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Students' Department

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Students' Department

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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 editors of the Students' Department.)

Examination in Accounting Theory and Practice—Part II (*continued*)

May 20, 1927, 1 p. m. to 6 p. m.

No. 6 (32 points):

On December 31, 1926, A is indebted to B in the following amounts:
\$1,500 due December 31, 1927, without interest;
\$3,500 due December 31, 1929, with interest at the rate of 6% payable annually;
\$5,000 due December 31, 1931, with interest at the rate of 6%, from December 31, 1926, not payable until maturity of note but to be compounded annually;
\$6,000 due December 31, 1932, with interest at the rate of 5%, payable annually.

On this date (December 31, 1926), A learns that on December 31, 1930, he will fall heir to \$200,000 and arranges with B to cancel the four notes in exchange for one note due in four years. It is then agreed that the new note shall include interest to maturity calculated at 5% compounded annually and that B shall not lose by the exchange.

What will be the amount of the new note?

Given at 5%:

$v^1 = .9523810$	$(1+i)^1 = 1.0500000$
$v^2 = .9070295$	$(1+i)^2 = 1.1025000$
$v^3 = .8638376$	$(1+i)^3 = 1.1576250$
$v^5 = .7835262$	$(1+i)^4 = 1.2155062$

Given at 6%:

	$(1+i)^3 = 1.1910160$
	$(1+i)^5 = 1.3382256$

Solution:

The first step in the solution is to determine the present value at December 31, 1926, of all payments of principal and interest to be made by A under the original plan. The present values of the various items are computed as follows:

(1) \$1,500 due December 31, 1927, without interest—

Given:

Present value of 1 at 5% for one period is .9523810.

Then, present value at 5% of \$1,500 due in one period is \$1,500 × .9523810 or \$1,428.5715

(2) \$3,500 due December 31, 1929, with interest at the rate of 6% payable annually—

The present value of this item is the sum of (a) the present value at 5% of \$3,500 due three periods hence, and (b) the present value at 5% per period of the three interest payments of $210 each due one, two and three periods hence respectively.

(a) Given:

Present value of 1 at 5% for three periods is .8638376.

Then, present value at 5% of $3,500 due in three periods is $3,500 × .8638376 or.......................... $3,023.4316

(b) Given:

Present value of 1 at 5% for three periods is .8638376.

Then, compound discount on 1 at 5% for three periods is 1 — .8638376 or .1361624, and the present value of an ordinary annuity of 1 at 5% for three periods is .1361624 ÷ .05 or 2.723248, and the present value of an ordinary annuity of $210 at 5% for three periods is $210 × 2.723248 or............................. 571.8821

(3) $5,000 due December 31, 1931, with interest at the rate of 6% from December 31, 1926, not payable until maturity of note but to be compounded annually.

The present value of this item is the sum of (a) the present value at 5% of $5,000 due five periods hence, and (b) the present value at 5% of the interest which will be accumulated five periods hence.

(a) Given:

Present value of 1 at 5% for five periods is .7835262.

Then, present value at 5% of $5,000 due in five periods is $5,000 × .7835262 or............................ 3,917.631

(b) To ascertain the amount of interest which will be accumulated at December 31, 1931: interest for each period is 6% of $5,000 or $300.

Given:

The amount of 1 at 6% for five periods is 1.3382256.

Then, the compound interest on 1 for five periods at 6% is 1.3382256 — 1 or .3382256, and the amount of an ordinary annuity of 1 at 6% for five periods is .3382256 ÷ .06 or 5.6370933, and the amount of an ordinary annuity of $300 at 6% for five periods is $300 × 5.6370933 or $1,691.128.

The present value at 5% of $1,691.128 due five periods hence is computed as follows:

Given:

Present value of 1 at 5% for five periods is .7835262.

Then, present value at 5% of $1,691.128 due in five periods is $1,691.128 × .7835262 or 1,325.0431

(4) $6,000 due December 31, 1932, with interest at the rate of 5% payable annually.

The present value of this item at December 31, 1926, is, obviously, $6,000. However, the present value may be calculated by actuarial science as follows:

The present value is the sum of (a) the present value at 5% of $6,000 due six periods hence, and (b) the present value at 5% of the six annual interest payments of $300 each.

(a) Given:

Present value of 1 at 5% for five periods is .7835262 and the present value of 1 at 5% for one period is .9523810.

