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Students' Department

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Students' Department

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(NOTE.—The fact that these answers appear in THE JOURNAL OF ACCOUNTANCY should not lead the reader to assume that they are the official answers of the board of examiners. They represent merely the personal opinions of the editors of the *Students' Department.*)

Editor, Students' Department.

SIR: The enclosed problem was given by the Ohio State Board of Accountancy on October 13, 1926.

It would be greatly appreciated by a number of the candidates who sat at the examination, if you would publish a solution to the problem in THE JOURNAL OF ACCOUNTANCY and comment on the points involved and the time limit.

Yours truly,

H. J. BROWN.

Columbus, Ohio

Problem:

A manufacturing company has an agreement with a sales company which provides that the latter company is to handle the entire output of the former company, and that the gross profits on sales are to be divided between the respective companies on the basis of 30% for the manufacturing company and 70% for the sales company. The term gross profit is to be taken as meaning the amount remaining after deducting from the net sales the actual cost of goods sold, plus 10%, and freight paid on same by the sales company. It is understood that the cost of goods shall include, in addition to the usual manufacturing charges, expenses of the cost department, shipping expenses, one-third of the salaries of the general officers, 85% of taxes, and 6% interest on $356,000 of invested capital.

Goods are to be shipped to the sales company on consignment at an estimated cost plus 10% and the consignee is to advance 75% of the billed value, which is to be paid on receipt of goods. And at the end of each month, the sales company is to remit for the balance due, at the billed value, on goods sold.

At the end of the year, adjustment is to be made of the difference between the estimated cost plus 10% and the actual cost plus 10%, if any.

The trial balance of the manufacturing company at December 31, 1925, was as follows:

	Debits	Credits
Cash	$74,906.24	
Sales company	59,702.50	
Raw materials purchased	425,714.50	
Productive labor	261,000.00	
Non-productive labor	63,574.53	
Cost department expense	19,450.60	
Superintendence	15,000.00	
Repairs to machinery	19,711.65	
Factory supplies and expense	15,037.75	
Interest	4,500.00	
Shipping expenses	14,540.00	
General officers' salaries	45,000.00	
Clerical salaries—general	21,500.00	

	Debits	Credits
General office expense	$14,781.78	
Machinery	200,000.00	
Factory fixtures	15,000.00	
Tools	20,000.00	
General office fixtures	10,000.00	
Land	21,000.00	
Buildings (factory)	100,000.00	
Taxes (local)	3,500.00	
Capital stock		$500,000.00
Accounts payable		65,719.55
Notes payable		75,000.00
Shipments on consignment		783,200.00
	$1,423,919.55	$1,423,919.55

Inventories at the end of the year were as follows:

Raw materials	$58,640.50
Goods in process	100,074.00
Factory supplies	3,674.53

The goods in process included $45,815.25 for material, $30,143.75 for productive labor and $24,115.00 for overhead.

Depreciation at the rate of 10% on machinery, tools, general office fixtures, factory fixtures and 3% on buildings, is to be taken into account.

Accruals not taken into account were: $6,000 for productive labor, $2,000 for non-productive labor, $2,500 for local taxes, and $1,500 for interest on notes payable.

The net sales as reported by the consignee amounted to $1,032,240 and the total freight paid on all goods received was $15,554.61, and the value of goods on hand at original billing was $68,794.

Remittances by the consignee included the full value, at original billed price, of goods sold.

You are to submit the following:

1. A balance-sheet, after taking into account the transactions reported by the consignee. This sheet must show clearly the true financial condition of the manufacturing company, in so far as it can be determined from the given data.
2. A profit-and-loss statement, which must show the result before and after giving effect to sales by consignee.
3. Statement showing actual amount due and payable by consignee at December 31, 1925. You must show clearly how the result has been arrived at. This statement must also show the profit on sales of consignee, and how arrived at.
4. A work sheet, which must be in good form, neat and intelligible.

