Students' Department

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NEW YORK C. P. A. EXAMINATION

The following problem was set up by The University of the State of New York as problem 4 in the examination on practical accounting—part II, November 11, 1930:

Problem:

You are requested by the Walton Electric Dishwashing Corporation to prepare from the following information, for the year ended December 31, 1929, a statement of cost of manufacture and cost of manufactured machines sold. All inventory elements of materials, labor and overhead are to be shown therein in analyzed form inclusive of cost per machine.

Depreciation:	
Buildings	$ 6,000
Machinery and equipment	60,000
Tools	10,000
Finished machines:	
December 31, 1928	125,000
December 31, 1929	203,000
Indirect labor	242,000
Indirect materials consumed	54,460
Insurance on factory	18,700
Labor consumed in making company tools	4,000
Machines in process:	
December 31, 1928	400,000
December 31, 1929	547,000
Maintenance and repairs	39,265
Materials consumed in making company tools	1,000
Overhead charged in making company tools	6,000
Payroll total	692,000
Power, light and heat	37,650
Property taxes	12,950
Purchases of materials	1,625,000
Stores:	
December 31, 1928	404,460
December 31, 1929	380,000
Sundry factory expense	37,875

Cost elements in the inventories are as follows:

	1928	1929
Finished machines:		
Labor	$ 20,000	$ 28,000
Materials	100,000	133,000
Overhead	25,000	42,000
Machines in process:		
Labor	80,000	112,000
Materials	200,000	267,000
Overhead	100,000	168,000

Overhead is to be distributed on the basis of productive labor.

	Actual productive labor	Actual overhead	Rate used in costing
1928	$300,000	$480,000	125%
1929			150%

Statistics on the production and sale of machines are as follows:

Finished machines:	
December 31, 1928	$ 1,854
December 31, 1929	2,515
Machines in process:	
December 31, 1928	6,050
December 31, 1929	7,620
Sales	31,419

Solution:

Schedule 1

WALTON ELECTRIC DISHWASHING CORPORATION

Schedule of manufacturing overhead for the year ended December 31, 1929

Depreciation:		
Buildings	$ 6,000.00	
Machinery and equipment	60,000.00	
Tools	10,000.00	
		$ 76,000.00
Indirect labor		242,000.00
Indirect materials consumed		54,460.00
Insurance on factory		18,700.00
Maintenance and repairs		39,265.00
Power, light and heat		37,650.00
Property taxes		12,950.00
Sundry factory expense		37,875.00
Total manufacturing overhead		$518,900.00
Less—overhead chargeable to tools made by company		4,612.44
Manufacturing overhead chargeable to cost of manufacturing		$514,287.56

Schedule 2

WALTON ELECTRIC DISHWASHING CORPORATION

Schedule of direct labor for the year ended December 31, 1929

Payroll total		$692,000.00
Deduct—indirect labor	$242,000.00	
Labor consumed in making tools	4,000.00	
		246,000.00
Total direct labor		$446,000.00

The rate of manufacturing overhead to direct labor for the year 1929 should be set at 115.31+% as the actual manufacturing overhead amounted to $518,900 which is 115.31+% of the actual direct labor of $450,000.

The charge to tools made by the company for manufacturing overhead should be based upon the actual rate, rather than upon the estimated rate of 125%.

Cost of tools manufactured by the company:

Materials	$1,000.00
Direct labor	4,000.00
Manufacturing overhead (115.31+% of $4,000)	4,612.44
Total cost	$9,612.44

As the problem does not give sufficient data to enable the candidate to compute depreciation on these tools, no adjustment can be made in the amount of depreciation on tools set aside by the company.

Schedule 3

WALTON ELECTRIC DISHWASHING CORPORATION

Schedule of raw material used for the year ended December 31, 1929

Inventory, January 1, 1929		$ 404,460.00
Purchases of materials		1,625,000.00
Total		$2,029,460.00
Less—inventory, December 31, 1929		380,000.00
Materials used		$1,649,460.00
Less—materials consumed in making company tools	$ 1,000.00	
Indirect materials consumed	54,460.00	
		55,460.00
Raw materials used in production		$1,594,000.00

The inventories of finished machines and machines in process both at January 1, 1929 (December 31, 1928), and December 31, 1929, should be adjusted to give effect to the actual overhead rather than the estimated overhead for the respective years. During 1928 a rate of 125% was used in costing, while the actual rate was ($480,000÷$300,000) 160%.