Then, the present value of 1 at 5% for six periods is .7835262 × .9523810 or .7462154659 and the present value at 5% of $6,000 due in six periods is $6,000 × .7462154659 or $4,477.2928

(b) Given [from (a)]:

Present value of 1 at 5% for six periods is .7462154659.

Then, the compound discount on 1 at 5% for six periods is 1 — .7462154659 or .2537845341, and the present value of an ordinary annuity of 1 at 5% for six periods is .2537845341 ÷ .05 or 5.075690682, and the present value of an ordinary annuity of $300 at 5% for six periods is $300 × 5.075690682 or 1,522.7072

The total of the present values of the four items is, therefore $16,266.5593

It remains only to calculate the interest to maturity at 5% compounded annually. This is done as follows:

The annual interest is 5% of $16,266.5593 or $813.328.

Given:

Amount of 1 at 5% for four periods is 1.2155062.

Then, the compound interest on 1 at 5% for four periods is 1.2155062 — 1 or .2155062, and the amount of an ordinary annuity of 1 at 5% for four periods is .2155062 ÷ .05 or 4.310124, and the amount of an ordinary annuity of $813.328 at 5% for four periods is $813.328 × 4.310124 or $3,505.5445.

The amount of the new note should, therefore, be $16,266.5593 + $3,505.5445 or $19,772.1038

Examination in Auditing

May 19, 1927, 9:00 a. m. to 12:30 p. m.

The candidate must answer all the following questions:

No. 1 (10 points):

Describe briefly a cash audit. What is the purpose of a cash audit and what are its limitations?

Answer:

A cash audit is generally understood as covering the examination of the records of cash received and disbursed during a period and the verification of the amount remaining at the end of the period. Cash, as referred to in this way, includes cheques, bank drafts, money orders, etc. and covers cash in banks as well as cash on hand, the latter including that in petty cash and working funds. The auditor's examination of the records should be directed to determine whether or not:

(a) All cash receipts have been properly accounted for;
(b) All cash disbursements have been duly authorized and properly recorded;
(c) The cash balance is in accordance with the records.

A cash audit is usually made for the purpose of establishing the integrity of those who handle cash or of disclosing fraud should it exist. Where fraud is known to exist, a cash audit is usually resorted to for the determination of the extent of the fraud. Restriction of an examination to the cash records only is subject to the very important limitation that it can not disclose fraud in respect of cash received but not recorded, or of cash which should have been received but has not been. Moreover, a cash audit, because of its limited scope, often results in dissatisfaction to both auditor and client because it fails to disclose the more important facts which, it may rightfully be expected, can be presented as the result of an audit of broader scope.

No. 2 (5 points):

Define briefly and give examples of:

(a) Current assets.
(b) Current liabilities.
(c) Fixed assets.
(d) Intangible assets.

Answer:

Current assets are cash and other assets which will be converted into cash in the near future through the normal operations of the business. Examples are trade accounts receivable, inventories, temporary investments.

Current liabilities are debts due in the near future. Examples are trade accounts payable, bank loans, accrued wages.

Fixed assets are properties of a permanent nature used in the operation of the business and not intended for sale. Examples are land, buildings, machinery.

Intangible assets are those which have no bodily substance and whose value therefore resides, not in the physical properties of the assets themselves, but in the rights which their possession confers upon their owners. Examples are goodwill, franchises.

No. 3 (10 points):

What means may be used for verifying the correctness of the following items on the books of a business concern?

(a) Bank balances.
(b) Notes receivable which have been sent to bank for collection.
(c) Securities which have been pledged as collateral for loans.
(d) Indebtedness for money borrowed from banks.
(e) Indebtedness on notes payable which have been sold through note brokers, the present holders being unknown to the makers.

Answer:

The means which may be used for verifying the correctness of the various items are as follows:

(a) Bank balances.—By examination of the records of cash receipts and disbursements and by reconciliation of the balances per books with the balances shown by the bank statements, confirmation of the latter being obtained from the depository banks by direct correspondence. The verification of bank balances should be simultaneous with the verification of cash on hand, securities, negotiable paper, and any other assets which might be used to make good any shortages in the bank balances.

(b) Notes receivable which have been sent to bank for collection.—By means of a certificate from the bank, together with an examination of the concern's note records and the records of credits by the bank, either upon collection of the notes or at the time they are received by the bank for collection if the practice is to give credit at that time.