Solution:

Considering, first, the factors entering into the amount due from sales company, $59,702.50, an unaccounted-for difference of $42,504 appears as shown in the following:

Charges to sales company (contra to credits, "shipments on consignment")	$783,200.00
Less—balance in sales company's account	59,702.50
Remittances received from sales company	$723,497.50

Representing:		
75% of billed price of $68,794.00 merchandise on hand at sales company		$51,595.50
100% of billed price of goods sold		$671,902.00
Charges to sales company		$783,200.00
Deduct:		
Goods sold (as shown above)	$671,902.00	
Goods on hand	68,794.00	
Total amount of goods received by sales company (at billed price)		740,696.00
Billed price of goods in transit		$42,504.00

From the above computations, it is a reasonable assumption that the balance of the sales-company account represents:

25% of billed price of goods on hand ($68,794.00)	$17,198.50
100% of billed price of goods in transit ($42,504.00)	42,504.00
Total	$59,702.50

By reference to exhibit "C," it will be noted that the overhead rates for actual cost and cost by the terms of contract are 72% and 80% respectively of productive labor, the difference being due to the exclusion of interest on invested capital in determining actual cost. The reasons for excluding such interest from manufacturing cost are, it is believed, sufficiently familiar to make unnecessary extended comment thereon.

While, of course, the terms of the agreement between the manufacturing company and the sales company do not determine which items should and which should not be included in actual cost of goods manufactured, it seems that interest on invested capital is the only item as to which actual cost and agreed cost should differ. The inclusion of one-third of general officers' salaries seems a reasonable charge for the services which such officers must certainly give to manufacturing operations. Cost department expenses constitute a legitimate part of manufacturing cost, and 85% of taxes appears entirely reasonable as the proportion applicable to goods manufactured. The inclusion of shipping expenses might be debatable. However, they are, in this case, necessary expenses incurred by the manufacturing company in placing its goods in readiness for sale, and are not, as is usually the case, expenses incurred after or in connection with the sale.

Before the agreed gross profit can be determined, it will be necessary to compute that portion of the freight paid by the sales company on all goods received applicable to the goods sold. This may be done as follows:

$$\frac{\text{(Billed price of goods sold) \$671,902}}{\text{(Billed price of goods received) \$740,696}} \times \text{(Freight Paid) \$15,554.61}$$

= $14,109.95 (Freight applicable to goods sold).

MANUFACTURING COMPANY

Statement showing amount due and payable by consignee
December 31, 1925

Billed price of goods sold—as adjusted........			$705,497.10
Manufacturing company's share of gross profit:			
Sales by consignee...........		$1,032,240.00	
Deduct:			
Cost of goods sold (determined per agreement) plus 10% thereof......	$705,497.10		
Freight applicable to goods sold.................	14,109.95		
		719,607.05	
Gross profit on sales by consignee...............		$312,632.95	
Deduct:			
Sales company's proportion of gross profit (70%)...............		218,843.06	
			93,789.89
Total amount payable by consignee per terms of agreement			$799,286.99
Deduct:			
Payments made by consignee:			
Charges to sales company...............		$783,200.00	
Less: present balance of account.........		59,702.50	
Remittances from sales company.........		$723,497.50	
Deduct:			
Advances on unsold goods (75% of $68,-794.00)............................		51,595.50	
			671,902.00
Balance—representing amount due and payable by consignee at December 31, 1925....			$127,384.99

The sales company is not required to pay for any goods consigned to it until the goods are sold. The advances remitted, $51,595.50 should therefore be deducted from the remittances received and be shown as advances in the current liability section of the balance-sheet. In addition, the sales company may be required to advance 75% of the excess of the adjusted billed price over the original billed price of unsold goods, or 75% of ($72,233.70—$68,794.00) or $2,579.78, depending upon what interpretation is placed upon the third paragraph of the problem. If the sales company is required to advance this amount, a footnote covering the requirement should appear on the balance-sheet.

No advance appears to be required on the goods in transit until the sales company is in receipt of goods.

With respect to the profit-and-loss statement, it is not clear as to what is meant by the requirement that it "must show the result before and after giving effect to sales by consignee." Inasmuch as goods are shipped to the sales company on consignment no sales take place at that time, and, since it is a basic principle of accounting that profits can only be made by actual sales, it is difficult to see how a profit-and-loss statement can be prepared to "show the result" before giving effect to sales by the consignee. However, no other interpretation suggests itself to the editors than that this requirement contemplates the showing of consignments as sales (at adjusted billing price) of the manufacturing company. Accordingly, they are so shown in exhibit "B" in order to meet the requirements of the problem.

