

Exercise *E15-15
page 670

Determine the amount of one interest payment:

$$\$200,000 \times 8\% \times 6/12 = \$8,000$$

PV of \$200,000 @ 10% semiannually:

$$\$200,000 \times .37689 = \$ 75,378$$

PV of Interest (one int pmt x factor):

$$\$8,000 \times 12.46221 = \underline{99,698}$$

Proceeds from the Sale of Bonds \$175,076

Make the journal entry for the sale of the bonds.

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
1/1/04	Cash	175,075	
	Discount Bonds Payable	24,925	
	Bonds Payable		200,000

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Determine the amount of one interest payment:

$$\text{\$300,000} \times 11\% \times 6/12 = \text{\$16,500}$$

PV of **\\$300,000 @ 10% semiannually:**

$$\text{\$300,000} \times .37689 = \text{\$113,067}$$

PV of Interest (one int pmt x factor):

$$\text{\$16,500} \times 12.46221 = \text{\underline{205,626}}$$

Proceeds from the Sale of Bonds **\\$318,693**

(a) (1) The journal entry for the sale of the bonds is:

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
1/1	Cash	318,693	
	Premium on Bonds Pay		18,693
	Bonds Payable		300,000

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(a)

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
1/1	Cash	318,693	
	Premium on Bonds Pay		18,693
	Bonds Payable		300,000
(b)			
7/1	Bond Interest Expense	16,500	
	Cash		16,500
7/1	Premium on Bonds Pay	565	
	Bond Interest Expense		565
(c)			
12/31	Bond Interest Expense	16,500	
	Bond Interest Payable		16,500
12/31	Premium on Bonds Pay	594	
	Bond Interest Expense		594

This version records interest and amortization in SEPARATE entries; accrues interest instead of PAID on Dec 31.

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(a)

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
1/1/04	Cash	318,694	
	Premium on Bonds Pay		18,694
	Bonds Payable		300,000
(b)			
7/1	Bond Interest Expense	15,935	
	Premium on Bonds Pay	565	
	Cash		16,500
12/31	Bond Interest Expense	15,935	
	Premium on Bonds Pay	594	
	Bond Interest Payable		16,500
	...and the payment?		
1/1	Bond Interest Payable	16,500	
	Cash		16,500

This version is most like textbook solution: interest payment and amortization in SAME entry; accrues interest at 12/31 but also assumes payment on 1/1

Exercise *E15-17 (continued)

(b)

(Examples of similar “charts” are on text pages 658 and 659)

<u>Pmt</u>	<u>A</u> Interest Paid (5.5% x \$300,000)	<u>B</u> Interest Expense (5% x E)	<u>C</u> Premium Amortization (A - B)	<u>D</u> Unamortized Premium (D - C)	<u>E</u> B. C. A. (\$300,000 + D) (E - C)
				18,693	318,693
1	16,500	15,935	565	18,128	318,128
2	16,500	15,906	594	17,534	317,534
3	16,500	15,877	623	16,911	316,911
4	16,500	15,846	654	16,257	316,257
5	16,500	15,813	687	15,570	315,570

Exercise *E15-16

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Determine the amount of one interest payment:

$$\$600,000 \times 9\% \times 6/12 = \$27,000$$

PV of \$600,000 @ 10% semiannually:

$$\$600,000 \times .37689 = \$226,134$$

PV of Interest (one int pmt x factor):

$$\$27,000 \times 12.46221 = \underline{\underline{336,479}}$$

$$\text{Proceeds from the Sale of Bonds} \quad \underline{\underline{\$562,613}}$$

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page 670

(a)

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
1/1/05	Cash	562,613	
	Discount on Bonds Pay	37,387	
	Bonds Payable		600,000
(b)			
7/1	Bond Interest Expense	27,000	
	Cash		27,000
7/1	Bond Interest Expense	1,131	
	Discount on Bonds Pay		1,131
(c)			
12/31	Bond Interest Expense	27,000	
	Bond Interest Payable		27,000
12/31	Bond Interest Expense	1,187	
	Discount on Bonds Pay		1,187

This version records interest and amortization in SEPARATE entries; accrues interest instead of PAID on Dec 31.

