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Students' Department

H. P. Baumann

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H. P. BAUMANN, *Editor*

AMERICAN INSTITUTE EXAMINATIONS

(NOTE.—The fact that these solutions appear in THE JOURNAL OF ACCOUNTANCY should not cause the reader to assume that they are the official solutions of the board of examiners. They represent merely the opinion of the editor of the *Students' Department*.)

EXAMINATION IN ACCOUNTING THEORY AND PRACTICE—PART II (*continued*)

November 16, 1928, 1 P. M. to 6 P. M.

The candidate must answer the first three questions and two other questions.

No. 2 (18 points):

On December 31, 1927, the ledger balances of Smith, Brown and Jones—a partnership, each member having a one-third interest therein—appeared as follows:

Cash	$9,500	
Receivables	98,500	
Reserve for bad accounts		$3,000
Payables		38,500
Loan from Jones		4,500
Salary due Smith		3,000
Capital:		
Smith		25,000
Brown		14,000
Jones		20,000
	$108,000	$108,000

At this date the firm decided to liquidate and a trustee was appointed to wind up its affairs.

The following represents the results of the trustee's activities:

Particulars	1st period	2nd period	3rd period
Cash collected from customers	$56,000	$18,000	$17,500
Liabilities paid in full settlement	19,200	19,000	
Trustee's expenses and salary	2,200	1,400	2,000
Cash paid to partners	8,000	9,900	Remainder

Prepare the necessary entries to wind up the partnership, and also prepare a statement setting forth the proper distribution (in your opinion) of the amounts paid to each partner at the end of each period and showing the final result.

Solution:

The statements required in this problem begin with the statement of partners' capitals on page 227.

SMITH, BROWN AND JONES
Statement of partners' capitals
From December 31, 1927, to ———, 1928

		Payables	Jones Loan	Jones Capital	Smith Salary	Smith Capital	Brown Capital	Total
Balances at December 31, 1927		$38,500.00	$4,500.00	$20,000.00	$3,000.00	$25,000.00	$14,000.00	$105,000.00
Trustee's expenses paid—first period				733.33		733.33	733.34	2,200.00
Balances, after trustee's expenses		$38,500.00	$4,500.00	$19,266.67	$3,000.00	$24,266.67	$13,266.66	$102,800.00
Distribution of cash—first period—								27,200.00
Payables		19,200.00						
Loan of Jones			4,500.00					
Salary of Smith					3,000.00			
Balance to Smith on account						500.00		
Balances at end of first period		$19,300.00		$19,266.67		$23,766.67	$13,266.66	$75,600.00
Trustee's expenses paid—second period				466.67		466.67	466.66	1,400.00
Balances, after trustee's expenses		$19,300.00		$18,800.00		$23,300.00	$12,800.00	$74,200.00
Distribution of cash—second period—								28,900.00
Liabilities	$19,300.00							
Settled for	19,000.00	19,000.00						
Credit partners	$300.00	300.00		100.00*		100.00*	100.00*	
Cash to partners				2,700.00		7,200.00		
Balances at end of second period				$16,200.00		$16,200.00	$12,900.00	$45,300.00
Trustee's expenses paid—third period				666.67		666.67	666.66	2,000.00
Balances, after trustee's expenses				$15,533.33		$15,533.33	$12,233.34	$43,300.00
Loss on realization—								4,000.00
Receivables at December 31, 1927	$98,500.00							
Less: Reserve for bad accounts	3,000.00							
Book value	$95,500.00							
Amount realized	91,500.00							
Loss	$4,000.00			1,333.33		1,333.33	1,333.34	
Balances				$14,200.00		$14,200.00	$10,900.00	$39,300.00
Final distribution of cash				14,200.00		14,200.00	10,900.00	39,300.00

SMITH, BROWN AND JONES

Statement of partners' capital accounts

Working papers

First period:	Jones	Smith	Brown	Total
Profit and loss ratio	1/3	1/3	1/3	
Total assets to be realized				$98,500.00
Less: Reserve for bad accounts				3,000.00
Balance at December 31, 1927				$95,500.00
Deduct: Assets realized				56,000.00
Total possible loss	$13,166.67	$13,166.67	$13,166.66	$39,500.00
Partners' capital accounts	19,266.67	24,266.67	13,266.66	56,800.00
Excess of partners' capital accounts over possible loss	$6,100.00	$11,100.00	$100.00	$17,300.00

Inasmuch as the capital accounts of both Jones and Smith are sufficient to absorb their respective shares of any possible loss on the balance of uncollected receivables, the loan and salary accounts may be paid immediately.

The $500 remaining after the payment of the loan and salary accounts may be paid to Smith as the amount of his capital account is the largest.

