Chapter 15

Do it!

State whether each of the following statements is true or false.

1. Mortgage bonds and sinking fund bonds are both examples of secured bonds.
2. Unsecured bonds are also known as debenture bonds.
3. The stated rate is the rate investors demand for loaning funds.
4. The face value is the amount of principal the issuing company must pay at the maturity date.
5. The bond issuer must make journal entries to record transfers of its bonds among investors.

Solution

1. True.
2. True.
3. False. The stated rate is the contractual interest rate used to determine the amount of cash interest the borrower pays.
4. True.
5. False. The bond issuer makes journal entries only when it issues or buys back bonds, when it records interest, and when bonds are converted.


Do it!

Giant Corporation issues $200,000 of bonds for $189,000. (a) Prepare the journal entry to record the issuance of the bonds, and (b) show how the bonds would be reported on the balance sheet at the date of issuance.

Solution

(a)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>189,000</td>
</tr>
<tr>
<td>Discount on Bonds Payable</td>
<td>11,000</td>
</tr>
<tr>
<td>Bonds Payable</td>
<td>200,000</td>
</tr>
<tr>
<td>(To record sale of bonds at a discount)</td>
<td></td>
</tr>
</tbody>
</table>

(b)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term liabilities</td>
<td></td>
</tr>
<tr>
<td>Bonds payable</td>
<td>$200,000</td>
</tr>
<tr>
<td>Less: Discount on bonds payable</td>
<td>(11,000)</td>
</tr>
<tr>
<td>$189,000</td>
<td></td>
</tr>
</tbody>
</table>


Bond Terminology

_action plan_

✔ Review the types of bonds and the basic terms associated with bonds.

Bond Issuance

_action plan_

✔ Record cash received, bonds payable at face value, and the difference as a discount or premium.
✔ Report discount as a deduction from bonds payable and premium as an addition to bonds payable.
Bond Redemption

action plan
✓ Determine and eliminate the carrying value of the bonds.
✓ Record the cash paid.
✓ Compute and record the gain or loss (the difference between the first two items).

Solution

There is a loss on redemption: The cash paid, $510,000 ($500,000 x 102%), is greater than the carrying value of $508,000. The entry is:

<table>
<thead>
<tr>
<th>Account</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonds Payable</td>
<td>500,000</td>
<td></td>
</tr>
<tr>
<td>Premium on Bonds Payable</td>
<td>8,000</td>
<td></td>
</tr>
<tr>
<td>Loss on Bond Redemption</td>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td></td>
<td>510,000</td>
</tr>
</tbody>
</table>

(To record redemption of bonds at 102)


Long-Term Note

action plan
✓ Record the issuance of the note as a cash receipt and a liability.
✓ Each installment payment consists of interest and payment of principal.

Solution

Cole Research issues a $250,000, 8%, 20-year mortgage note to obtain needed financing for a new lab. The terms call for semiannual payments of $12,631 each. Prepare the entries to record the mortgage loan and the first installment payment.

<table>
<thead>
<tr>
<th>Account</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>250,000</td>
<td>250,000</td>
</tr>
<tr>
<td>Mortgage Payable</td>
<td></td>
<td>250,000</td>
</tr>
<tr>
<td>(To record mortgage loan)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest Expense</td>
<td>10,000*</td>
<td></td>
</tr>
<tr>
<td>Mortgage Payable</td>
<td>2,361</td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td></td>
<td>12,361</td>
</tr>
<tr>
<td>(To record semiannual payment on mortgage)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Interest expense = $250,000 x 8% x 6/12.

FX Corporation leases new equipment on December 31, 2012. The lease transfers ownership to FX at the end of the lease. The present value of the lease payments is $240,000. After recording this lease, FX has assets of $2,000,000, liabilities of $1,200,000, and stockholders’ equity of $800,000. (a) Prepare the entry to record the lease, and (b) compute and discuss the debt to total assets ratio at year-end.

**Solution**

- (a) Leased Asset—Equipment 240,000  
  Lease Liability 240,000  
  (To record leased asset and lease liability)
- (b) The debt to total assets ratio = $1,200,000 ÷ $2,000,000 = 60%. This means that 60% of the total assets were provided by creditors. The higher the percentage of debt to total assets, the greater the risk that the company may be unable to meet its maturing obligations.

Related exercise material: BE15-7, E15-12, E15-14, and Do it! 15-5.

