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## Students' Department

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# Students' Department 

H. P. Baumann, Editor

## AMERICAN INSTITUTE EXAMINATIONS

[Note.-The fact that these answers appear in The Journal of AccountANCY should not cause the reader to assume that they are the official answers 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 15, 1934, 1.30 P. M. to 6.30 P. M.
Solve all problems.
No. 1 (25 points):
On January 1, 1933, the F company purchased $90 \%$ of the stock of Company G and $80 \%$ of the stock of Company H . Wishing to acquire the remaining stock of the more profitable company (Company H) Company F on June 30, 1933, disposed of 200 shares of its holdings in Company G at a price of $\$ 160$ per share, and on that date was successful in acquiring an additional $10 \%$ of the stock of Company H in exchange for the entire proceeds of the sale of Company G stock.

The investment accounts on the books of Company F are carried at cost except the account representing the investment in capital stock of Company G: this account has been credited with the proceeds of the 200 shares sold.

From the following post-closing trial balances of the three companies at December 31, 1933, prepare:

1. A consolidated balance-sheet
2. A statement of consolidated earned surplus
3. A statement of goodwill

| Assets |  |  |  |
| :---: | :---: | :---: | :---: |
|  | F | G | H |
| Current assets. | \$152,500 | \$150,000 | \$105,000 |
| Investment in subsidiary companies- |  |  |  |
| Company G: |  |  |  |
| Capital stock. | 220,000 |  |  |
| Advances. | 25,000 |  |  |
| Company H: |  |  |  |
| Capital stock. | 214,000 |  |  |
| Advances. | 40,000 |  |  |
| Buildings and equipment |  | 170,000 | 235,000 |
|  | \$651,500 | \$320,000 | \$340,000 |

Liabilities

| Capital stock: |  |  |  |
| :---: | :---: | :---: | :---: |
| Company F-3,000 shares. | \$300,000 |  |  |
| Company G- 2,000 shares. |  | \$200,000 |  |
| Company H-1,000 shares. |  |  | \$100,000 |
| Due to parent company. |  | 25,000 | 40,000 |
| Accounts payable. | 235,000 | 40,000 | 25,000 |
| Surplus at beginning of year | 166,500 | 60,000 | 145,000 |


| Profit for the year | * \$20,000 | \$15,000 | \$40,000 |
| :---: | :---: | :---: | :---: |
| Dividends (paid Dec. 31, 1933) | 70,000 | 20,000 | 10,000 |
|  | \$651,500 | \$320,000 | \$340,000 |

* Dividends received from subsidiary companies, less expenses of parent company.

It is assumed that the profits of the companies for the year 1933 were divided equally between the two six months periods.

## Solution:

Probably as good a start as any in the solution of this problem is to determine the cost of the investment in Companies G and H , as this information is necessary to compute the goodwill arising in the purchases.

An analysis of the investment account for the stock of Company $G$ at December 31, 1933, would show:

|  | Shares | Amount |
| :---: | :---: | :---: |
| Balance, December 31, 1933 | 1,600 | \$220,000 |
| Sale price of stock sold | 200 | 32,000 |
| Cost of original purchase ( $90 \%$ ). | 1,800 | \$252,000 |
| Cost per share ( $\$ 252,000 \div 1,800$ ) |  | \$140 |

The 200 shares of stock of Company G cost the F company $\$ 28,000$ (200 times $\$ 140$ ), which amount should have been credited to the investment account, rather than the selling price of $\$ 32,000$. The adjustment necessary to reflect the correct cost in the investment account and to transfer the realized profit to the surplus account follows:
Investment in Company G................................ $\$ 4,000$
Surplus ( F company).................................... $\$ 4,000$
To transfer the profit on the sale of 200 shares of stock of
Company G to the surplus account
After the investment account has been charged with the $\$ 4,000$ debit in the above entry, it will show that the cost of the 1,600 shares held on December 31, 1933, cost ( 1,600 times $\$ 140$ ) $\$ 224,000$. (Since the $F$ company is following the practice of carrying its investments at cost and taking subsidiaries' profits into income when they are realized in the form of dividends, a share of Company G's profits for the six months ended June 30, 1933, has not been added to the cost of the stock sold in computing the profit on the sale. Correspondingly, in taking up F company's share of G's profit for 1933, no consideration is given to the profit applicable to the stock sold. This profit was in effect realized by the sale of the stock, and forms part ( $\$ 750$ ) of the $\$ 4,000$ profit.)