Second period:	Jones	Smith	Brown	Total
Total possible loss at end of first period				$39,500.00
Deduct: Assets realized				18,000.00
Balance				$21,500.00
Deduct: Gain on liquidation of payables				300.00
Total possible loss	$7,066.67	$7,066.67	$7,066.66	$21,200.00
Partners capital accounts	18,900.00	23,400.00	12,900.00	55,200.00
Excess of partners' capital accounts over possible loss	$11,833.33	$16,333.33	$5,833.34	$34,000.00

It will be seen from these working papers that the capital accounts are in excess of the total possible loss. The payment of $9,900 is applied against the accounts of Jones and Smith, which contain the largest balances.

Entries to wind up the partnership

Entries for first period:

(1)

Cash	$56,000.00	
Receivables		$56,000.00
To record the cash collected from customers.		

(2)

Payables	19,200.00	
Cash		19,200.00
To record the payment of liabilities.		

(3)

Smith—Capital	$733.33	
Brown—Capital	733.33	
Jones—Capital	733.34	
Cash		$2,200.00
To record the payment of trustee's expenses and salary.		

(4)

Loan from Jones	4,500.00	
Salary due Smith	3,000.00	
Smith—Capital	500.00	
Cash		8,000.00
To record cash paid to partners.		

Entries for second period:

(5)

Cash	$18,000.00	
Receivables		$18,000.00
To record the cash collected from customers.		

(6)

Payables	19,000.00	
Cash		19,000.00
To record the payment of liabilities.		

(7)

Payables	300.00	
Smith—Capital		100.00
Jones—Capital		100.00
Brown—Capital		100.00
To record the adjustment in payables—paid in full.		

Balance per books	$19,300.00
Cash paid	19,000.00
Excess	300.00

(8)

Smith—Capital	466.67	
Jones—Capital	466.66	
Brown—Capital	466.67	
Cash		1,400.00
To record the payment of trustee's expenses and salary.		

(9)

Smith—Capital	7,200.00	
Jones—Capital	2,700.00	
Cash		9,900.00
To record cash paid to partners.		

(10)

Entries for third period:

Cash	$17,500.00	
Receivables		$17,500.00
To record the cash collected from customers.		

(11)

Smith—Capital	1,333.33	
Brown—Capital	1,333.33	
Jones—Capital	1,333.34	
Reserve for bad accounts	3,000.00	
Receivables		7,000.00

To write off loss on uncollected accounts:

Balance, December 31, 1927	$98,500.00
Less: Collections	91,500.00
Balance	$7,000.00
Less: Reserve for bad accounts	3,000.00
Loss to partners	$4,000.00

(12)

Smith—Capital	666.67	
Brown—Capital	666.67	
Jones—Capital	666.66	
Cash		2,000.00
To record the payment of trustee's expenses and salary.		

(13)

Smith—Capital	14,200.00	
Brown—Capital	10,900.00	
Jones—Capital	14,200.00	
Cash		39,300.00
To record final distribution of cash to partners.		

No. 4 (15 points):

The X Y Z Light & Power Co. has an operating contract with the trustees of a bond issue, under the terms of which it must expend seven per cent. of its gross operating revenue for maintenance. Any portion of the seven per cent. not so expended must be deposited with the trustees.

Under the terms of the same contract, the company must set aside annually a reserve of four per cent. of its gross operating revenue for depreciation.

A certain built-in production unit has fallen below a profitable degree of efficiency and must be either rebuilt or replaced by a new unit.

It is decided to re-build which involves three steps, viz.:—(1) tearing down, (2) repairing certain parts, (3) re-erecting. Tearing down is done at the cost of labor only. Repairing parts requires the purchase of necessary material and entails cost of labor. Re-erecting involves principally cost of labor and incidental material.

(a) Is any part of the cost involved in the above process chargeable to maintenance or maintenance reserve? If so, designate what part and explain why.

(b) Is any part of the cost involved chargeable to depreciation reserve? If so, what part and why?

(c) Is labor cost a proper charge to depreciation reserve?

(d) Does the expenditure of money for labor retard the progress of depreciation or is that function performed only by material?

Solution:

(a) Maintenance expenditures are classified generally as those repairs of minor consequence which occur with somewhat regular frequency and keep a machine or unit in operation. The expenditures may be charged currently as incurred, or against a reserve for maintenance if the company has created and is operating such a reserve. The primary purpose of such a reserve is to apportion the cost of maintenance (upkeep) over the periods during which the machine or unit is used. In the present case, the unit had fallen below a profitable degree of efficiency and "*must* be either *rebuilt* or *replaced* by a new unit". Therefore, no part of the cost of (1) tearing down, (2) repairing certain parts or (3) re-erecting should be charged as maintenance but to the reserve for depreciation.

(b) After rebuilding the unit, the company had added nothing to its equipment, but had converted an unprofitable unit, which had evidently run down or had become obsolete, to one of efficient operation with additional years of service. In the circumstances, the generally accepted theory of charging the cost to the reserve for depreciation should be followed.

(c) Labor cost is a proper charge to depreciation reserve if the labor retards or arrests depreciation or in itself or in conjunction with material prolongs the life of the asset beyond the originally estimated period.