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**Do it!**

Snyder Software Inc. has successfully developed a new spreadsheet program. To produce and market the program, the company needed $2 million of additional financing. On January 1, 2012, Snyder borrowed money as follows.

1. Snyder issued $500,000, 11%, 10-year convertible bonds. The bonds sold at face value and pay semiannual interest on January 1 and July 1. Each $1,000 bond is convertible into 30 shares of Snyder’s $20 par value common stock.
2. Snyder issued $1 million, 10%, 10-year bonds at face value. Interest is payable semiannually on January 1 and July 1.
3. Snyder also issued a $500,000, 12%, 15-year mortgage payable. The terms provide for semiannual installment payments of $36,324 on June 30 and December 31.

**Instructions**

1. For the convertible bonds, prepare journal entries for:
   - (a) The issuance of the bonds on January 1, 2012.
   - (b) Interest expense on July 1 and December 31, 2012.
   - (c) The payment of interest on January 1, 2013.
   - (d) The conversion of all bonds into common stock on January 1, 2013, when the market value of the common stock was $67 per share.
2. For the 10-year, 10% bonds:
   - (a) Journalize the issuance of the bonds on January 1, 2012.
   - (b) Prepare the journal entries for interest expense in 2012. Assume no accrual of interest on July 1.
   - (c) Prepare the entry for the redemption of the bonds at 101 on January 1, 2015, after paying the interest due on this date.
3. For the mortgage note payable:
   - (a) Prepare the entry for the issuance of the note on January 1, 2012.
   - (b) Prepare a payment schedule for the first four installment payments.
   - (c) Indicate the current and noncurrent amounts for the mortgage note payable at December 31, 2012.
**Solution to Comprehensive Do it!**

1. (a) 2012
   Jan. 1 | Cash 500,000 | Bonds Payable 500,000
   (To record issue of 11%, 10-year convertible bonds at face value)

   (b) 2012
   July 1 | Interest Expense 27,500 | Cash ($500,000 × 0.055) 27,500
   (To record payment of semiannual interest)
   Dec. 31 | Interest Expense 27,500 | Interest Payable 27,500
   (To record accrual of semiannual bond interest)

   (c) 2013
   Jan. 1 | Interest Payable 27,500 | Cash 27,500
   (To record payment of accrued interest)

   (d) Jan. 1 | Bonds Payable 500,000 | Common Stock 300,000*
   Paid-in Capital in Excess of Par — Common Stock 200,000
   (To record conversion of bonds into common stock)
   *(500,000 ÷ $1,000 ÷ 500 bonds; 500 × 30 = 15,000 shares; 15,000 × $20 = $300,000)

2. (a) 2012
   Jan. 1 | Cash 1,000,000 | Bonds Payable 1,000,000
   (To record issuance of bonds)

   (b) 2012
   July 1 | Interest Expense 50,000 | Cash 50,000
   (To record payment of semiannual interest)
   Dec. 31 | Interest Expense 50,000 | Interest Payable 50,000
   (To record accrual of semiannual interest)

   (c) 2015
   Jan. 1 | Bonds Payable 1,000,000 | Loss on Bond Redemption 10,000*
   Cash 1,010,000
   (To record redemption of bonds at 101)
   *(1,010,000 — 1,000,000)

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**action plan**

✔ Compute interest semiannually (six months).
✔ Record the accrual and payment of interest on appropriate dates.
✔ Record the conversion of the bonds into common stock by removing the book (carrying) value of the bonds from the liability account.

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✔ Record the issuance of the bonds.
✔ Compute interest expense for each period.
✔ Compute the loss on bond redemption as the excess of the cash paid over the carrying value of the redeemed bonds.
Gardner Corporation issues $1,750,000, 10-year, 12% bonds on January 1, 2012, at $1,968,090, to yield 10%. The bonds pay semiannual interest July 1 and January 1. Gardner uses the effective-interest method of amortization.

Instructions

(a) Prepare the journal entry to record the issuance of the bonds.

(b) Prepare the journal entry to record the payment of interest on July 1, 2012.