	Machines in process	Finished machines
Inventories, January 1, 1929:		
Materials	$200,000.00	$100,000.00
Labor	80,000.00	20,000.00
Actual overhead (160% of labor)	128,000.00	32,000.00
Total	$408,000.00	$152,000.00

WALTON ELECTRIC DISHWASHING CORPORATION

Statement of cost of goods manufactured and sold in total and by units for the year ended December 31, 1929

	Total amount				By units				
	Materials	Labor	Mfg. overhead	Total	Machines	Materials	Labor	Mfg. overhead	Total
Machines in process January 1, 1929	$ 200,000.00	$ 80,000.00	$128,000.00	$ 408,000.00	6,050	$33.058	$13.223	$21.157	$67.438
Cost of manufacturing (schedules 1, 2 and 3)	1,594,000.00	446,000.00	514,287.56	2,554,287.56	33,650	47.370	13.254	15.283	75.907
Total	$1,794,000.00	$526,000.00	$642,287.56	$2,962,287.56	39,700	$45.189	$13.249	$16.179	$74.617
Deduct—machines in process, December 31, 1929	267,000.00	112,000.00	129,148.44	508,148.44	7,620	35.039	14.698	16.949	66.686
Cost of machines manufactured	$1,527,000.00	$414,000.00	$513,139.12	$2,454,139.12	32,080	$47.600	$12.905	$15.996	$76.501
Finished machines, January 1, 1929	100,000.00	20,000.00	32,000.00	152,000.00	1,854	53.937	10.788	17.260	81.985
Total	$1,627,000.00	$434,000.00	$545,139.12	$2,606,139.12	33,934	$47.946	$12.790	$16.065	$76.800
Deduct—finished machines December 31, 1929	133,000.00	28,000.00	32,287.11	193,287.11	2,515	52.883	11.133	12.838	76.854
Cost of machines sold	$1,494,000.00	$406,000.00	$512,852.01	$2,412,852.01	31,419	$47.551	$12.922	$16.323	$76.796

The inventories at December 31, 1929, should be adjusted also to give effect to the actual rate of overhead of \$115.31+%.

	Machines in process	Finished machines
Inventories, December 31, 1929:		
Materials	\$267,000.00	\$133,000.00
Labor	112,000.00	28,000.00
Actual overhead (115.31+% of labor)	129,148.44	32,287.11
Total	\$508,148.44	\$193,287.11

Illinois C. P. A. Examination

The following problem was set by the examiners in accountancy, University of Illinois, in the examination in accounting, theory and practice—part I, held on November 20, 1930. The suggested time allowance was one hour and thirty minutes:

Problem:

John M. Good, a merchant, has called you in to review his individual federal income tax return for the calendar year 1929, which was prepared by his bookkeeper. Aside from his business proprietorship, no books were kept.

Mr. Good is a citizen of the United States, maintaining his home in Chicago, Illinois. He is the father of two children in school, neither of whom contribute to their own support, one seventeen and the other twenty years of age.

Mr. Good's wife, Mary B. Good, died August 5, 1929. The administrator of her estate filed an individual federal income tax return for her covering the period up to and including the date of death. On the individual return he deducted \$3,500 for personal exemption.

The bookkeeper has computed Mr. Good's tax as follows:

Particulars	Amount	
Income:		
Salary	\$ 3,600.00	
Income from business	32,540.76	
Interest on deposits, bonds, etc.	12,172.48	
Rents and royalties	2,210.65	
Profits from sale of real estate, stocks, bonds, etc.	90,671.30	
Dividends on stock	5,720.52	
Income from fire insurance	1,778.40	
Total income		\$148,694.11
Deductions:		
Interest paid	\$ 2,648.73	
Taxes paid	3,017.21	
Bad debts	2,000.00	
Contributions	600.00	
Total deductions		8,265.94
Net income		\$140,428.17

Computation of Tax

Net Income		\$140,428.17
Less:		
Dividends	\$ 5,720.52	
Credit for dependents	800.00	
Personal exemption	3,500.00	10,020.52
Balance		\$130,407.65

Normal tax—1½% on $4,000..................	$ 60.00
3 % on next $4,000..............	120.00
5 % on balance of $122,407.65....	6,120.38
Surtax of 20% on $140,428.17................	28,085.63
	$ 34,386.01
Less—Credit of 25% on earned income..........	422.00
Net tax..................................	$ 33,964.01

You determine the following facts pertinent to the situation:

The salary of $3,600 was received from the D Corporation of which Mr. Good is an officer and director.