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(a)

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
1/1/05	Cash	562,613	
	Discount on Bonds Pay	37,387	
	Bonds Payable		600,000
(b)			
7/1	Bond Interest Expense	28,131	
	Discount on Bonds Pay		1,131
	Cash		27,000
(c)			
12/31	Bond Interest Expense	28,187	
	Discount on Bonds Pay		1,187
	Bond Interest Payable		27,000
	...and the payment?		
1/1/06	Bond Interest Payable	27,000	
	Cash		27,000

This version is most like textbook solution: interest payment and amortization in SAME entry; accrues interest at 12/31 but also assumes payment on 1/1/06.

Exercise *E15-16 (continued)

(b)

(Examples of similar “charts” are on text pages 653 and 654)

<u>Pmt</u>	<u>A</u> Interest Paid (4.5% x \$600,000)	<u>B</u> Interest Expense (5% x E)	<u>C</u> Discount Amortization (B - A)	<u>D</u> Unamortized Discount (D - C)	<u>E</u> B. C. A. (\$600,000 - D) (E + C)
				37,387	562,613
1	27,000	28,131	1,131	36,256	563,744
2	27,000	28,187	1,187	35,069	564,931
3	27,000	28,247	1,247	33,822	566,178
4	27,000	28,309	1,309	32,513	567,487
5	27,000	28,374	1,374	31,139	568,861

Exercise E15-3

page 668

(a)

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
1/1	Cash	500,000	
	Bonds Payable		500,000
(b)			
7/1	Bond Interest Expense	25,000	
	Cash		25,000
(c)			
12/31	Bond Interest Expense	25,000	
	Bond Interest Payable		25,000
	...and the payment?		
1/1/x6	Bond Interest Payable	25,000	
	Cash		25,000

This version accrues interest at 12/31 and assumes the payment of interest on 1/1/x6.

Exercise E15-18 – pages 670-671

(a)

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
1/1	Cash	412,000	
	Bonds Payable		400,000
	Premium on Bonds Pay		12,000
(b)			
7/1	Bond Interest Expense	18,000	
	Cash		18,000
7/1	Premium on Bonds Pay	300	
	Bond Interest Expense		300
(c)			
12/31	Bond Interest Expense	18,000	
	Bond Interest Payable		18,000
12/31	Premium on Bonds Pay	300	
	Bond Interest Expense		300
(d)			
1/1	Bonds Payable	400,000	
	Cash		400,000

Exercise E15-19 – page 671

(a)

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
12/31/04	Cash	730,000	
	Discount on Bonds Pay	70,000	
	Bonds Payable		800,000
(b)			
6/30/05	Bond Interest Expense	44,000	
	Cash		44,000
	Bond Interest Expense	3,500	
	Discount on Bonds Pay		3,500
(c)			
12/31	Bond Interest Expense	44,000	
	Cash		44,000
12/31	Bond Interest Expense	3,500	
	Discount on Bonds Pay		3,500
(d)			
12/31/ 2014	Bonds Payable	800,000	
	Cash		800,000

Brief Exercise BE15-2
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(a)

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
1/1	Cash	3,000,000	
	Bonds Payable		3,000,000
(b)			
7/1	Bond Interest Expense	120,000	
	Cash		120,000
(c)			
12/31	Bond Interest Expense	120,000	
	Bond Interest Payable		120,000

Brief Exercise BE15-11

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(a)

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
12/31	Cash	4,800,000	
	Discount on Bonds Pay	200,000	
	Bonds Payable		5,000,000
(b)			
7/1	Bond Interest Expense	225,000	
	Cash		225,000
	Bond Interest Expense	10,000	
	Discount on Bonds Pay		10,000

Brief Exercise BE15-12
page 667

(a)

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
1/1//05	Cash	3,060,000	
	Premium on Bonds Pay		60,000
	Bonds Payable		3,000,000
(b)			
7/1	Bond Interest Expense	150,000	
	Cash		150,000
	Premium on Bonds Pay	6,000	
	Bond Interest Expense		6,000

Brief Exercise BE15-5
page 666

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
7/1/05	Bonds Payable	1,000,000	
	Loss on Redemption	70,000	
	Discount on Bonds Pay		60,000
	Cash		1,010,000

Brief Exercise *BE15-10 – page 667

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
7/1	Bond Interest Expense	45,000	
	Cash		45,000
	Bond Interest Expense	1,884	
	Discount on Bonds Payable		1,884

Exercise *E15-8

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(a)

<u>Date</u>	<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
	Bond Interest Payable	72,000	
	Cash		72,000
(b)			
	Bond Payable	600,000	
	Loss on Redemption	24,000	
	Cash		624,000
(c)			
7/31	Bond Interest Expense	45,000	
	Cash		45,000