Solution to Comprehensive Do it! for Appendix 15B

(a) 2012
Jan. 1
Cash
500,000
Mortgage Payable
500,000
(To record issuance of mortgage note payable)

(b) Semiannual Interest Period

<table>
<thead>
<tr>
<th>Issue date</th>
<th>Cash Payment</th>
<th>Interest Expense</th>
<th>Reduction of Principal</th>
<th>Principal Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$36,324</td>
<td>$30,000</td>
<td>$6,324</td>
<td>$493,676</td>
</tr>
<tr>
<td>2</td>
<td>36,324</td>
<td>29,621</td>
<td>6,703</td>
<td>486,973</td>
</tr>
<tr>
<td>3</td>
<td>36,324</td>
<td>29,218</td>
<td>7,106</td>
<td>479,867</td>
</tr>
<tr>
<td>4</td>
<td>36,324</td>
<td>28,792</td>
<td>7,532</td>
<td>472,335</td>
</tr>
</tbody>
</table>

(c) Current liability $14,638 ($7,106 + $7,532)
Long-term liability $472,335

action plan

- Compute periodic interest expense on a mortgage note, recognizing that as the principal amount decreases, so does the interest expense.
- Record mortgage payments, recognizing that each payment consists of (1) interest on the unpaid loan balance and (2) a reduction of the loan principal.

- Compute interest expense by multiplying bond carrying value at the beginning of the period by the effective-interest rate.
- Compute credit to cash (or bond interest payable) by multiplying the face value of the bonds by the contractual interest rate.
- Compute bond premium or discount amortization, which is the difference between interest expense and cash paid.
- Interest expense decreases when the effective-interest method is used for bonds issued at a premium. The reason is that a constant percentage is applied to a decreasing book value to compute interest expense.
Do it!

Glenda Corporation issues $1,750,000, 10-year, 12% bonds on January 1, 2012, for $1,968,090 to yield 10%. The bonds pay semiannual interest July 1 and January 1. Glenda uses the straight-line method of amortization.

Instructions
(a) Prepare the journal entry to record the issuance of the bonds.
(b) Prepare the journal entry to record the payment of interest on July 1, 2012.

Solution to Comprehensive Do it! for Appendix 15C

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) 2012</td>
<td></td>
</tr>
<tr>
<td>Jan. 1</td>
<td>Cash</td>
</tr>
<tr>
<td></td>
<td>Bonds Payable</td>
</tr>
<tr>
<td></td>
<td>Premium on Bonds Payable</td>
</tr>
<tr>
<td>(b) 2012</td>
<td></td>
</tr>
<tr>
<td>July 1</td>
<td>Interest Expense</td>
</tr>
<tr>
<td></td>
<td>Premium on Bonds Payable</td>
</tr>
<tr>
<td></td>
<td>Cash</td>
</tr>
<tr>
<td></td>
<td>**$218,090 ÷ 20</td>
</tr>
<tr>
<td></td>
<td>**$105,000 − $10,904.50</td>
</tr>
</tbody>
</table>

The Navigator

Evaluate statements about bonds.
(SO 1)

Prepare journal entry for bond issuance and show balance sheet presentation.
(SO 2)

Prepare entry for bond redemption.
(SO 3)

Prepare entries for mortgage note and installment payment on note.
(SO 4)

Prepare entry for lease, and compute debt to total assets ratio.
(SO 5)

Do it! 15-1 State whether each of the following statements is true or false.

_____ 1. Mortgage bonds and sinking fund bonds are both examples of debenture bonds.

_____ 2. Convertible bonds are also known as callable bonds.

_____ 3. The market rate is the rate investors demand for loaning funds.

_____ 4. Semiannual interest on bonds is equal to the face value times the stated rate times 6/12.

_____ 5. The present value of a bond is the value at which it should sell in the market.

Do it! 15-2 Biskup Corporation issues $300,000 of bonds for $312,000. (a) Prepare the journal entry to record the issuance of the bonds, and (b) show how the bonds would be reported on the balance sheet at the date of issuance.

Do it! 15-3 Venice Corporation issued $400,000 of 10-year bonds at a discount. Prior to maturity, when the carrying value of the bonds was $390,000, the company retired the bonds at 99. Prepare the entry to record the redemption of the bonds.

Do it! 15-4 Bluebell Orchard issues a $350,000, 6%, 15-year mortgage note to obtain needed financing for a new lab. The terms call for semiannual payments of $17,857 each. Prepare the entries to record the mortgage loan and the first installment payment.

Do it! 15-5 Seipple Corporation leases new equipment on December 31, 2012. The lease transfers ownership of the equipment to Seipple at the end of the lease. The present value of the lease payments is $192,000. After recording this lease, Seipple has assets of $1,800,000, liabilities of $1,100,000, and stockholders’ equity of $700,000. (a) Prepare the entry to record the lease, and (b) compute and discuss the debt to total assets ratio at year-end.
Problems: Set B

P15-1B  On June 1, 2012, Lublin Corp. issued $2,000,000, 9%, 5-year bonds at face value. The bonds were dated June 1, 2012, and pay interest semi-annually on June 1 and December 1. Financial statements are prepared annually on December 31.