The cost of the two purchases of the capital stock of Company H is determined in the following analysis of the investment account:

|  | Shares | Amount |
| :---: | :---: | :---: |
| Cost of first purchase. | 800 | \$182,000 |
| Cost of second purchase | 100 | 32,000 |
| Total. | 900 | \$214,000 |

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Having obtained the cost of the several purchases of stock in the subsidiaries, the candidate may now proceed with the statement of goodwill. It will be noticed in the following statement, and in the consolidated balance-sheet, that the goodwill arising from the second purchase of stock of Company H is deducted from the surplus arising from the first purchase ("negative goodwill"). Whether the remaining, or net "negative goodwill" should be applied against the goodwill arising from the purchase of the stock of Company $G$ is open to question.
(3) The F Company and its subsidiaries, Companies G and H. Statement showing computation of goodwill (and surplus arising from consolidation), December 31, 1933

| Book value |  |  | Goodwill |
| :---: | :---: | :---: | :---: |
| Total | Proportionate interest | Cost of stock purchased | arising from consolidation*) |


| Acquisition of stock of Company G: |  |
| :---: | :---: |
| Book value-January 1, 1933: |  |
| Capital stock. . . . . . . . . . . | \$200,000 |
| Surplus. . . . . . . . . . . . . . . | 60,000 |
| Total. | \$260,000 |

$80 \%$ thereof. . ........... $\xlongequal{\$ 208,000} \xlongequal{\$ 224,000} \xlongequal{\$ 16,000}$

Acquisition of stock of Company H:

First purchase: January 1, 1933:
Net worth:
Capital stock. . . . . . . . . . $\$ 100,000$
Surplus
145,000

Total-January 1, 1933. . $\$ 245,000$
$80 \%$ thereof $. \ldots . . . \ldots \ldots .$.
Second purchase, June30,1933:
Profit for the six months January 1, 1933 to June 30, 1933. . . . . . . . . . . . . 20,000

Total, June 30, 1933. . . . $\$ 265,000$


| 26,500 | 32,000 | 5,500 |
| :---: | :---: | :---: |
| \$222,500 | \$214,000 | \$8,500* |

(2) The F Company and its subsidiaries, Companies G and H. Statement of consolidated surplus for the year ended December 31, 1933

| Company F: |  |  |  |
| :---: | :---: | :---: | :---: |
| Balance, January 1, 1933.. |  | \$166,500 |  |
| Dividends received: |  |  |  |
| Company G ( $80 \%$ of $\$ 20,000$ ). . | \$16,000 |  |  |
| Company H ( $90 \%$ of \$10,000). | 9,000 | 25,000 |  |
| Profit on sale of stock of Company G. . . |  | 4,000 | \$195,500 |
| Deduct: |  |  |  |
| Net loss for the year (exclusive of the dividends received from subsidiary companies) |  | \$ 5,000 |  |
| Dividends paid, December 31, 1933..... |  | 70,000 | 75,000 |
| Balance, December 31, 1933........... |  |  | \$120,500 |
| Company G: |  |  |  |
| Pro-rata share of the net decrease in the surplus account of Company G during the year: |  |  |  |
| Dividends paid. . |  | \$ 20,000 |  |
| Profits for the year. |  | 15,000 |  |
| Net decrease in surplus account . . . |  | \$5,000 |  |
| 80\% thereof . . . . . . . . . . . . . . . |  |  | 4,000 |
| Company H: |  |  |  |
| Pro-rata share of the net increase in the surplus account of Company H during the year: |  |  |  |
| Six months ended June 30, $1933 \ldots \ldots$. | \$20,000 |  |  |
| 80\% thereof. |  | \$ 16,000 |  |
| Six months ended December 31, 1933.. | \$20,000 |  |  |
| Dividends paid................... | 10,000 |  |  |
| Net increase. . . . . . . . . . . . . . . . . | \$10,000 |  |  |
| 90\% thereof . . . . . . . . . . . . . . . . |  | 9,000 | 25,000 |
| Consolidated surplus, December 31, 1933.. |  |  | \$141,500 |