(c) Securities which have been pledged as collateral for loans.—By means of a certificate from the pledgee as to the existence of the securities, by examination of the purchase or other records as to the cost thereof, and by reference to market quotations or similar sources of information as to market value of the securities.

(d) Indebtedness for money borrowed from banks.—By means of certificates obtained from depository banks and other banks which may be indicated as possible sources of borrowings, certificates from the responsible officers of the concern, itself, as to its outstanding obligations for money borrowed, and by examination of the "interest paid" account and the minute book of the corporation.

(e) Indebtedness of notes payable which have been sold through note brokers, the present holders being unknown to the makers.—By means of certificates from the note brokers, by examination of the records of cash receipts for entries of the proceeds of such notes, and by a comparison of the interest paid with the principal amount of notes shown as outstanding.

No. 4 (15 points):

Prepare a list of all important matters with reference to the item of inventories which require attention in making a balance-sheet audit.

Answer:

The matters requiring attention in making a balance-sheet audit, with reference to the item of inventories, may be roughly classified under two headings:

I. Those matters which are involved in the verification of the amount at which the inventories are stated.

II. Those matters which appertain to the presentation of the item of inventories in the balance-sheet.

Under I may be listed:

(a) Verification of quantities:

1. Determination of extent of the auditor's verification, whether by actual supervision, by tests at date of audit, or only by examination of the book records and inventory sheets.
2. Investigation as to method and time of taking the inventories and persons who took or supervised the taking of them.
3. Comparison of quantities with previous purchases and sales or with book inventories if they are maintained.

4. Determination that goods held as consignee or as bailee or goods sold but undelivered are not included in the inventories and that any merchandise held by others but owned by the company are included.
5. Examination as to merchandise in transit and merchandise for succeeding season received under post-dated invoices.
6. Certification by responsible officers and employees as to correctness of quantities and indication of spoiled, damaged, or otherwise unsalable or unusable materials or merchandise.

(b) Verification of prices:
1. Examination of purchase invoices, cost records, etc., as to cost.
2. Reference to market quotations, etc., as to market prices.
3. Consideration of possible effect of sales commitments.
4. Determination as to whether freight, drayage, duty, handling costs, etc., have been considered.
5. Determination of the degree of completion of goods in process and proportion of costs applicable thereto.
6. Comparison with previous inventories.
7. Study of prices used under special or unusual methods of inventory valuation.

(c) Verification of mathematical accuracy of extensions and footings:
1. Extent—whether complete or by tests.
2. Check against original inventory sheets if copies have been used in making extensions and footings.

Under II may be listed:

(a) Classification of inventories as to supplies, raw materials, goods in process, or finished goods, and segregation of spoiled or damaged merchandise or merchandise not usable or salable for other reasons.

(b) Ascertainment of bases of valuation of the various parts of the inventories.

(c) Determination of the existence of liens or encumbrances of any kind upon the merchandise or materials included in the inventories.

No. 5 (10 points):

Why is it essential that any hypothecation of assets, or any liens existing thereon, be disclosed in a balance-sheet? Indicate the steps you would take to ascertain whether or not any part of the inventory of a manufacturer has been pledged to secure loans or advances.

Answer:

It is essential to disclose in the balance-sheet any liens upon or hypothecation of assets in order to show readers of the balance-sheet whether any preferential payments will have to be made in the event of liquidation, whether there are any possible limitations upon the concern's control over the assets, and whether there is any possibility of the concern's being deprived of certain assets through enforcement of liens against them.

In ordinary circumstances, where merchandise in the inventory of a manufacturer is on hand, the steps taken to ascertain whether any part thereof has been pledged consist of obtaining certificates from the makers of loans or advances as to the security therefor.

Where any part of the merchandise is in warehouses, receipts covering all of such merchandise should be accounted for to see whether any may have been deposited with creditors in making a pledge of merchandise.

Confirmation should also be obtained from consignees and bailees of merchandise to determine the terms under which it is held.

No. 6 (10 points):

Among the accounts receivable of the Mississippi Company, which aggregate approximately $1,000,000, you find the following:

Account of $50,000 for sales during the previous month to the Jonesboro' Dry Goods Company, 75 per cent. of whose capital stock is owned by the Mississippi Company. Sales to this company are settled promptly in 30 days.