Instructions
(a) Prepare the journal entry to record the issuance of the bonds.
(b) Prepare the adjusting entry to record the accrual of interest on December 31, 2012.
(c) Show the balance sheet presentation on December 31, 2012.
(d) Prepare the journal entry to record payment of interest on June 1, 2013, assuming no accrual of interest from January 1, 2013, to June 1, 2013.
(e) Prepare the journal entry to record payment of interest on December 1, 2013.
(f) Assume that on December 1, 2013, Lublin calls the bonds at 102. Record the redemption of the bonds.

P15-2B  Petoskey Co. sold $800,000, 9%, 10-year bonds on January 1, 2012. The bonds were dated January 1, and interest is paid on January 1 and July 1. The bonds were sold at 105.

Instructions
(a) Prepare the journal entry to record the issuance of the bonds on January 1, 2012.
(b) At December 31, 2012, the balance in the Premium on Bonds Payable account is $36,000. Show the balance sheet presentation of accrued interest and the bond liability at December 31, 2012.
(c) On January 1, 2014, when the carrying value of the bonds was $832,000, the company redeemed the bonds at 105. Record the redemption of the bonds assuming that interest for the period has already been paid.

P15-3B  Giordano’s Electronics issues a $600,000, 8%, 10-year mortgage note on December 31, 2012, to help finance a plant expansion program. The terms provide for semiannual installment payments, not including real estate taxes and insurance, of $44,149. Payments are due June 30 and December 31.

Instructions
(a) Prepare an installment payments schedule for the first 2 years.
(b) Prepare the entries for (1) the mortgage loan and (2) the first two installment payments.
(c) Show how the total mortgage liability should be reported on the balance sheet at December 31, 2013.

P15-4B  Presented below are three different lease transactions in which Kristi Enterprises engaged in 2012. Assume that all lease transactions start on January 1, 2012. In no case does Kristi receive title to the properties leased during or at the end of the lease term.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of property</td>
<td>Bulldozer</td>
<td>Truck</td>
<td>Furniture</td>
</tr>
<tr>
<td>Bargain purchase option</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Lease term</td>
<td>4 years</td>
<td>6 years</td>
<td>3 years</td>
</tr>
<tr>
<td>Estimated economic life</td>
<td>8 years</td>
<td>7 years</td>
<td>5 years</td>
</tr>
<tr>
<td>Yearly rental</td>
<td>$13,000</td>
<td>$20,000</td>
<td>$3,000</td>
</tr>
<tr>
<td>Fair value of leased asset</td>
<td>$80,000</td>
<td>$96,000</td>
<td>$20,500</td>
</tr>
<tr>
<td>Present value of the lease rental payments</td>
<td>$48,000</td>
<td>$82,000</td>
<td>$9,000</td>
</tr>
</tbody>
</table>

Instructions
(a) Identify the leases above as operating or capital leases. Explain.
(b) How should the lease transaction for Hofmeister Co. be recorded on January 1, 2012?
(c) How should the lease transaction for Janca Inc. be recorded in 2012?
*P15-5B  On July 1, 2012, Sagittarius Satellites issued $4,500,000 face value, 9%, 10-year bonds at $4,219,600. This price resulted in an effective-interest rate of 10% on the bonds. Sagittarius uses the effective-interest method to amortize bond premium or discount. The bonds pay semiannual interest July 1 and January 1.

Instructions  
(Round all computations to the nearest dollar.)

(a) Prepare the journal entry to record the issuance of the bonds on July 1, 2012.  
(b) Prepare an amortization table through December 31, 2013 (3 interest periods) for this bond issue.  
(c) Prepare the journal entry to record the accrual of interest and the amortization of the discount on December 31, 2012. 
(d) Prepare the journal entry to record the payment of interest and the amortization of the discount on July 1, 2013, assuming that interest was not accrued on June 30.  
(e) Prepare the journal entry to record the accrual of interest and the amortization of the discount on December 31, 2013.

*P15-6B  On July 1, 2012, Dacotah Chemical Company issued $4,000,000 face value, 10%, 10-year bonds at $4,543,627. This price resulted in an 8% effective-interest rate on the bonds. Dacotah uses the effective-interest method to amortize bond premium or discount. The bonds pay semiannual interest on each July 1 and January 1.