MANUFACTURING COMPANY

Adjusting Entries December 31, 1925

(A)	Depreciation:		
	Machinery (10%)	$20,000.00	
	Tools (10%)	2,000.00	
	General office fixtures (10%)	1,000.00	
	Factory fixtures (10%)	1,500.00	
	Buildings (3%)	3,000.00	
	Reserve for depreciation:		
	Machinery		$20,000.00
	Tools		2,000.00
	General office fixtures		1,000.00
	Factory fixtures		1,500.00
	Buildings		3,000.00
	To record depreciation for the year 1925.		
(B)	Productive labor	$6,000.00	
	Non-productive labor	2,000.00	
	Accrued wages		8,000.00
	To set up accrued wages.		
(C)	Taxes local	2,500.00	
	Accrued local taxes		2,500.00
	To set up accrued local taxes.		
(D)	Interest	1,500.00	
	Accrued interest on notes payable		1,500.00
	To set up accrued interest on notes payable.		
(E)	Merchandise consigned	783,200.00	
	Sales company		783,200.00
	To transfer charge from sales-company account to a memorandum account.		
(F)	Merchandise consigned	39,160.00	
	Shipments on consignment		39,160.00
	To adjust memorandum accounts to 110% of cost as defined by contracts.		

MANUFACTURING COMPANY

Working papers for the year ended December 31, 1925

	Trial balance December 31, 1925		Adjustments		Cost of consigned goods sold		Profit and loss		Balance-sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	$74,906.24								$74,906.24	
Sales company	59,702.50		$799,286.99 (H)	$783,200.00 (E)						
			51,595.50 (J)						127,384.99	
Raw materials purchased	425,714.50				$367,074.00				58,640.50	
Productive labor	261,000.00		6,000.00 (B)		267,000.00					
Non-productive labor	63,574.53		2,000.00 (B)		65,574.53					
Cost department expense	19,450.60				19,450.60					
Superintendence	15,000.00				15,000.00					
Repairs to machinery	19,711.65				19,711.65					
Factory supplies and expense	15,037.75				11,363.22				3,674.53	
Interest	4,500.00		1,500.00 (D)				$6,000.00			
Shipping expenses	14,540.00				14,540.00					
General officers' salaries	45,000.00				15,000.00		30,000.00			
Clerical salaries—general	21,500.00						21,500.00			
General office expense	14,781.78						14,781.78			
Machinery	200,000.00								200,000.00	
Factory fixtures	15,000.00								15,000.00	
Tools	20,000.00								20,000.00	
General office fixtures	10,000.00								10,000.00	
Land	21,000.00								21,000.00	
Buildings—factory	100,000.00								100,000.00	
Taxes—local	3,500.00		2,500.00 (C)		5,100.00		900.00			
Capital stock		$500,000.00								$500,000.00
Accounts payable		65,719.55								65,719.55
Notes payable		75,000.00								75,000.00
Shipments on consignment		783,200.00	705,497.10 (G)	39,160.00 (F)						116,862.90

Depreciation—machinery.................			$20,000.00 (A)		$20,000.00					
Depreciation—tools			2,000.00 (A)		2,000.00					
Depreciation—general office fixtures........			1,000.00 (A)				$1,000.00			
Depreciation—factory fixtures.............			1,500.00 (A)		1,500.00					
Depreciation—buildings			3,000.00 (A)		3,000.00					
Reserve for depreciation.				$27,500.00 (A)						$27,500.00
Accrued wages.........				8,000.00 (B)						8,000.00
Accrued taxes.........				2,500.00 (C)						2,500.00
Accrued interest.......				1,500.00 (D)						1,500.00
Goods in process.......						$97,662.50			$97,662.50	
Merchandise consigned..			783,200.00 (E)							
			39,160.00 (F)	705,497.10 (G)					116,862.90	
Sales.................				799,286.99 (H)				$799,286.99		
Advances from sale company...............				51,595.50 (J)						51,595.50
Cost of goods unsold....						103,546.29			103,546.29	
Cost of goods sold......						625,105.21	625,105.21			
Net profit.............							100,000.00			100,000.00
	$1,423,919.55	$1,423,919.55	$2,418,239.59	$2,418,239.59	$826,314.00	$826,314.00	$799,286.99	$799,286.99	$948,677.95	$948,677.95