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The following consolidated balance-sheet was prepared by totaling the current assets, buildings and equipment, and accounts payable accounts; by eliminating the reciprocal accounts; and by inserting the goodwill, surplus arising through consolidation, minority interests, and consolidated surplus as derived in the accompanying statements and schedules. The formal working papers shown on page 60 are unnecessary to the solution, and are given here for explanatory purposes only.
(1) The F Company and its subsidiaries, Companies G and H. Consolidated balance-sheet, December 31, 1933

| Assets |  |  |
| :---: | :---: | :---: |
| Current assets. |  | \$407,500 |
| Buildings and equipment |  | 405,000 |
| Goodwill arising through consolidation |  | 16,000 |
|  |  | \$828,500 |
| Liabilities and capital |  |  |
| Accounts payable. |  | \$300,000 |
| Minority interests: |  |  |
| Company G . | \$ 51,000 |  |
| Company H | 27,500 |  |
| Capital: |  |  |
| Capital stock-3,000 shares. | \$300,000 |  |
| Surplus. | 141,500 |  |
| Surplus arising through consolidation | 8,500 | 450,000 |
|  |  | \$828,500 |

The minority interest in the subsidiary companies was determined by multiplying the book value of the companies at December 31, 1933, by the percentage of minority interest, as follows:

|  | Companies |  |
| :---: | :---: | :---: |
|  | G | H |
| Capital stock | \$200,000 | \$100,000 |
| Surplus, January 1, 1933 | 60,000 | 145,000 |
| Profit for the year. | 15,000 | 40,000 |
| Dividends paid. | 20,000* | 10,000 |
| Book values, December 31, 1933. | \$255,000 | \$275,000 |
| Minority interest: |  |  |
| Percentage. | 20\% | 10\% |
| Amount. | \$ 51,000 | \$ 27,500 |

The F Company and its subsidiaries，Companies G and H．Consolidated balance－sheet－working papers，December 31， 1933 Consoli－
dated
balance－
sheet
$\$ 407,500$

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Eliminations and
adjustments
（1）$\$ 4,000$（2）$\$ 208,000$
$\begin{array}{cc}\text { G } & \text { H } \\ \$ 150,000 & \$ 105,000\end{array}$



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$\begin{array}{r}70,000 \\ \hline \$ 651,500 \\ \hline \hline\end{array}$

## Assets

Current assets．．．．．．．．．．．．．．．．．．．．．．．．
Company G：
Capital stock
Advances．．．
Company H：
Capital stock
Buildings and equipment

## Liabilities

Capital stock：
Company $F-3,000$ shares．
Company G－ $\mathbf{2 , 0 0 0}$ shares．
Company H－1，000 shares．
Accounts payable．．．．．．．．．
Surplus at beginning of year：
Company F．．
Company H．．．．．
Profit for the year：
Profit for then F
Company G．
Company H．
Dividends（paid December 31，1933）：
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0


## Adjusting and elimination entries used in the working papers.

(1)

> Investment-Company G
> Surplus-Company F
> To record the profit on the sale of 200 shares of stock of Company G
> (2)
> Capital stock-Company G
> Surplus at beginning of year-Company G. . . . . . . . . . 48,000
> Investment-Company G
> To eliminate the $80 \%$ interest in the capital stock and surplus of Company $G$ as at the date of purchase.
\$ 4,000
$\$ 4,000$

160,000

208,000
(3)

Capital stock-Company H 90,000
Surplus at beginning of year-Company H . . . . . . . . . . 130,500
Profit for the year-Company H . . . . . . . . . . . . . . . . . . . . 2,000
Investment-Company H
222,500
To eliminate the $90 \%$ interest in the capital stock and surplus accounts of Company H , and the $10 \%$ interest in the profits for the first six months of 1933. (The latter representing part of the surplus at acquisition of the $10 \%$ purchased on June 30.)
(4)

Profit for the year-Company F. . . . . . . . . . . . . . . . . . $\quad 4,000$
Profit for the year-Company G. . . . . . . . . . . . . . . . . . 12,000
Dividends-Company G
16,000
To transfer to the profits account of Company F its $80 \%$ interest in the profits and dividends of Company G.
(5)

Profit for the year-Company H . . . . . . . . . . . . . . . . . . . . 34,000
Dividends-Company H 9,000
Profit for the year-Company F . . . . . . . . . . . . . . . 25,000
To transfer to the profits account of Company F its $90 \%$ interest in the dividend of Company H , and its share of the earnings of the latter company for the current year as follows.

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|  | Six months ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | June 30 | Dec. 31 |  |  |
| Profit. | \$20,000 | \$20,000 |  |  |
| Per cent. | 80\% | 90\% |  |  |
| Share. | \$16,000 | \$18,000 |  |  |
|  | (6) |  |  |  |
| Due to parent company.. |  |  | \$65,000 |  |
| Advances-Company G |  |  |  | \$25,000 |
| Advances-Company H |  |  |  | 40,000 |
| To eliminate the inter-com | ccounts. |  |  |  |

