 € and 125 467.50 €

D None of the others.

Item 7

Calculator

[1 point]

Arda Metal Packaging *is a* producer of aluminum beverages' cans. To produce the cans, large sheets of aluminum are cut into circles that are then shaped into cans. Due to the rounded shape, under efficient conditions, 5% of the aluminum sheets is scrapped. Afterwards, unexpectedly, some cans end up being defective and are also scrapped.

The following information was collected regarding the month of February:

Costs	**Can Shaping**
Aluminum Sheets (€)	50 000 €
Conversion Costs (€)	10 625 €
Total	**60 625 €**

Aluminum dm^2 consumed	125 000
dm^2 per finished/defective can	1
Number of finished cans	118 000
Number of defective cans	750
Price per dm^2 of scrapped aluminum (€)	0.2 €

- There was no opening or closing stocks of finished goods and work-in-progress.
- All the losses can be sold.

Knowing that the selling price per can is 1€, calculate the operating profit of ***Arda Metal Packaging***.

A 57 525.00 €

B 58 975.00 €

C 58 775.00€ ✔

D 59 175.00 €

E None of the others.

Item 8

Calculator

[1 Point]

The following information is known about the company **ACS International**. The company currently uses the total full costing system to calculate the cost of goods manufactured.

For the period under analysis the following information is available:

Manufacturing Variable Costs	220 000.00 €
Production	25 000 units
Practical Capacity	28 000 units
Unit Selling Price	44 €
Opening inventory of Finished Goods	0 units

P&L	**TFC**
Sales	962 500.00 €
COGS	761 250.00 €
Gross Profit	201 250.00 €
Non-Manufacturing Costs	105 000.00 €
PBT	96 250.00 €

What would be the COGS if the ACS International used the Full Costing Based on Practical Capacity?

A 700 312.50 € ✓

B 800 357.14 €

C 615 351.56 €

D 703 258.93 €

E None of the others.

Calculator

[6 Points]

A manufacturing company, **XYZ Apparel Inc.**, produces two types of garments: tops, and dresses. Each garment undergoes several production activities, including prepping the fabric, dying the fabric, cutting the fabric, stitching pieces together, and quality control.

Currently, XYZ Apparel Inc. uses a traditional costing system with a single overhead rate to allocate manufacturing overhead costs to its products, using Direct Material costs as an allocation base.

However, management is considering adopting Activity-Based Costing (ABC) to gain a more accurate understanding of product costs. The following information was gathered:

Activity	Cost driver	Cost (€)
Prepping the fabric	square meters of fabric prepped	10 000 €
Dying the fabric	weight of fabric dyed	12 000 €
Cutting the fabric	no. of pieces cut	11 250 €
Stitching pieces together	total no. of seams	18 000 €
Quality control	no. of inspection hours	7 500 €

Cost driver	Tops	Dress	Total
square meters of fabric prepped	500	1 500	2 000
weight of fabric dyed	1 500	2 500	4 000
no. of pieces cut	425	200	625
total no. of seams	10 000	2 500	12 500
no. of inspection hours	60	40	100

Costs	Tops	Dress
Direct Material	5 000 €	8 970 €
Direct Labour	20 000 €	22 500 €

Calculate the Cost of Goods Manufactured for both products using the current method for allocating manufacturing indirect costs.

ANSWER ON PAPER

Recompute the COGM, but using Activity-Based Costing.

ANSWER ON PAPER

Comment on the results and state the advantages and disadvantages of using ABC.

ANSWER HERE

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Activity Based Costing

9.1) Calculate the Cost of Goods Manufactured for both products using the current method for allocating manufacturing indirect costs.

SOR = Manufaturing Overheads / Allocation Base
= (10 000 + 12 000 + 11 250 + 18 000 + 7 500) / (5 000 + 8 970) = 4.21 €

MOH Tops = 4.21 * 5 000 = 21 027.20 €
MOH Dress = 4.21 * 8 970 = 37 722.80 €

SOR	**Tops**	**Dress**
DM + DL	25 000.00 €	31 470.00 €
MOH	21 027.20 €	37 722.80 €
COGM	**46 027.20 €**	**69 192.80 €**

SOR	**4.21 €**

Answer: COGM Tops = 46 027.20 €, COGM Dress = 69 192.80 €

9.2) How much would be the Cost of Goods Manufactured using Activity-Based Costing?

CDR = Total Cost / Total Driver

Cost driver	**Tops**	**Dress**	**Total**	**Cost (€)**	**CDR**
square meters of fabric prepped	500	1 500	2 000	10 000 €	5.00 €
weight of fabric dyed	1 500	2 500	4 000	12 000 €	3.00 €
no. of pieces cut	425	200	625	11 250 €	18.00 €
total no. of seams	10 000	2 500	12 500	18 000 €	1.44 €
no. of inspection hours	60	40	100	7 500 €	75.00 €

COGM Tops = DM + DL + MOH - ΔWIP =
5 000 + 20 000 + 500 * 5 € + 1 500 * 3 € + 425 * 18 € + 10 000 * 1.44 € + 60 * 75 €
= 58 550 €

COGM Dress = DM + DL + MOH - ΔWIP =
8 970 + 22 500 + 1500 * 5 € + 2 500 * 3 € + 200 * 18 € + 2 500 * 1.44 € + 40 * 75 €
= 56 670 €

Answer: COGM Tops = 58 550 €, COGM Dress = 56 670 €

9.3) Comment on the results and state the advantages and disadvantages of using ABC compared to the current costing system.