Income from a private business of Mr. Good's was computed as follows:

Particulars	Amount	
Total receipts..................................		$781,426.38
Cost of merchandise sold (net)................	$525,469.09	
Salaries..................................	100,048.60	
Interest..................................	6,211.14	
Taxes..................................	895.32	
Bad debts..................................	9,410.16	
Depreciation..................................	14,786.92	
Rent, repairs and other expenses...............	92,064.39	748,885.62
Net profit..............................		$ 32,540.76

Receipts included $150 from the sale of certain old fixtures which had originally cost $1,355, and, including the writeoff for 1929, had been depreciated by $1,005. The fixtures had not been removed from the asset account on the books of the business.

Other business expense included $728.48, the cost of repairs and upkeep of Mr. Good's automobile which was used for business purposes about 75% of the time.

Interest income included:

Particulars	Amount
On bank deposits..............................	$ 769.48
From industrial bonds........................	5,388.00
From utility bonds...........................	4,365.00
From Cook county highway bonds.............	1,650.00
	$ 12,172.48

All utility bonds owned by Mr. Good were tax-free-covenant issues on which a 2% tax had been paid at the source.

Rents were analyzed as follows:

Particulars	Amount received	Cost of asset	Depreciation	Repairs	Other expense	Net profit
Building A..........	$16,245.00	$192,645.00	$3,852.00	$3,621.16	$6,480.03	$2,290.91
Building B..........	6,000.00	78,240.00	1,564.80	1,195.20	3,320.26	*80.26*
						$2,210.65

The loss from Building B was attributed to the fact that Mr. Good occupied one of the six apartments in this building and that no income was realized from that apartment.

Profit from sale of real estate, stock, bonds, etc., was made up of the following items:

	Date acquired	Amount received	Depreciation allowable	Cost	Subsequent improvements	Net profit
Factory building	1928	$73,425.00	$12,865.80	$77,349.50	$7,480.00	$1,461.30
Stock rights (Master Corp.)	1929	210.00				210.00
Barrington Mach. stock	1925	110,500.00		21,500.00		89,000.00
						$90,671.30

The 20 stock rights (one right had been received for each 5 shares held) were sold at $10.50 each and had been acquired as the result of the ownership of 100 shares of Master Corporation stock purchased in 1922 by Mr. Good at $93 a share. The market price of the stock at the time the rights were issued was $138 a share and the market value of the rights was $7.50 each. The proper proportion of cost should be allocated to the rights.

Dividends were received from:

200	shares M and M Bank stock	$3,000.00
50	shares Belding Foundry stock	175.00
82 5/6	shares Jordan Building Co. stock	538.52
60	shares Hemple & Co. stock	2,007.00
		$5,720.52

Hemple & Co. had discontinued business in 1928 and the dividend received in 1929 was the first liquidating dividend. The stock had been purchased at par ($100) in 1920.

Income from fire insurance was received as compensation for damage done to a garage which was entirely destroyed by fire. The garage was built by Mr. Good at the cost of $1,890 on which depreciation of $629.50 had been taken. After the fire the structure was rebuilt at a cost of $2,118.

Interest expense of $2,648.73 covered personal borrowings and included $378.15 of accrued interest. Taxes paid were as follows:

Personal property	$ 216.85
Real estate, including $1,047.60 of special new paving assessment.	2,800.36
	$3,017.21

Real estate tax bills of $4,932.60, including $1,998.57 of special paving assessments were due but unpaid.