Account of $130,000 representing principally advances to the Memphis Metal Company (95 per cent. of whose capital stock is owned by the Mississippi Company) to enable it to make additions to its plant. A considerable part of the output of the Memphis Company is sold to the Mississippi Company at prices advantageous to the latter for use in its manufacturing operations.

Account of $25,000 for advances to the Bluestone Sales Company, all of whose capital stock is owned by the Mississippi Company, but which has a bonded debt of $100,000 to others than the Mississippi Company. The advances were made principally to enable the Bluestone Company to continue in business in spite of losses sustained for several years past.

Account of $28,000 for advances to the president of the company who expects to pay it off during the next two years out of the percentage of the company's profits which is payable to him (if earned) under contract.

What examination, if any, other than that which you would make of ordinary customers' accounts, would you deem desirable or necessary in the case of each of the foregoing accounts? What treatment would you give these accounts in stating the balance-sheet of the Mississippi Company, (a) if it be a consolidated balance-sheet, or (b) if it be a non-consolidated balance-sheet?

Answer:

The auditor should inspect the minutes of the meetings of the board of directors of the Mississippi Company for the authority for the advances to the affiliated companies and to the president of the company. All debits and credits to the accounts should be vouched, and the nature of the transactions ascertained. Confirmation of his account should be obtained from the president. By direct correspondence with the affiliated companies, their accounts should be confirmed and their balance-sheets obtained for the purpose of determining the collectibility of the amounts due.

The advances to the president of the company, $28,000, should be transferred from accounts receivable and shown after current assets in either a consolidated or non-consolidated balance-sheet.

If a non-consolidated balance-sheet is prepared for the Mississippi Company, the accounts receivable and advances of the affiliated companies should be transferred from accounts receivable and shown as follows:

The account of Jonesboro' Dry Goods Company should appear after "accounts receivable—trade" in the current-asset section as "accounts receivable —affiliated company, $50,000."

The account of the Memphis Metal Company should be shown as "advances to affiliated company, $130,000." The advances to the Bluestone Sales Company, being in the nature of additional investments, should be added to the cost of the investment already made in this company, and should be shown as such. Both of these items should appear in the balance-sheet, after current assets, as "investments in, and advances to affiliated companies."

If a consolidated balance-sheet is prepared to include the Jonesboro' Dry Goods Company, the Memphis Metal Company and the Bluestone Sales Company, the inter-company balances should be eliminated and consequently they would not appear in the consolidated balance-sheet. If the Jonesboro' Dry Goods Company is not included in the consolidation, the account receivable of that company should be shown separately as "accounts receivable—affiliated company, $50,000" in the current-asset section.

No. 7 (10 points):

State several reasons for the compilation of "audit papers" and, without naming each paper, describe what they should comprise.

Answer:

"Audit papers" comprise the schedules, analyses and memoranda made by the auditor from which the report to the client is prepared. A separate working paper is generally prepared to support each item appearing in the report.

When indexed and filed, the audit papers are a permanent office record, containing a complete history of the case and a record of the work done by the auditor.

No. 8 (10 points):

You have been retained by the executors of a recently deceased member of a firm, which operated a silk-manufacturing business, to determine the fair value of his interest in the firm. What matters, if any, would you take into consideration other than those included in the usual periodical audit of the firm's accounts? Describe your procedure with respect to any such special questions.

Answer:

The auditor should inspect the partnership agreement, and be governed by any specific provisions relating to procedure in case of the death of a partner. It is assumed in this case that the deceased partner's interest is to be sold to the remaining partner or partners at the values fixed by the auditor.

While conservative accounting practice sanctions the principle that no profits should be expected in the case of going concerns, the application of the principle in this case would not be fair. In effect, the deceased partner's interest should be valued as it would be if his share in the net assets were to be sold, and market prices at the date of death should govern.

In addition to the matters considered in the usual periodical audit, the auditor should adjust the inventories, investments, and fixed assets to market value. While excessive provision for bad debts, depreciation and miscellaneous contingencies might be condoned in preparing a balance-sheet from the viewpoint of a going concern its propriety is at least questionable when the balance-sheet is to be used as the basis for settlement of the deceased partner's estate.

If the partnership agreement includes the placing of a value on goodwill, the auditor should consider this asset in arriving at the fair value of the deceased partner's interest.

