## Journal of Accountancy

## Students' Department

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# Students' Department 

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 opinions of the editor of the Students' Department.]

## Examination in Accounting Theory and Practice-Part I

November 12, 1931, 1:30 P. M. to 6:30 P. M.
The candidate must answer the first three questions and one other question:
No. 1 (30 points):
The trial balance (condensed) of Company A, as at December 31, 1930, was as follows:

| Cash | $\begin{aligned} & \text { Dr. }_{2,438} \end{aligned}$ | Cr. |
| :---: | :---: | :---: |
| Accounts receivable. | 37,097 |  |
| Inventories-January 1, 1930: |  |  |
| Raw material. | 7,492 |  |
| Jobbing goods. | 2,564 |  |
| Finished goods. | 10,473 |  |
| Machinery and equipment | 14,622 |  |
| Prepaid insurance | 1,300 |  |
| Purchases: |  |  |
| Raw material. | 88,838 |  |
| Jobbing goods. | 44,045 |  |
| Sales: |  |  |
| Manufactured goods-net |  | \$163,721 |
| Jobbing goods. . |  | 54,601 |
| Sundry accounts, apart from those detailed, applicable to cost of manufacturing and cost of sales. | 43,232 |  |
| Sundry expense accounts, applicable to profit and loss.. . | 51,312 |  |
| Notes and accounts payable. |  | 24,215 |
| Reserves: |  |  |
| For depreciation. |  | 12,021 |
| For doubtful accounts. |  | 3,500 |
| To reduce "Company B's" account to inventory cost value-January 1, 1930 |  | 144 |
| Capital stock. . . . . . . . . . . . . . . |  | 18,500 |
| Surplus...... |  | 26,711 |

\$303,413 \$303,413

Included in the accounts receivable of Company $\mathbf{A}$ is an account with "Company $B$," which is in reality a title only, used by $A$ in selling merchandise on consignment to certain small dealers.

An ${ }^{8}$ analysis of this account, as it appears in the accounts-receivable ledger of Company A , is as follows:
 account on the books of $A$. This procedure has been in vogue for several years.

A list of balances of customers' consignment accounts of " $B$ " totals $\$ 1,218$ (which is accepted as correct), representing the prices at which the garments are sold to the public by the customers of "B." These customers remit only for garments actually sold and deduct 20 per cent. for their profit. A garment billed to "B" by Company A at the latter's regular selling price of $\$ 2$ is then sold to the public by the customers of " $B$ " for $\$ 2.90$. The same proportion holds throughout. Shipments, inventories and sales consist of 75 per cent. of manufactured goods and 25 per cent. of jobbing goods.

On the articles handled by "B," Company A earns a gross profit of 35 per cent. on its selling price on manufactured goods and 25 per cent. on jobbing goods.

A physical inventory of goods on hand at the plant of Company A, at the close of business, December 31, 1930, was as follows:

| Raw material. | \$6,780 |
| :---: | :---: |
| Jobbing goods. | 4,463 |
| Finished goods | 7,246 |

From the foregoing trial balance and following data, prepare
(1) Journal entries necessary to adjust the account of "Company B;"
(2) Statement of cost of goods manufactured and cost of sales;
(3) Statement of profit and loss for the year ended December 31, 1930;
(4) Balance-sheet as at the close of business, December 31, 1930.

## Solution:

(1) Journal entries necessary to adjust the account of Company B.

Accounts receivable-(B) . . . . . . . . . . . . . . . . . . . . . . . . \$ 144.00
To transfer the reserve account to accounts receivable (B).
(2)

Inventory-manufactured goods-January 1, 1930. . . 2,592.00
Inventory-jobbing goods-January 1, 1930. 864.00

Accounts receivable-(B)
To set up the inventories of finished goods at January 1, 1930, charged to accounts receivable (B) as follows:

Balance-January 1, 1930 . . . . . . . . . . $\$ 3,600.00$
Less-reserve . . . . . . . . . . . . . . . . . . . . . 144.00
Adjusted balance . . . . . . . . . . . . . . . . . . $\$ 3,456.00$


Computation of inventory on consignment at December 31, 1930.
The goods billed to Company B include a gross profit on sales of 35 per cent. on the manufactured goods, and 25 per cent. on the jobbing goods.