The $2,000 bad debt consisted of money loaned to Mr. Good's brother in 1928. There was no note to support the loan. The brother's death in 1929 precluded the possibility of collecting; Mr. Good did not desire to press the claim because the net estate going to the widow was only $5,000. Contributions were made up as follows:

Church	$ 350.00
Y. M. C. A. building fund	50.00
Salvation Army Christmas chest	50.00
Democratic party campaign fund	150.00
Total	$ 600.00

Recompute Mr. Good's income tax liability, prepare the necessary supporting schedules, and explain any differences between your figures and those of the bookkeeper.

The applicable surtax rates in force during 1929 were:

Income	Rate applicable to last bracket of income	Total surtax
$ 14,000.00	1	$ 40.00
16,000.00	2	80.00
48,000.00	12	2,720.00
52,000.00	13	3,240.00
56,000.00	14	3,800.00
60,000.00	15	4,400.00
64,000.00	16	5,040.00
70,000.00	17	6,060.00
80,000.00	18	7,860.00
100,000.00	19	11,600.00
100,000.00+	20	

Solution:

No adjustment is necessary to account for the salary of $3,600 received from the D Corporation, of which Mr. Good is an officer and a director, as this amount was correctly included in the computation of Mr. Good's tax as prepared by the bookkeeper.

The income from the private business of Mr. Good should be adjusted (1) to exclude from the total receipts the amount ($150) received from the sale of the old fixtures, and (2) to include only 75% of the automobile expense of $728.48 incurred during the year in the operation of the automobile. These adjustments are explained below:

Total receipts from business:		
Per bookkeeper's computation		$781,426.38
Deduct—Amount received from sale of fixtures		150.00
Total receipts from business as adjusted		$781,276.38
Rents, repairs and other expenses:		
Per bookkeeper's computation		$ 92,064.39
Deduct—Automobile expenses applicable to personal use:		
Total expense of operating automobile	$ 728.48	
25% of $728.48 (the automobile is used for business purposes about 75% of the time)		182.12
Rents, repairs and other expenses as adjusted		$ 91,882.27

The loss on the sale of the fixtures is considered later with the gains or losses from sales of other assets subject to the capital net gain section of the regulations. After giving effect to the two above adjustments, the income from the private business of Mr. Good should be shown in schedule A of form 1040 as follows:

Total receipts from business		$781,276.38
Net cost of goods sold	$525,469.09	
Salaries	100,048.60	
Interest	6,211.14	
Taxes	895.32	
Bad debts	9,410.16	
Depreciation	14,786.92	
Rent, repairs and other expenses	91,882.27	
Total deductions		748,703.50
Net profit		$ 32,572.88

The interest income should be set forth separately in the return showing:

Interest on bank deposits, notes, etc. (except interest on tax-free covenant bonds):		
On bank deposits	$ 769.48	
From industrial bonds	5,388.00	
		$ 6,157.48
Interest on tax-free covenant bonds:		
From utility bonds (upon which a 2% tax had been paid at the source)		4,365.00
Interest on tax exempt bonds (should be shown in schedule E of the return):		
From Cook county highway bonds		1,650.00
Total interest income		$ 12,172.48

The income from rents should be corrected to account for the apartment in Building B (a six apartment building) occupied by Mr. Good, by apportioning the expenses; i. e., reducing the expenses shown by the bookkeeper by one-sixth. Schedule B of the return would appear as follows:

Particulars	Amount received	Cost of asset	Depreciation	Repairs	Other expenses	Net profit
Building A	$16,245.00	$192,645.00	$3,852.90	$3,621.16	$6,480.03	$2,290.91
Building B	6,000.00	78,240.00	1,304.00	996.00	2,766.88	933.12
Totals	$22,245.00	$270,885.00	$5,156.90	$4,617.16	$9,246.91	$3,224.03

Profit from sale of real estate, stocks, bonds, etc. (schedule C of the return), should include only the sale of the factory building acquired in 1928. The sale of the old fixtures, stock and stock rights should be shown in schedule D of the return which is considered immediately thereafter.

