

# CHAPTER 14

## LONG-TERM FINANCIAL LIABILITIES

### CHAPTER STUDY OBJECTIVES

**1. Understand the nature of long-term debt financing arrangements.** Incurring long-term debt is often a formal procedure. Corporation bylaws usually require the approval of the board of directors and the shareholders before bonds can be issued or other long-term debt arrangements can be contracted. Generally, long-term debt has various covenants or restrictions. The covenants and other terms of the agreement between the borrower and the lender are stated in the bond indenture or note agreement. Notes are similar in substance to bonds but do not trade as readily in capital markets, if at all.

The variety of types of bonds and notes is a result of attempts to attract capital from different investors and risk takers and to satisfy the issuers' cash flow needs.

External credit rating agencies rate bonds and assign a credit rating based on the riskiness. The credit rating helps investors decide whether to invest in a particular bond. Companies sometimes extinguish debt early using a defeasance arrangement. In a defeasance arrangement, funds are deposited into a trust and the trust continues to make the regularly scheduled payments until maturity.

By using debt financing, companies can maximize income through the use of leverage. Capital-intensive industries often have higher levels of debt. Continued access to low-cost debt is important for maximizing shareholder value.

**2. Understand how long-term debt is measured and accounted for.** The investment community values a bond at the present value of its future cash flows, which consist of interest and principal. The rate that is used to calculate the present value of these cash flows is the interest rate that provides an acceptable return on an investment that matches the issuer's risk characteristics. The interest rate written in the terms of the bond indenture and ordinarily appearing on the bond certificate is the stated, coupon, or nominal rate. This rate, which is set by the issuer of the bonds, is expressed as a percentage of the bond's face value, which is also called the par value, principal amount, or maturity value. If the rate used by the buyers differs from the stated rate, the bond's present value calculated by the buyers will differ from the bond's face value. The difference between the bond's face value and the present value is either a discount or a premium. Long-term debt is measured at fair value on initial recognition, including transaction costs where the instruments will subsequently be valued at amortized cost. Subsequently, the instruments are measured at amortized cost or, in certain limited situations, fair value, under the fair value option.

The discount (premium) is amortized and charged (credited) to interest expense over the period of time that the bonds are outstanding. IFRS requires the effective-interest method; however, ASPE allows a choice and often smaller private entities use the straight-line method.

Bonds and notes may be issued with zero interest or for a non-monetary consideration.

Measurement of the bonds and the consideration must reflect the underlying substance of the transaction. In particular, reasonable interest rates must be imputed. The fair value of the debt and of the non-monetary consideration should be used to value the transaction.

**3. Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.** At the time of reacquisition, the unamortized premium or discount and any costs of issue that apply to the debt must be amortized up to the reacquisition date. The amount that is paid on extinguishment or redemption before maturity, including any call premium and expense of reacquisition, is the reacquisition price. On any specified date, the debt's net carrying amount is the amount that is payable at maturity, adjusted for unamortized premium or discount and the cost of issuance. Any excess of the net carrying amount over the reacquisition price is a gain from extinguishment, whereas the excess of the reacquisition price over the net carrying amount is a loss from extinguishment. Legal defeasance results in derecognition of the liability. In substance defeasance does not. Where debt is settled by exchanging the old debt with new debt (generally in troubled debt situations), it is treated as a settlement where the terms of the agreements are substantially different, including a size test, and where the new debt is with a new lender. If not treated as a settlement, it is treated as a modification of the old debt and a new interest rate is imputed. Off-balance sheet financing is an attempt to borrow funds in such a way that the obligations are not recorded. One type of off-balance sheet financing involves the use of certain variable interest entities. Accounting standard setters are studying this area with the objective of coming up with a new definition of what constitutes the reporting entity.

**4. Explain how long-term debt is presented on the statement of financial position.**

Companies that have large amounts and many issues of long-term debt often report only one amount in the SFP and support this with comments and schedules in the accompanying notes. Long-term debt that matures within one year should be reported as a current liability, unless it will be retired without using current assets. If the debt is to be refinanced, converted into shares, or retired from a bond retirement fund, it should continue to be reported as non-current and accompanied by a note explaining the method to be used in its liquidation unless certain conditions are met.

**5. Identify disclosure requirements.** Note disclosures are significant and generally indicate the nature of the liabilities, maturity dates, interest rates, call provisions, conversion privileges, restrictions imposed by the creditors, and assets designated or pledged as security as well as other details.

**6. Calculate and interpret key ratios related to solvency and liquidity.** Debt to total assets and times interest earned are two ratios that provide information about debt-paying ability and long-term solvency.