(G) Shipments on consignment		$705,497.10	
Merchandise consigned			$705,497.10
To adjust memorandum accounts to billed price of goods unsold:			
Original billed price of shipments	$783,200.00		
Adjustment above	39,160.00		
Total	$822,360.00		
Less—adjusted billed price of goods sold	705,497.10		
Adjusted billed price of goods unsold	$116,862.90		
(H) Sales company		799,286.99	
Sales			799,286.99
Adjusted billed price of goods sold	$705,497.10		
Share of profit	93,789.89		
Total	$799,286.99		
(J) Sales company		51,595.50	
Advances from sales company			51,595.50
To record as a liability advances received from sales company, 75% of billed price of goods on hand, $68,794.00.			

Exhibit "A"

MANUFACTURING COMPANY

Balance-sheet December 31, 1925

Assets

Current assets:				
Cash			$74,906.24	
Due from sales company			127,384.99	
Inventories:				
Raw materials		$58,640.50		
Work-in-process		97,662.50		
Finished goods on consignment		103,546.29		
Supplies		3,674.53	263,523.82	$465,815.05
Capital assets:	Cost	Depreciation Reserve	Book Value	
Land	$21,000.00	....	$21,000.00	
Buildings	100,000.00	$3,000.00	97,000.00	
Machinery	200,000.00	20,000.00	180,000.00	
Factory fixtures	15,000.00	1,500.00	13,500.00	
Tools	20,000.00	2,000.00	18,000.00	
General office fixtures	10,000.00	1,000.00	9,000.00	
	$366,000.00	$27,500.00	$338,500.00	338,500.00
				$804,315.05

Liabilities and net worth

Current liabilities:			
Accrued local taxes		$2,500.00	
Accrued wages		8,000.00	
Accounts payable		65,719.55	
Notes payable	$75,000.00		
Accrued interest on notes payable	1,500.00	76,500.00	
Advances from sales company		51,595.50	$204,315.05
Net worth:			
Capital stock		$500,000.00	
Surplus net profits for the year Ended December 31, 1925 (exhibit "B") *		100,000.00	600,000.00
			$804,315.05

* Subject to federal income taxes for the year 1925.

Exhibit "B"

MANUFACTURING COMPANY

Statement of profit and loss for the year ended December 31, 1925

	Before giving effect to sales by consignee	After giving effect to sales by consignee
Consigned sales	$705,497.10	$799,286.99
Cost of consigned goods sold	625,105.21	625,105.21
Gross profit	$80,391.89	$174,181.78
Expenses:		
General officers' salaries	$30,000.00	$30,000.00
Clerical salaries—general	21,500.00	21,500.00
General office expense	14,781.78	14,781.78
Taxes—local	900.00	900.00
Depreciation—general office fixtures	1,000.00	1,000.00
Total	$68,181.78	$68,181.78
Profit from operations	$12,210.11	$106,000.00
Interest paid	6,000.00	6,000.00
Net profit to surplus (subject to federal income taxes)	$6,210.11	$100,000.00

Exhibit "C"

MANUFACTURING COMPANY

Statement showing cost of goods manufactured and consigned for the year ended December 31, 1925

	Actual cost	Cost per terms of contract and adjusted billing price
Raw materials	$367,074.00	$367,074.00
Productive labor	$267,000.00	$267,000.00

Overhead:		
Non-productive labor	$65,574.53	$65,574.53
Cost department expense	19,450.60	19,450.60
Superintendence	15,000.00	15,000.00
Repairs to machinery	19,711.65	19,711.65
Factory supplies and expenses	11,363.22	11,363.22
Shipping expenses	14,540.00	14,540.00
General officers' salaries	15,000.00	15,000.00
Taxes	5,100.00	5,100.00
Depreciation:		
Machinery	20,000.00	20,000.00
Tools	2,000.00	2,000.00
Factory fixtures	1,500.00	1,500.00
Buildings	3,000.00	3,000.00
Interest—6% of $356,000	....	21,360.00
Total overhead	$192,240.00	$213,600.00
Ratio of overhead to productive labor	(72%)	(80%)
Total raw materials, productive labor and overhead	$826,314.00	$847,674.00
Deduct inventory of goods-in-process, December 31, 1925:		
Materials	$45,815.25	$45,815.25
Productive labor	30,143.75	30,143.75
Overhead:		
72% of $30,143.75	21,703.50	
80% of $30,143.75		24,115.00
Total goods-in-process	$97,662.50	$100,074.00
Cost of goods manufactured and consigned	$728,651.50	$747,600.00
Add:		
Agreed percentage (10%)		74,760.00
Adjusted billing price		$822,360.00