No. 9 (10 points):

In making a detailed audit, describe how you would satisfy yourself that the sales had been properly accounted for in three of the following five cases:

(a) An automobile manufacturer.
(b) A bituminous coal operator.

(c) A manufacturer of heavy machine tools.
(d) A silk-dress-goods manufacturer.
(e) A building contractor.

Answer:

In the audit of sales, it is well for the auditor to bear in mind possible methods of manipulation, such as:

(1) Inflation of selling prices and quantities, especially of most recent sales.

(2) Treatment of consignments and approval shipments as sales.

(3) Sales records "held open" to include shipments of the following period.

Comparisons of sales by months should be made for the purpose of detecting manipulation which may occur, generally during the last month of the period. Any relative increase in the last month and decrease in the following month should be investigated.

Return sales, rebates, allowances and discounts should be considered in the audit of sales.

In the five cases given in the question, certain steps applicable to all should be taken.

(1) All the duplicate sales invoices for the period should be accounted for.

(2) Substantial tests of invoice prices, extensions, and footings should be made.

(3) Invoices should be checked to the sales journal.

(4) Footings of the sales journal should be verified.

(5) Postings to the control account should be checked.

(6) A substantial number of postings to customers' accounts should be checked.

(7) A substantial number of invoices should be checked against the shipping records.

(8) Approval for return sales, rebates, allowances and discounts should be checked.

(9) Returned merchandise should be traced to the stock records.

In addition to the steps outlined above, the auditor, in case (a), an automobile manufacturer, and in case (c), a manufacturer of heavy machine tools, should check the shipping records to the record of bills of lading, and the receipt of cash for the discount or collection of the sight drafts generally attached.

In case (b), a bituminous coal operator, he should check the shipping records against the record of cars used in hauling the coal, and the cash receipts to customers' accounts.

In case (e), a building contractor, he should check the sales to contracts, and to the cost records.

No. 10 (10 points):

May a certificate of a balance-sheet be qualified without necessarily reflecting on the validity of the balance-sheet? If in your opinion such may be the case, state the conditions and write two certificates as illustrations.

Answer:

A certificate may be qualified without reflecting on the validity of the balance-sheet. Where conditions are present under which the auditor can not state that in his opinion the balance-sheet reflects the financial position of the company, he qualifies his certificate as to the conditions.

Two common examples of such qualifications are:

(1) Where no provision has been made for federal income taxes, and

(2) Where the inventory quantities were certified to by officers of the company, but were not verified by the auditor.

The following qualified certificates are given as illustrations:

We hereby certify that we have examined the books of account and records of the Blank Company, Detroit, Michigan, as of the close of business, December 31, 1926, and that, in our opinion, based upon the records examined and the information obtained by us, and subject to the liability for federal income taxes, the accompanying balance-sheet is drawn up so as to set forth correctly the financial position of the company at the date named.

(Signed) A. B. and Company.

We have audited the books of account of the Blank Company for the year ended December 31, 1926.

The inventories have been certified to us as to quantities by responsible officers of the company and were verified by us as to extensions, footings, and pricing; they are valued at cost or market, whichever is lower.

We hereby certify that in our opinion, subject to the foregoing qualification, the accompanying balance-sheet presents the financial condition of the company at the close of business, December 31, 1926.

(Signed) A. B. and Company,
Certified Public Accountants.

Date

Amortization of Bond Discount

Editor, Students' Department.

Sir: Permit me to call your attention to an error made in your solution of problem No. 5 of the Institute examination of May 19, 1927, part 1.

Your solution is prefaced with the remark that the income-tax regulations prescribe no method of proration of bond discount. Although this is true, the method to be followed is set forth in I. T. 1412. This ruling prescribes the "serial method," under which the amortization, omitting years after 1929, would be as follows:

Series Due	Amount	Discount applicable (11%)	Yearly proportion	Amount of amortization 1927	1928	1929
12/31/27	$10,000	$1,100	1/1	$1,100.00	$......	$......
28	15,000	1,650	1/2	825.00	825.00	......
29	20,000	2,200	1/3	733.33	733.33	733.34
30	25,000	2,750	1/4	687.50	687.50	687.50
31	30,000	3,300	1/5	660.00	660.00	660.00
32	35,000	3,850	1/6	641.67	641.67	641.66
33	40,000	4,400	1/7	628.57	628.57	628.57
34	125,000	13,750	1/8	1,718.75	1,718.75	1,718.75
	$300,000	$33,000		$6,994.82	$5,894.82	$5,069.82

While I hold no brief for the method prescribed, reference to the article by F. C. Belser, appearing on page 330 of The Journal of Accountancy for May, 1927, shows that amortization on the basis of the "bonds outstanding method" is also often far from being scientific. I know of many instances in which I. T. 1412 has not been followed, but this does not alter the fact that the method shown above is the one recognized by the income-tax unit.