Instructions  
(Round all computations to the nearest dollar.)

(a) Prepare the journal entries to record the following transactions. 
   (1) The issuance of the bonds on July 1, 2012. 
   (2) The accrual of interest and the amortization of the premium on December 31, 2012. 
   (3) The payment of interest and the amortization of the premium on July 1, 2013, assuming no accrual of interest on June 30. 
   (4) The accrual of interest and the amortization of the premium on December 31, 2013. 
(b) Show the proper balance sheet presentation for the liability for bonds payable on the December 31, 2013, balance sheet. 
(c) Provide the answers to the following questions in letter form. 
   (1) What amount of interest expense is reported for 2013? 
   (2) Would the bond interest expense reported in 2013 be the same as, greater than, or less than the amount that would be reported if the straight-line method of amortization were used? 
   (3) Determine the total cost of borrowing over the life of the bond. 
   (4) Would the total bond interest expense be greater than, the same as, or less than the total interest expense if the straight-line method of amortization were used?

*P15-7B  Somonauk Company sold $6,000,000, 9%, 20-year bonds on January 1, 2012. The bonds were dated January 1, 2012, and pay interest on January 1 and July 1. Somonauk Company uses the straight-line method to amortize bond premium or discount. The bonds were sold at 96. Assume no interest is accrued on June 30.

Instructions  
(a) Prepare the journal entry to record the issuance of the bonds on January 1, 2012. 
(b) Prepare a bond discount amortization schedule for the first 4 interest periods. 
(c) Prepare the journal entries for interest and the amortization of the discount in 2012 and 2013.

(d) Show the balance sheet presentation of the bond liability at December 31, 2013.

*P15-8B  Gabriel Corporation sold $4,000,000, 8%, 10-year bonds on January 1, 2012. The bonds were dated January 1, 2012, and pay interest on July 1 and January 1. Gabriel Corporation uses the straight-line method to amortize bond premium or discount. Assume no interest is accrued on June 30.

Instructions  
(a) Prepare all the necessary journal entries to record the issuance of the bonds and bond interest expense for 2012, assuming that the bonds sold at 103. 
(b) Prepare journal entries as in part (a) assuming that the bonds sold at 96. 
(c) Show balance sheet presentation for each bond issue at December 31, 2012.
The following is taken from the Kijak Corp. balance sheet.

**KIJAK CORPORATION**

**Balance Sheet (partial)**

**December 31, 2012**

<table>
<thead>
<tr>
<th>Current liabilities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest payable (for 6 months from July 1 to December 31)</td>
<td>$108,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Long-term liabilities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonds payable, 9%, due January 1, 2023</td>
<td>$2,400,000</td>
</tr>
<tr>
<td>Less: Discount on bonds payable</td>
<td>90,000</td>
</tr>
<tr>
<td></td>
<td>2,310,000</td>
</tr>
</tbody>
</table>

Interest is payable semiannually on January 1 and July 1. The bonds are callable on any semiannual interest date. Kijak uses straight-line amortization for any bond premium or discount. From December 31, 2012, the bonds will be outstanding for an additional 10 years (120 months).

**Instructions**

(Round all computations to the nearest dollar).

(a) Journalize the payment of bond interest on January 1, 2013.

(b) Prepare the entry to amortize bond discount and to pay the interest due on July 1, 2013, assuming that interest was not accrued on June 30.

(c) Assume that on July 1, 2013, after paying interest, Kijak Corp. calls bonds having a face value of $800,000. The call price is 102. Record the redemption of the bonds.

(d) Prepare the adjusting entry at December 31, 2013, to amortize bond discount and to accrue interest on the remaining bonds.

Prepare entries to record interest payments, straight-line discount amortization, and redemption of bonds.

(SO 2, 3, 9)

### Continuing Cookie Chronicle

*(Note: This is a continuation of the Cookie Chronicle from Chapters 1 through 14.)*

**CCC15** Natalie and Curtis have been experiencing great demand for their cookies and muffins. As a result, they are now thinking about buying a commercial oven. They know which oven they want and how much it will cost. They have some cash set aside for the purchase and will need to borrow the rest. They met with a bank manager to discuss their options.

*Go to the book’s companion website, [www.wiley.com/go/global/weygandt](http://www.wiley.com/go/global/weygandt), to see the completion of this problem.*