Kind of property	Date acquired	Amount received	Depreciation allowable	Cost	Subsequent improvements	Net profit
Factory building	1928	$73,425.00	$12,865.80	$77,349.50	$7,480.00	$1,461.30

Capital assets as defined in the regulations include "property held by the taxpayer for more than two years" and not held "primarily for sale in the course of his trade or business." The "capital net gain" is the taxable gain from sales of such property. While no date of acquisition of the "certain old fixtures" is given in the problem, it is apparent that, considering the ratio of the amount of the accumulated depreciation to the original cost of the asset, the fixtures were purchased prior to the year 1928. The stock investment in Barrington machine was acquired in 1925. A point not generally known, however, is that the sale of the stock rights received during the year 1929, is subject to the capital net gain provisions, for these rights are considered to have been "acquired" at the original date of acquisition of the stock (1922). Gain or loss on the sale of rights of Master Corporation, is determined by ascertaining the difference between the amount received and the cost or basis for the rights as prescribed by the regulations. The cost or basis for the stock should be divided between the stock and the rights in proportion to their relative market values at the time the rights are issued. Accordingly, the original cost of the investment of $9,300 should be divided between the 100 shares of stock with a market price of $13,800 and the rights with a market price of (20 x $7.50) $150.

	Market price	Ratio	Cost or "basis"
Stock	$13,800.00	98.92%	$9,200.00
Rights	150.00	1.08	100.00
Total	$13,950.00	100.00%	$9,300.00

The capital net gain section of the return (schedule D) should be set up to include the following:

Kind of property	Date acquired	Date sold	Amount realized	Depreciation	"Cost or value"	Net gain or loss
Fixtures	?	1929	$ 150.00	$1,005.00	$ 1,355.00	$ *200.00**
Barrington machine stock	1925	1929	110,500.00		21,500.00	89,000.00
Stock rights (Master Corporation	1922	1929	210.00		100.00	110.00
Totals			$110,860.00	$1,005.00	$22,955.00	$88,910.00

The first liquidating dividend received on the 60 shares of Hemple & Co. stock amounting to $2,007, is not subject to tax inasmuch as it represents an amount in partial liquidation, and presumably further liquidating dividends will be received. "The gain or loss to a shareholder from a distribution in liquidation is to be determined . . . by comparing the amount of the distribution with the cost or other basis of the stock." (Article 625 of regulation 74.) As the amount received ($2,007) is less than the price paid for the stock ($6,000), the dividend received is to be considered as a return of the cost, and is, therefore, not taxable. If this dividend were in complete liquidation, that is, if no further dividends were to be received, the excess of the cost of $6,000 over the amount received, $2,007, would be a deductible loss, subject to the capital net gain provisions of the regulations. The amount of dividends to be reported would show:

200	shares M and M Bank stock	$3,000.00
50	shares Belding foundry stock	175.00
82 5/6	shares Jordan building stock	538.52
	Total dividends received	$3,713.52

The item of income from fire insurance $1,778.40, is not subject to tax as it represents the amount received from the insurance companies as compensation for damage done to a garage which was entirely destroyed by fire, and immediately rebuilt at a cost of $2,118. Article 579 of regulations 74 states, "If the property so destroyed . . . is replaced in kind by similar property, . . . no gain or loss is recognized."

The interest expense should be corrected to eliminate the item of $378.15 of accrued interest, as Mr. Good's personal income is reported on the receipts and disbursements basis. The correct amount of interest is: (2,648.73 less $378.15) $2,270.58.

The real estate taxes accrued should not be reported as deductions for the same reason given above. The amounts paid on special new paving assessments are capital expenditures and are not deductible. The taxes to be deducted should appear (schedule F):

Personal property	$ 216.85
Real estate	1,752.76
Total taxes deductible	$1,969.61

No deduction may be made for the "bad debt" of $2,000, for had Mr. Good pressed his claim, as he might have done under a strictly debtor-creditor relationship, a partial, if not a complete recovery may have been made. The internal revenue department would, most likely, consider Mr. Good's motives in not pressing his claim as "charitable."