Apportionment of costs:

	In ratio of original billed price	Actual cost	Adjusted billed price
Goods in inventory	$68,794.00	$64,002.62	$72,233.70
Goods in transit	42,504.00	39,543.67	44,629,20
Total unsold	$111,298.00	$103,546.29	$116,862.90
Goods sold	671,902.00	625,105.21	705,497.10
Total	$783,200.00	$728,651.50	$822,360.00

Editor, Students' Department,

SIR: In the *Students' Department* of the April number of THE JOURNAL is printed an answer to one of the questions in the last Institute examination, which calls for the preparation of a financial statement of Snow, Frost & Co., stock brokers. This answer does not, and possibly was not intended to cover all the points raised in the question.

Either by intention of the examiners or otherwise a full answer could only be expected from candidates who were acquainted with the questionnaires which are periodically sent, by the committee on business conduct, to members of the New York stock exchange. But aside from this, any adequate answer requires a working knowledge of the stock brokers' business and the implications arising therefrom.

The legal theory as at present developed, which applies to a stock broker's dealings with his customers, appears to be that he is merely the custodian of the securities which he is carrying on margin for their account. The securities are held to be the actual property of the customers subject to the stock broker's claim for the unpaid portion of the purchase price. The debit ledger balances of fully secured customers are not therefore liabilities of such customers to the broker. On the contrary, the equities of such customers in the securities carried for their account are liabilities of the broker to those customers. As a consequence, in preparing a financial statement, the accounts appearing on the debit side of the ledger are, in large part, transformed into liabilities; the accounts appearing on the credit side are, in large part, transformed into assets; and the value of the securities in box or transfer, which does not appear on the ledger at all, is set up as an asset.

The attached statement A is a financial statement in the form called for and statement B, the working-sheet from which statement A is prepared, is patterned on an answer to a New York stock exchange questionnaire.

There are two points in the question which call for attention. (1) It is questionable whether or not the examiners expect the two items "customers unsecured $2,500" and "advances to salesmen $750" to be charged off. The stock exchange committee's accountants would allow no value for these items, but in a statement for general purposes it would be rather drastic to charge them off without certain knowledge that they were worthless. (2) Under item 7 of the explanatory matter the examiners state that included in the bank collateral are $5,000 of securities held in what is known in brokerage circles as "safekeeping." This is an infraction of the stock exchange rule which requires that all securities paid for in full by customers be kept in the "box." There appears no good reason, however, to differentiate these securities in a financial statement issued for general purposes, unless by means of a footnote. The bank loans would still be secured by a margin of over 20% if the small amount of securities in "safekeeping" were withdrawn from the collateral.

The firm's capital in statement A appears as $486,250. The stock exchange committee's accountants would reduce this figure. Although it is, of course, impossible to speak with any certainty, they would probably scale it down somewhat as follows:

Firm capital		$390,750.00
Equity in securities account		95,500.00
		$486,250.00
Deduct:		
Memberships	$90,000.00	
Customers unsecured	2,500.00	
Advances to salesmen	750.00	
Margin on firm-trading account	60,000.00	
Margin deficiency on partly secured customers' accounts	18,000.00	171,250.00
Effective capital		$315,000.00

The effective capital is ample for the amount of business carried, being nearly 24% of the fully secured customers' balances. Exception must be taken to the fact that all of the capital was locked up in the ledger item "securities $400,000." If these securities were liberty bonds or other gilt-edged paper this objection would amount to little. If they were speculative stocks the account should be reduced; if not closed out entirely. The small amount of securities in the box might cause adverse comment. The stock exchange rule on securities in safekeeping also applies to securities carried for customers whose accounts are extra-heavily margined. The long customers' equities are nearly 34% of their debit balances. It is quite possible that the margin percentage in some cases runs up considerably higher. The question might then arise as to whether the securities in the box were sufficient to cover the excess margins.