Company B in turn bills these goods to consignees on the basis of $\$ 2.90$ for every $\$ 2$ of cost to it, or at a billed price of 145 per cent. of cost. The consignment customers' accounts represent inventories at cost, plus the two profits noted above.
$\left.\begin{array}{lllll}\text { Consignment customers' accounts at prices billed to } \\ \text { customers by Company B } \ldots \ldots \ldots \ldots \ldots \ldots \ldots\end{array}\right)$

Total inventory at cost to Company A of goods out on consignment at December 31, 1930

Statement of cost of goods manufactured and sold for the year ended
December 31, 1930

| Particulars | Manufactured goods | Jobbing goods | Total |
| :---: | :---: | :---: | :---: |
|  | \$ 7,492.00 |  | \$ 7,492.00 |
| Inventory-jobbing goods, January 1, |  |  |  |
| Total | \$ 7,492.00 | 3,428.00 | 10,920.00 |
| Purchases during the year, 1930 | 88,838.00 | 44,045.00 | 132,883.00 |
| Finished goods inventory, January 1, 1930 | 13,065.00 |  | 13,065.00 |
| Sundry accounts, applicable to cost of manufacturing and cost of sales. | 43,232.00 |  | 43,232.00 |
| Total. | \$152,627.00 | \$47,473.00 | \$200,100.00 |
| Deduct-inventories at December 31, 1930: |  |  |  |
| Raw materials. | 6,780.00 \$ |  | \$ 6,780.00 |
| Finished and jobbing goods | 7,655.50 | 4,620.50 | 12,276.00 |
| Total deduction | \$ 14,435.50 \$ | 4,620.50 | \$ 19,056.00 |
| Cost of goods manufactured and sold. | \$138,191.50 \$ | 2,852.50 | \$181,044.00 |

(3)

Company A
Statement of profit and loss for the year ended December 31, 1930
Manufac- Jobbing

| Particulars | Manufac- Jobbing tured goods goods | Total |
| :---: | :---: | :---: |
| Sales. | \$166,925.00 \$55,669.00 | \$222,594.00 |
| Cost of sales (2) | 138,191.50 42,852.50 | 181,044.00 |
| Gross profit on sales. | \$ 28,733.50 \$12,816.50 | 41,550.00 |
| Sundry expenses applicable to profit and |  |  |
| loss. |  | 51,370.00 |
| Net loss for the year ended December 31, |  |  |
| 1930. |  | \$ 9,820.00 |

(4)

Company A
Balance-sheet-December 31, 1930
Assets
Current assets:
Cash. . . . . . . . . . . . . . . . . . . . . . . . . . . $\$ 2,438.00$
Accounts receivable . . . . . . . . . . . . . . . . $\$ 37,711.00$
Less-reserve for bad debts . . . . . . . 3,500.00
$34,211.00$
Inventories:
On hand:
Raw material . . . . . . . . \$6,780.00
Jobbing goods. . . . . . . $\quad 4,463.00$
Finished goods . . . . . . 7,246.00
$\$ 18,489.00$
On consignment:
Finished goods. . . . . . \$ 409.50
Jobbing goods. . . . . . 157.50
567.00

|  | 19,056.00 |  |
| :---: | :---: | :---: |
|  |  | \$55,705.00 |
| Machinery and equipment | \$14,622.00 |  |
| Less-reserve for depreciation | 12,021.00 |  |
|  |  | 2,601.00 |
| Prepaid insurance. |  | 1,300.00 |
|  |  | \$ 59,606.00 |