The "contribution" to the Democratic party campaign fund of $150 is not deductible as a contribution and should be excluded. The corrected list of contributions should show (schedule F):

Church	$ 350.00
Y. M. C. A. building fund	50.00
Salvation Army Christmas chest	50.00
Total contributions	$ 450.00

A recapitulation of the corrections explained above are set forth in the statement following:

Statement showing differences between bookkeeper's computations and corrected amounts

Income	Bookkeeper's computation	As corrected	Increase or *decrease*
Salaries—D Corporation	$ 3,600.00	$ 3,600.00	$
Income from business	32,540.76	32,572.88	32.12
Interest on deposits, bonds, etc.	12,172.48	6,157.48	*6,015.00*
Interest on tax-free covenant bonds		4,365.00	4,365.00
Rents and royalties	2,210.65	3,224.03	1,013.38
Profit from sale of real estate	90,671.30	1,461.30	*89,210.00*
Dividends on stock	5,720.52	3,713.52	*2,007.00*
Income from fire insurance	1,778.40		*1,778.40*
Total income	$148,694.11	$ 55,094.21	*$93,599.90*
Deductions			
Interest paid	$ 2,648.73	$ 2,270.58	*$378.15*
Taxes paid	3,017.21	1,969.61	*1,047.60*
Bad debts	2,000.00		*2,000.00*
Contributions	600.00	450.00	*150.00*
Total deductions	$ 8,265.94	$ 4,690.19	*$ 3,575.75*
Net income	$140,428.17	$ 50,404.02	*$90,024.15*
Capital gain		88,910.00	88,910.00
Total	$140,428.17	$139,314.02	*$ 1,114.15*

The bookkeeper in his computation of income tax payable deducted $800 as credit for two dependents. Mr. Good was entitled to a credit of only $400 for the child under eighteen years of age. The personal exemption of $3,500 is correct, as the taxpayer was the "head of a family."

The rates of both normal and surtax used by the bookkeeper were incorrect. By a special act of congress, the normal tax rates for the year 1929 were reduced from 1½%, 3% and 5%, to ½%, 2% and 4%. Surtax should have been based upon the rates given in the problem, not upon a flat rate of 20%.

John M. Good

Individual income-tax return for calendar year 1929

Income		
Salary—D Corporation	$3,600.00	
Income from business or profession (schedule A)	32,572.88	
Interest on bank deposits, notes, corporation bonds, etc.	6,157.48	
Interest on tax-free covenant bonds (2%)	4,365.00	
Rents and royalties (schedule B)	3,224.03	
Profit from sale of real estate (schedule C)	1,461.30	
Dividends on stock of domestic corporations	3,713.52	
Total income		$55,094.21

Deductions

Interest paid			$2,270.58	
Taxes paid (schedule F)			1,969.61	
Contributions (schedule F)			450.00	
Total deductions				4,690.19
Net income				$50,404.02

Earned income credit

Earned income:				
Salary			$3,600.00	
20% of income from business (note)			6,514.58	$10,114.58
Less personal exemption and credit for dependents				3,900.00
Balance				$ 6,214.58
Amount taxable at ½%				4,000.00
Amount taxable at 2%				$ 2,214.58
Normal tax:				
½% of $4,000.00		20.00		
2% of $2,214.58		44.29	$ 64.29	
Surtax on	$10,115.48			
0%	10,000.00			
1% of	$ 114.58		1.15	
Tax on earned net income				$ 65.44
Credit of 25% of tax ($65.44)				$ 16.36

NOTE.—Earned income is limited to amounts received as compensation for personal services actually rendered, and to an amount not in excess of 20% of the net profits accruing from a business in which both personal services and capital are "material income-producing factors."

Computation of tax

	Amount		Tax
Net income		$50,404.02	
Less:			
Dividends	$3,713.52		
Credit for dependents	400.00		
Personal exemption	3,500.00	7,613.52	
Balance		$42,790.50	

Amount taxable at ½%....	$4,000.00		$20.00
Balance..............	$38,790.50		
Amount taxable at 2%.....	4,000.00		80.00
Balance..............	$34,790.50		
Amount taxable at 4%.....	34,790.50		1,391.62
Surtax:	Net Income		
From table, on..........	$48,000.00	$2,720.00	
13% of................	2,404.02	312.52	
Total................	$50,404.02		3,032.52
Tax on net income........			$ 4,524.14
Tax on capital gain or loss 12½% of $88,910.......			11,113.75
Total................			$15,637.89
Less credit of 25% of tax on earned income..................			16.36
Total tax..			$15,621.53
Less income tax paid at source (2% of $4,365)...............			87.30
Balance of tax......................................			$15,534.23