- Results show material differences between SOR and ABC.
- SOR understates Tops' cost and overstates Dresses' cost, causing product subsidization.
- ABC yields more accurate costing results, as it leverages cause-effect cost drivers, which enable better decision making.
- ABC is more complex, time-consuming, and expensive to implement, which detracts more companies to implement it.

Calculator

[6 points]

HappySights is a company that manufactures dinnerware (plates, mugs and cups). For accounting purposes, the company's factory is organized in the following homogeneous cost pools (or cost centers):

- **Shaping** (machine hours as the unit of work) - where the materials are molded in the desired shape.
- **Painting** (machine hours as the unit of work) - where the dinnerware is painted.
- **Maintenance** (labor hours as the unit of work) - ensures the maintenance and repair of the manufacturing and cleaning equipment.
- **Cleaning** (labor hours as the unit of work) - ensures the cleaning of the spaces.
- **General Manufacturing Overheads –** responsible for the well-functioning of the factory.

The following information was collected regarding the month of February:

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

Costs	Shaping	Painting	Maintenance	Cleaning	GMO
Miscellaneous costs	300 €	600 €	200 €	250 €	1 000 €
Wages	5 000 €	1 850 €	6 000 €	4 000 €	-
Depreciation	1 000 €	800 €	200 €	200 €	-
Other costs	300 €	100 €	100 €	50 €	600 €
Total	**6 600 €**	**3 350 €**	**6 500 €**	**4 500 €**	**1 600 €**

2 – The activities of the homogeneous cost pools:

Suppliers / Users	Shaping	Painting	Maintenance	Cleaning
Shaping	-	-	200	100
Painting	-	-	100	300
Maintenance	-	-	-	100
Cleaning	-	-	50	-
Plates	800	200	-	-
Mugs	400	100	-	-
Cups	200	75	-	-
Total	1400 Mh	375 Mh	350 Lh	500 Lh

- General Manufacturing Overheads are allocated equally between the remaining departments.

3 – Prime Costs:

- Plates Prime Cost: 12 375 €
- Mugs Prime Cost: 5 550 €
- Cups Prime Cost: 1 350 €

4 – Production and Sales:

During the month of February **HappySights:**

- Produced 30 000 plates, 10 000 mugs and 4 000 cups.
- Sold 28 000 plates at 2.2€/un, 9 000 mugs at 1.8€/un and 3 600 cups at 1.6€/un.

Compute the COGM, COGS and Gross Profit of **Plates**, knowing that the company uses the simultaneous equation method and LIFO. Provide relevant comment on the results to the CEO of **HappySights**.

WRITE COMPUTATIONS ON PAPER AND COMMENTS ON WISEFLOW

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Homogenous Cost Pools

10) Compute the COGM, COGS and Gross Profit of Plates, knowing that the company uses the simultaneous equation method and LIFO. Provide relevant comment on the results to the CEO of **HappySights**.

$$\begin{cases} M = 6\,500 + 400 + \dfrac{100}{500}\,C \\ C = 4\,500 + 400 + \dfrac{50}{350}\,M \end{cases} (=) \begin{cases} M = 8\,111.76 \\ C = 6\,058.82 \end{cases}$$

Simultaneous Equation Method	Unit of work	Shaping		Painting		Maintenance		Cleaning		TOTAL (€)
		Mh	1400	Lh	375	Lh	350	Lh	500	
		Q	V	Q	V	Q	V	Q	V	
Direct Costs			6 600		3 350		6 500		4 500	22 550
Reallocation of Service Departments										
GMO	%	0.25	400	0.25	400	0.25	400	0.25	400	1 600
Maintenance	Lh	200	4 635	100	2 318			50	1 159	8 112
Cleaning	Lh	100	1 212	300	3 635	100	1 212			6 059
Total Cost			12 847		9 703		8 112		6 059	22 550
Total Unit cost			9.18		25.87		23.18		12.12	

V1:

COGM Plates = Prime Cost + MOH = 12 375 € + 800 * 9.18 € + 200 * 25.87 € = 24 891.08 €

COGM/Unit = 24 891.08 € / 30 000 = 0.83 €

COGS = COGM/Unit * Units Sold = 0.83 € * 28 000 = 23 231.67 €

Gross Profit = Sales – COGS = 28 000 * 2.2 € - 23 231.67 € = 38 368.33 €

V2: (same but for Mugs)

COGM Mugs = Prime Cost + MOH = 5 550 € + 400 * 9.18 € + 100 * 25.87 € = 11 808.04 €

COGM/Unit = 11 808.04 € / 10 000 = 1.18 €

COGS = COGM/Unit * Units Sold = 1.18 € * 9 000 = 10 627.24 €

Gross Profit = Sales – COGS = 9 000 * 1.8 € - 10 627.24 € = 5 572.76 €

V3: (same but for Cups)

COGM Cups = Prime Cost + MOH = 1 350 € + 200 * 9.18 € + 75 * 25.87 €
= 5 125.88 €

COGM/Unit = 5 125.88 € / 4 000 = 1.28 €

COGS = COGM/Unit * Units Sold = 1.28 € * 3 600 = 4 613.29 €

Gross Profit = Sales – COGS = 3 600 * 1.6 € - 4 613.29 € = 1 146.71 €

Comments:

- Plates/Mugs/Cups present a positive gross margin, which is positive for the company.
- Plates/Mugs exhibit sound gross margin, which suggests good pricing power, lack of competition or a cost advantage. Cups exhibit a narrow gross margin, which might suggest wrong pricing, stronger competition, or cost inefficiencies.
- High/Low Gross Margin increases the likelihood of the firm to be profitable/ struggle financially.