## Liabilities and net worth

Current liabilities:
Notes and accounts payable......... \$24,215.00
Net worth:

| Capital stock. |  | \$18,500.00 |
| :---: | :---: | :---: |
| Surplus: |  |  |
| Balance January 1, 1930......... \$ 26,711.00 |  |  |
| Less-loss for year (3) | 9,820.00 |  |
|  | -16,891.00 |  |
|  |  | 35,391.00 |
|  |  | \$ 59,606.00 |

No. 2 (25 points):
Companies M and P are engaged in the exploitation, development and production of minerals. They decide to consolidate and form a Company K with a capital stock of 100,000 shares of no par value.
Under certain rights, acquired for nominal considerations, the holdings of Companies M and P have proved to be very valuable, principally because of discoveries of extensive underground deposits, the cost of which was considerably less than the present intrinsic values.

A disinterested appraisal has been made, and, based upon this appraisal and other assets apart from those appraised, the capital stock of K is to be issued to the stockholders of the subsidiary companies in the following proportions: for each share of $M$, two shares of $K$ and for each share of $P$, four shares of $K$.

The appraisal shows the value of the properties of M to be $\$ 2,600,000$ and those of $\mathrm{P}, \$ 4,400,000$.
All the stock is exchanged, with the exception of 100 shares of M. Later, 20,000 shares of K stock are sold for cash at $\$ 100$ a share.
The accounts of M and P , as at the date of consolidation, were as follows:

|  | M | P |
| :---: | :---: | :---: |
| Cash. | \$ 200,000 | \$ 100,000 |
| Property .......... | 1,600,000 | 1,800,000 |
|  | $\begin{array}{r}\text { 500,000 } \\ \hline 6\end{array}$ | $4^{1.400,000}$ |
|  | \$2,300,000 | \$2,000,000 |
| Sundry liabilities <br> Reserves for depletion and depreciation <br> Capital stock <br> Surplus (deficit) | \$ 300,000 | \$ 600,000 |
|  | 800,000 | 600,000 |
|  | 1,500,000 | 1,000,000 |
|  | 300,000 | 200,000 |
|  | \$2,300,000 | \$2,000,000 |

From the foregoing information
(a) Prepare journal entries to record transactions on books of K .
(b) Prepare a consolidated balance-sheet (in detail) explaining eliminations and adjustments.
(c) Explain basis on which minority interests are computed.
(d) How do you show capital accounts on the consolidated balance-sheet and why?
(e) How do you show property accounts on the consolidated balance-sheet and why?
(f) In preparing a consolidated balance-sheet and income statement as of a subsequent date, what adjustment, if any, would you make with regard to reserves for depletion of mineral deposits?

## Solution:

Before the journal entries to record the transactions on the books of Company K can be prepared, it is necessary to consider whether or not the appraised values should be expressed upon the books, and what value should be assigned to the no-par-value stock of Company K. The problem leaves both of these points to the judgment of the candidate. Using the wholly owned subsidiary, Company P , as an example, and assuming a composite rate of 10 per cent. for depreciation and depletion, and that the stock of the subsidiary is $\$ 100$ par value, let us consider the possible methods of solving the problem.

1. As 20,000 shares of capital stock of Company K were sold for cash at $\$ 100$ a share, that valuation may be assigned to the 40,000 shares of no-par-value stock of Company K exchanged for the 10,000 shares of stock of Company P . If the appraised values of the property are not expressed upon the books of Company P, we find that the value of the stock of Company K ( $\$ 4,000,000$ ) is $\$ 3,200,000$ in excess of the book value of the stock of Company $\mathrm{P}(\$ 800,000)$ received in the exchange. Under ordinary circumstances, this excess would be called goodwill. However, as it is shown that the value of the property carried on the books of Company P is understated by $\$ 3,200,000$ (appraised value, $\$ 4,400,000$ minus book value, $\$ 1,200,000$ ), an adjustment should be made in the consolidated working papers to restate the property valuation and to increase the net worth or book value of the stock of Company ${ }^{2} \mathrm{P}$.