(d) Labor may retard the progress of depreciation. Maintenance of the roadbed of a railroad frequently involves only a labor expenditure, as when a track crew is employed in shifting ballast and rearranging ties, rails, etc. Material does not arrest depreciation unless applied, by means of labor, to the machine or unit subject to depreciation.

NOTE.—In public-utility accounting, considerable difficulty is encountered in distinguishing between maintenance and depreciation expenditures. The operating contracts which the company had with the trustee, and the rules and regulations of any supervising commissions should be read for any provisions pertinent to the case in point.

No. 5 (15 points):

The Plebe Machine Company operates under a licence from the Omnia Corporation, the owner of certain patents. In terms of the licence agreement the company agrees to pay the corporation a royalty of five per cent. of the net sales price of all machines sold each year during the continuance of the licence. Royalty settlements on the five per cent. basis are to be made quarterly—March 31st, June 30th, September 30th and December 31st, and it is agreed that a minimum royalty of $120,000 shall be payable for each of the calendar years covered by the licence.

During the half year ended June 30, 1928, the net sales aggregated $700,000 and royalty amounting to $20,000 was paid thereon, i. e., royalty for the March quarter. The company's business is seasonal and it is claimed by the management that royalty for the calendar year, calculated on the agreed-upon basis of five per cent. of the net sales, will at least equal the stipulated minimum of $120,000.

The Plebe Company's fiscal year ends on June 30th.

State what amount you would show in the balance-sheet as the liability for royalty at the date named. Give reasons for your answer.

Solution:

Under the terms of the licence the Plebe Manufacturing Company was required to pay the Omnia Corporation 5 per cent. of the net sales which for the six months ended June 30, 1928, amounted to $700,000. The amount of the royalties for the six-months period was, therefore, 5 per cent. of $700,000, or $35,000. Of this amount, the Plebe Manufacturing Company had paid $20,000, leaving a balance due of $15,000 as at June 30, 1928. This amount represents an actual liability as at that date and should be shown as a current liability in the balance-sheet.

It was further agreed that a minimum royalty of $120,000 "shall be payable for each of the calendar years covered by the licence". Any actual liability arising under this clause can not be determined until at the end of each calendar year. However, the accountant should give expression to the contingent liability thereunder, by means of a footnote on the balance-sheet as at June 30, 1928, if no surplus is set aside as a reserve for such contingency.

No. 6 (15 points):

The following are the comparative profit-and-loss accounts of the Deka Company for the two years ended December 31, 1926, and December 31, 1927, respectively:

	Year ended December 31, 1926	Year ended December 31, 1927	Increase
Net sales	$1,000,000	$1,250,000	$250,000
Cost of sales	800,000	975,000	175,000
Gross profit	$200,000	$275,000	$75,000
Selling expenses	$70,000	$75,000	$5,000
General and administrative expenses	40,000	45,000	5,000
Total expenses	$110,000	$120,000	$10,000
Net profit on sales	$90,000	$155,000	$65,000
Other income:			
Interest on notes receivable	$5,000	$7,000	$2,000
Gross income	$95,000	$162,000	$67,000
Deductions from income:			
Interest on notes payable	6,000	10,000	4,000
Net income	$89,000	$152,000	$63,000

Prepare a statement accounting for the increased net income, showing the amounts due to the variation in the volume and selling prices respectively, assuming that the cost of goods was the same in both years.

Solution:

THE DEKA COMPANY

Statement accounting for increase in net profit

Net profit—1927	$152,000.00
Net profit—1926	89,000.00
Increase in net profit	$63,000.00

Accounted for as follows:				
Items increasing net profit:				
Increase in gross profits, caused by:				
(1) Increase in volume of sales:				
Sales in 1927, at 1926 prices (see below) . . .	$1,218,750.00			
Sales 1926. .	1,000,000.00			
20% (1926 rate of gross profit) of	$218,750.00	$43,750.00		
(2) Increase in rate of gross profit, due to:				
Increase in selling prices				
Sales—1927—actual	$1,250,000.00			
Sales—1927—at 1926 prices. .	1,218,750.00	31,250.00	$75,000.00	
Increase in interest on notes receivable:				
1927		$7,000.00		
1926		5,000.00	2,000.00	$77,000.00
Items decreasing net profit:				
Increase in selling expenses:				
1927		$75,000.00		
1926		70,000.00	$5,000.00	
Increase in general and administrative expenses:				
1927		$45,000.00		
1926		40,000.00	5,000.00	
Increase in interest on notes payable:				
1927		$10,000.00		
1926		6,000.00	4,000.00	14,000.00
Increase in net profit (as above)				$63,000.00

Computation of selling prices and costs of 1927 business on 1926 basis:

Cost of sales—1927 . . . . $975,000.00

On the assumption that the cost of goods was the same in both years, these goods would have cost $975,000.00 in 1926.

Sales—1927 . . . . $1,250,000.00

The write up in 1926 was 25% on cost with the result that the profit on sales for that year was 20%. Then the goods sold in 1927 would have been written up in 1926 to $975,000.00 × 125% or $1,218,750.00 which would have been the selling price in 1926.