Yours truly,

O. E. Fischer.

We think that the foregoing letter states the case admirably. The regulations do not prescribe, but I. T. 1412 states the "recognized" method. However, the fact that it is not rigidly prescribed appears to be evidenced by many instances in which other methods have been applied.

The "bonds outstanding" method is not scientifically accurate, as shown by Mr. Belser's article to which Mr. Fischer alludes, but we doubt whether the "serial method" is any more accurate. In fact it is likely to be less accurate because it gives consideration to only the par value of the bonds in the several series and not to the periods during which they are outstanding.

To illustrate, assume the following issue of 4% serial bonds sold on a 6% basis:

Par	Maturity	Price (per bond table)
$100	1 year	$98.09
100	2 years	96.28
100	3 years	94.58
100	4 years	92.98
100	5 years	91.47
$500		$473.40

The total charge for interest and amortization (by the scientific method) of discount during each year would be as follows:

End of	Charge to interest 6%	Interest paid	Discount amortized	Principal paid	Balance
					$473.40
½ year	$14.20	$10.00	$4.20		477.60
1 year	14.33	10.00	4.33	$100.00	381.93
			$8.53		
1½ years	11.46	8.00	$3.46		385.39
2 years	11.56	8.00	3.56	100.00	288.95
			$7.02		
2½ years	8.67	6.00	$2.67		291.62
3 years	8.75	6.00	2.75	100.00	194.37
			$5.42		
3½ years	5.83	4.00	$1.83		196.20
4 years	5.89	4.00	1.89	100.00	98.09
			$3.72		
4½ years	2.94	2.00	$.94		99.03
5 years	2.97	2.00	.97	100.00	.....
			$1.91		

By the bonds-outstanding method, the discount amortized each year would be:

Year	Bonds outstanding	Fraction	Amount
1	$500.00	5/15	$8.88
2	400.00	4/15	7.09
3	300.00	3/15	5.32
4	200.00	2/15	3.54
5	100.00	1/15	1.77
			$26.60

But by the serial method the amortization would be:

Due end of year	Amount	Discount (5.32%)	Yearly proportion	1st year	2nd year	3rd year	4th year	5th year
1	$100.00	$5.32	1/1	$5.32	$....	$....	$....	$....
2	100.00	5.32	1/2	2.66	2.66	....	....	....
3	100.00	5.32	1/3	1.77	1.77	1.78	....	....
4	100.00	5.32	1/4	1.33	1.33	1.33	1.33	....
5	100.00	5.32	1/5	1.06	1.06	1.06	1.07	1.07
	$500.00	$26.60		$12.14	$6.82	$4.17	$2.40	$1.07

The error of principle in this method lies in the failure to recognize that the discount on a $100 bond due in five years is more than the discount on a $100 bond due in one year. Or, put in another way, the apportionment of the discount of $26.60 should be based on a consideration of the life as well as the amount of each group of bonds in the series. The discount on the bonds maturing at the end of one year is not $5.32, as shown above, but $1.91 as shown by the statement of bond values ($100 – $98.09).

More accurate results could be obtained by weighting the bonds on a basis of amount and life, and thus apportioning the discount:

Par	Life	Product	Fraction	Discount	1st year	2nd year	3rd year	4th year	5th year
$100.00	1	100	1/15	$1.77	$1.77	$....	$....	$....	$....
100.00	2	200	2/15	3.54	1.77	1.77	....	....	....
100.00	3	300	3/15	5.32	1.77	1.77	1.78	....	....
100.00	4	400	4/15	7.09	1.77	1.77	1.77	1.78	....
100.00	5	500	5/15	8.88	1.77	1.77	1.78	1.78	1.78
Total				$26.60	$8.85	$7.08	$5.33	$3.56	$1.78

But this attempt to correct the error in principle in the serial method produces the results of the bonds-outstanding method. That method, therefore, though scientifically inexact, appears to be more correct in principle and results than the serial method.