But what adjustments for depreciation and depletion, if any, are to be made at a subsequent date? Assume that Company $P$ has a profit at the end of the year of $\$ 500,000$ before deducting depreciation and depletion of $\$ 120,000$. The profit of $\$ 380,000$ would increase the net assets of Company $P$ to $\$ 1,180,000$. The parent company, $K$, would take up the profit of $\$ 380,000$ by a charge to investment account and a credit to surplus. However, in eliminating the investment account against the net worth of Company P , we find:

| Investment account on books of Company K. | \$4,000,000 |  |
| :---: | :---: | :---: |
| Add-profits for the year. | 380,000 |  |
| Total at end of the year. |  | \$4,380,000 |
| Book value of stock of Company P at the beginning of the year. | \$ 800,000 |  |
| Add-profits for the year | 380,000 | 1,180,000 |
| Difference |  | \$3,200,000 |

The excess of the investment account over the book value of the stock of the subsidiary company, considered as an increase in property valuation, rather than as goodwill, has not changed during the year. Obviously, this treatment can not be correct, for if the property account has been increased in the consolidated statement by $\$ 3,200,000$, some provision for depreciation and depletion should be made on the appreciated values.
2. Let us assume as another choice, that the appraised values were taken up on the books of Company P, by charges of $\$ 2,600,000$ to the property account, $\$ 600,000$ to the reserves for depletion and depreciation, and a credit of $\$ 3,200$,000 to appraisal surplus account. The new book value of the stock of Company

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| P would be $\$ 4,000,000$ which would be equal to the balance account of Company K. <br> But what adjustments are to be made at the end of the the depreciation and depletion? Most textbooks would r realized appreciation be accounted for on the books of Com | e in the <br> year to recomme mpany | stment <br> ount for hat the follows: |
| :---: | :---: | :---: |
| Profit and lo | \$440,000 |  |
| Reserves for depreciation and depletion. . . . .......... <br> To set up depreciation and depletion on the appraised value of the property at the rate of $10 \%$ per annum. |  | \$440,000 |
| Profit and loss. | 60,000 |  |
| Surplus. <br> To transfer the remaining balance in the profit-andloss account into surplus. |  | 60,000 |
| Appraisal surplus. | 320,000 |  |
| Surplus. <br> To credit surplus account with the realized appreciation. |  | 320,000 |
| Profit and loss. | 120,000 |  |
| Reserves for depreciation and depletion. <br> To set up depreciation and depletion at the rate of $10 \%$ per annum on the cost (?) of property. |  | 120,000 |
| Profit and loss. | 380,000 |  |
| Surplus. <br> To transfer the remaining balance in profit-and-loss account into surplus. |  | 380,000 |
| Appraisal surplus................................ | 320,000 |  |
| Reserves for depreciation and depletion. . . . . . . . . . . . . <br> To set aside the depreciation and depletion on the excess of appraised values over book value. |  | 320,000 |

Under this method, the net assets of Company P at the end of the year would be:

| Assets: |  |  |  |
| :---: | :---: | :---: | :---: |
| Cash and sundry assets. |  | \$200,000 |  |
| Increase in assets (profit) |  | 500,000 |  |
| Property-appraised | \$4,400,000 |  |  |
| Less-reserves. | 440,000 | 3,960,000 |  |
| Total assets. |  |  | \$4,660,000 |
| Liabilities. |  |  | 600,000 |
| Net assets. |  |  | \$4,060,000 |

But what amount should be taken up by the holding company as profit and as an increase in its investment account? The consolidated profit-and-loss statement should show, in the case of Company $P$, a profit for the year of
$\$ 380,000$. If this amount is taken up by Company K, its investment account would show a balance of $\$ 4,380,000$ which is $\$ 320,000$ (the amount of the realized appreciation) in excess of the book value of the subsidiary. In preparing the consolidated balance-sheet, the elimination of the investment account against the book value of the subsidiary would leave, each year, a balance increased by the amount of each year's realized appreciation. And this increasing balance certainly can not be considered as goodwill. On the other hand, if the holding company takes up a profit of $\$ 60,000$ ( $\$ 500,000$ minus $\$ 440,000$ ), how will the profit of the operating company ( $\$ 380,000$ ) be reconciled with the consolidated profit of both companies ( $\$ 60,000$ )?