**7. Identify major differences in accounting standards between IFRS and ASPE, and what changes are expected in the near future.** IFRS and ASPE are largely converged as they relate to long-term debt. Small differences relate to whether the debt is presented as current or non-current and in measurement. For example, ASPE has measurement standards for related-party transactions. The standard setters are working on several large projects, including the conceptual framework and financial instruments with the characteristics of equity.

## MULTIPLE CHOICE—Conceptual

Answer	No.	Description
a	1.	Liability identification
b	2.	Restrictions in restricted covenants
d	3.	Bond vocabulary
b	4.	Bond vocabulary
c	5.	Bond vocabulary
d	6.	Rate of interest earned by bondholders
b	7.	Bond premium and interest rates
a	8.	Interest and discount amortization
b	9.	Effective-interest amortization method
d	10.	Impact of effective-interest method
c	11.	Bonds issued between interest dates
d	12.	Bonds issued between interest dates
b	13.	Valuation of bonds
d	14.	Bond face value
b	15.	Notes with zero interest or non-monetary consideration
d	16.	Fair value option
d	17.	Note issued for property, goods, or services
c	18.	Callable bonds
a	19.	Debt refunding
c	20.	Modification of terms in troubled debt restructuring
d	21.	Gain/loss on troubled debt restructuring
b	22.	Gain/loss on troubled debt restructuring
c	23.	Creditor's calculations for modification of terms
a	24.	In substance defeasance
d	25.	Off-balance-sheet financing
a	26.	Presentation
b	27.	Presentation
b	28.	Long-term debt disclosures
d	29.	Disclosure
b	30.	Disclosure
c	31.	Times interest earned ratio
a	32.	Debt to total assets ratio
d	33.	Times interest earned ratio
b	34.	Debt to total assets ratio
b	35.	Comparison of IFRS and ASPE
a	36.	Comparison of IFRS and ASPE

**MULTIPLE CHOICE—Computational**

<b>Answer</b>	<b>No.</b>	<b>Description</b>
a	37.	Calculate the present value of bond principal.
b	38.	Calculate the present value of bond interest.
a	39.	Calculate the issue price of bonds.
b	40.	Interest expense using effective-interest method
c	41.	Interest expense using effective-interest method
a	42.	Interest on noninterest-bearing note
c	43.	Interest on instalment note payable
a	44.	Calculate balance of note payable.
c	45.	Calculate proceeds from bond issue.
b	46.	Calculate balance in bonds payable account.
c	47.	Calculate balance in bonds payable account.
b	48.	Calculate bond interest expense.
b	49.	Calculate gain on retirement of bonds.
a	50.	Calculate gain or loss on retirement of bonds.
c	51.	Calculate loss on retirement of bonds.
b	52.	Bond retirement with call premium
b	53.	Calculate loss on retirement of bonds.
b	54.	Transfer of equipment in debt restructure
d	55.	Recognizing gain on debt restructure
b	56.	Interest and troubled debt restructuring
b	57.	Calculate loss on retirement of bonds.
a	58.	Calculate loss on retirement of bonds.
b	59.	Calculate gain or loss on retirement of bonds.
c	60.	Calculate gain or loss on retirement of bonds.
d	61.	Classification of gains from troubled debt restructuring
d	62.	Calculate times interest earned ratio.
c	63.	Calculate debt to total assets ratio.

## EXERCISES

<b>Item</b>	<b>Description</b>
E14-64	Underwriting for bond issues
E14-65	Terms related to long-term debt
E14-66	Amortization of discount or premium
E14-67	Bond issue price and discount amortization
E14-68	Note issued for cash and other rights
E14-69	Note issued for non-cash consideration
E14-70	Entries for bonds payable
E14-71	Sale and subsequent buyback of bonds
E14-72	Retirement of bonds
E14-73	Early extinguishment of debt
E14-74	Accounting procedures for bond redemptions
E14-75	Accounting for a troubled debt settlement
E14-76	Accounting for troubled debt restructuring
E14-77	Accounting for troubled debt

## PROBLEMS

<b>Item</b>	<b>Description</b>
P14-78	Bond interest and discount amortization
P14-79	Bond interest and discount amortization
P14-80	Fair value option
P14-81	Entries for bonds payable
P14-82	Entries for bonds payable
P14-83	Accounting for bond issuance and retirement
P14-84	Bond accounting, ratios, debt covenants
P14-85	Accounting for a troubled debt settlement

## MULTIPLE CHOICE—Conceptual

1. Which of the following is NOT generally classified as a long-term liability?

- a) stock dividends distributable
- b) pension liabilities
- c) mortgages payable
- d) lease liabilities

Answer: a

Difficulty: Easy

Learning Objective: Understand the nature of long-term debt financing arrangements.

Section Reference: Understanding Debt Instruments Measurement

CPA: Financial Reporting

Bloomcode: Knowledge

2. Restrictions included in restricted covenants do NOT generally include

- a) working capital restrictions.
- b) limits on executive compensation.
- c) dividend restrictions.
- d) limitations on incurring additional debt.