Statement A

Snow, Frost and Company

Financial Statement—June 30, 1926

Assets

Cash			$75,000.00
Firm's equity in securities hypothecated:			
Market value of bank collateral	$185,000.00		
Less: bank loans	145,000.00		
Equity		$40,000.00	
Market value of broker's collateral	$1,955,000.00		
Less: broker's balances	1,400,000.00		
Equity		555,000.00	
			595,000.00
Market value of securities in box or transfer			191,000.00
Accounts receivable:			
Customers' partly secured long-ledger balances, Debit	$110,000.00		
Market value of securities	90,000.00		
		$20,000.00	
Customers' partly secured short-market value of securities	$9,000.00		
Ledger balances, Credit	7,500.00		
		1,500.00	
Customers' unsecured	$2,500.00		
Advances to salesmen	750.00		
		3,250.00	
			24,750.00
Memberships			90,000.00
			$975,750.00

Liabilities and capital

Customers' equities:			
Market value of securities long	$1,787,000.00		
Less: customers' debit balances	1,337,500.00		
Equity		$449,500.00	
Customers (short) credit balances	$42,500.00		
Less: market value of securities	32,500.00		
		10,000.00	
			$459,500.00
Customers' free credit balances			30,000.00
Firm's capital:			
Partners' capital and undivided profit		$390,750.00	
Market value of securities in "securities account"	$495,500.00		
Less: ledger balance debit	400,000.00		
		95,500.00	
			486,250.00
			$975,750.00

Statement B

SNOW, FROST AND COMPANY

Questionnaire working-sheet

		Ledger balances Dr.	Ledger balances Cr.	Securities Long	Securities Short	Equities Dr.	Equities Cr.
1. Total bank balances		$75,000.00				$75,000.00	
2. Bank loans			$145,000.00		$185,000.00	40,000.00	
Brokers			1,400,000.00		1,955,000.00	555,000.00	
3. Market value of securities in box and transfer books					191,000.00	191,000.00	
4. Total ledger debit balances—customers:							
Secured	$1,337,500.00			$1,787,000.00			$449,500.00
Partly secured	110,000.00			90,000.00		20,000.00	
Unsecured	2,500.00					2,500.00	
		1,450,000.00					
Total ledger credit balances:							
Secured	$42,500.00				32,500.00		10,000.00
Partly secured	7,500.00				9,000.00	1,500.00	
			50,000.00				
5. Free credit balances			30,000.00				30,000.00
6. Partners' capital and undivided profits			390,750.00				390,750.00
Firm trading		400,000.00		495,500.00			95,500.00
7. Other accounts:							
Advances to salesmen		750.00				750.00	
Stock exchange membership		90,000.00				90,000.00	
		$2,015,750.00	$2,015,750.00	$2,372,500.00	$2,372,500.00	$975,750.00	$975,750.00

NOTE.—The numbers at left hand margin indicate the questions appearing on the New York stock exchange questionnaire.

If they were not securities should be withdrawn from the brokers and placed in the safekeeping box.

The question as worded in the examination paper does not necessarily imply that the answer is to conform to the stock exchange requirements. It would seem, however, that its formulator had the questionnaire in mind and the above analysis from this standpoint may be of interest to those of your student readers who have had little or no experience in stock brokers' accounts.

Yours faithfully,

HERBERT BECK.

Chicago, Illinois, April 19, 1927.

The editors of this department wish to express to Mr. Beck their appreciation of his very clear exposition of the special principles and procedure of stock-brokerage accounting contained in the foregoing letter. This department is always receptive to correspondence of the nature of the above communication.

The rough draft of the solution prepared by the editors of this department contained statements in the general form of Mr. Beck's financial statement and questionnaire working-sheet, but these were omitted from the printed solution, it being the opinion of the editors that the statements, as published, met the requirements of the problem and that the more extensive knowledge of brokerage accounts, evidenced by the two statements submitted by Mr. Beck, was probably not contemplated by the examiners in setting the problem.