If Company P had sold its assets to Company K for $\$ 4,000,000$ instead of exchanging its stock, the profits of Company K would appear as $\$ 60,000$, as the depreciation and depletion of $\$ 440,000$ would be based upon cost to Company K.
3. As a further choice, let us consider a valuation of the no-par capital stock of Company K based upon the book values without giving any effect to the appraised values whatsoever. The 40,000 shares of stock of Company K would be placed on its books at $\$ 800,000$, the book value of Company P, or at the rate of $\$ 20$ a share. It is questionable whether such a valuation was intended, for it seems that a balance-sheet showing a value of $\$ 20$ a share would not aid in the selling of any unissued stock at a price of $\$ 100$ a share for cash. Furthermore, there are many who would favor the stating of appraised values on the books, in the circumstances outlined in this problem, as the correct showing of the financial condition of the business.

The profit of Company P, based upon depreciation and depletion of $\$ 120,000$, would appear in the consolidated profit-and-loss statement at $\$ 380,000$, and that amount would be taken up by the holding company. No difficulty would be encountered in the preparation of the consolidated balance-sheet, as the book value of Company P of $\$ 1,180,000$ would be in agreement with the investment account of Company K.
4. In this solution, an attempt is made to avoid the disadvantages noted above, by recording an appraisal surplus on the books of the holding company. The journal entries and working papers are self-explanatory. (c) The minority interest in Company M, represented by the 100 shares of the stock of that company which were not exchanged, is shown in the consolidated balancesheet in detail. The capital stock is valued at the assumed par value of $\$ 100$ a share, and the proportionate interest represented by that stock in the deficit and appraisal surplus is set forth. The requirements of sections (d) and (e) regarding the capital and property accounts are discussed above. (f) Under the method used in the solution, the profits of the subsidiaries should be taken up by Company K, by a charge to the investment accounts and a credit to surplus. The depreciation and depletion on the appreciation should be accounted for by a charge to appraisal surplus and a credit to the reserves for depreciation and depletion.
(A) Journal Entries to Record Transactions on the Books of K

| Investment in Stock of Company M | \$1,800,000 |
| :---: | :---: |
| Investment in Stock of Company P. | 3,200,000 |
| Appraisal surplus |  |

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## (B) Company K and Its Subsidiaries, Companies M and P

Consolidated Balance-sheet

| DateAssets |  |  |
| :---: | :---: | :---: |
|  |  |  |
| Cash. |  | \$2,300,000 |
| Property (as appraised) |  | 7,000,000 |
| Sundry other assets. |  | 600,000 |
| Total assets. |  | \$9,900,000 |



Liabilities and Net Worth

| Sundry liabilities. |  | \$ 900,000 |
| :---: | :---: | :---: |
| Minority interest in Company M : |  |  |
| Capital stock . . . . . . . . . . . . . . . . . . . . . . \$10,000 |  |  |
| Appraisal surplus. . . . . . . . . . . . . . . . . . . 12,000 | \$ 22,000 |  |
| Deduct-Deficit. | 2,000 |  |
| Net worth: |  |  |
| Capital stock-no par value-authorized 100,000 shares-issued and outstanding- 89,800 shares | \$3,992,000 |  |
| Appraisal surplus. | 4,988,000 | 8,980,000 |
| Total liabilities and net worth. |  | \$9,900,000 |

Explanations of adjustments and eliminations in working papers.
Numbers one (1) and two (2) record the transfer of the excess of the appraised values over book values of the property of the subsidiaries from the investment accounts to the property accounts.
Numbers three (3) and four (4) write off the reserves for depreciation and depletion carried upon the books of the subsidiaries.
(A) and (B) record the eliminations of the investments in Company M (A) and Company $P$ (B), and the holding company's interest in the book values of those companies.