Answer: b

Difficulty: Easy

Learning Objective: Understand the nature of long-term debt financing arrangements.

Section Reference: Understanding Debt Instruments Measurement

CPA: Financial Reporting

Bloomcode: Knowledge

3. A contract representing the covenants and other terms of the agreement between the issuer of bonds and the lender is known as a

- a) bond debenture.
- b) long-term note payable.
- c) registered bond.
- d) bond indenture.

Answer: d

Difficulty: Easy

Learning Objective: Understand the nature of long-term debt financing arrangements.

Section Reference: Understanding Debt Instruments Measurement

CPA: Financial Reporting

Bloomcode: Knowledge

4. The term used for bonds that are backed by collateral is

- a) convertible bonds.
- b) debenture bonds.
- c) secured bonds.
- d) callable bonds.

Answer: c

Difficulty: Easy

Learning Objective: Understand the nature of long-term debt financing arrangements.

Section Reference: Understanding Debt Instruments Measurement

CPA: Financial Reporting

Bloomcode: Knowledge

5. Bonds frequently used by schools and municipalities that mature in instalments are called
- a) convertible bonds.
  - b) revenue bonds.
  - c) serial bonds.
  - d) callable bonds.

Answer: c

Difficulty: Easy

Learning Objective: Understand the nature of long-term debt financing arrangements.

Section Reference: Understanding Debt Instruments Measurement

CPA: Financial Reporting

Bloomcode: Knowledge

6. The rate of interest actually earned by bondholders is called the
- a) stated rate.
  - b) coupon rate.
  - c) dividend rate.
  - d) effective yield or market rate.

Answer: d

Difficulty: Easy

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Knowledge

7. Mars Corp. issued ten-year bonds with a maturity value of \$400,000. If the bonds were issued at a premium, this indicates that
- a) the market rate was higher than the stated rate.
  - b) the stated rate was higher than the market rate.
  - c) the market and stated rates were the same.
  - d) no relationship exists between the two rates.

Answer: b

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Comprehension

8. If bonds are initially sold at a discount and the straight-line method of amortization is used, interest expense in the earlier years will be
- a) higher than it would have been had the effective-interest method of amortization been used.
  - b) less than it would have been had the effective-interest method of amortization been used.
  - c) the same as it would have been had the effective-interest method of amortization been used.
  - d) less than the stated rate of interest.

Answer: a

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Comprehension

9. Using the effective-interest method of bond discount or premium amortization, the periodic interest expense is equal to the
- a) stated rate multiplied by the face value of the bonds.
  - b) market rate multiplied by the beginning-of-period carrying value of the bonds.
  - c) stated rate multiplied by the beginning-of-period carrying value of the bonds.
  - d) market rate multiplied by the face value of the bonds.

Answer: b

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Comprehension

10. When the effective-interest method is used to amortize bond premium or discount, the periodic amortization will
- a) increase if the bonds were issued at a discount.
  - b) decrease if the bonds were issued at a premium.
  - c) increase if the bonds were issued at a premium.
  - d) increase if the bonds were issued at either a discount or a premium.

Answer: d

Difficulty: Medium



Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Comprehension

11. If bonds are issued between interest dates, the entry on the books of the issuing corporation could include a

- a) debit to Interest Payable.
- b) credit to Interest Receivable.
- c) credit to Interest Expense.
- d) credit to Unearned Interest.

Answer: c

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Knowledge

12. When the interest payment dates of a bond are May 1 and November 1, and a bond issue is sold on June 1, the amount of cash received by the issuer will be

- a) decreased by accrued interest from June 1 to November 1.
- b) decreased by accrued interest from May 1 to June 1.
- c) increased by accrued interest from June 1 to November 1.
- d) increased by accrued interest from May 1 to June 1.

Answer: d

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Comprehension

13. How should a long-term bond initially be valued?

- a) at the future value of the future cash flows
- b) at the present value of the future cash flows
- c) at the present value of the interest to be paid
- d) at the maturity value of the bond

Answer: b

Difficulty: Easy

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Knowledge

14. A bond's face value is also called
- a) the par value or the present value.
  - b) the principal amount or the present value.
  - c) the future value or the maturity value.
  - d) the par value or the maturity value.

Answer: d

Difficulty: Easy

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Knowledge

15. If a long-term note is issued with zero interest or for non-monetary consideration,
- a) the debtor must first try to value the non-monetary asset(s) involved in the transaction.
  - b) a reasonable interest rate must be imputed.
  - c) the debtor always tries to create a gain with such a transaction.
  - d) the note is a non-monetary liability.

Answer: b

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Comprehension

16. When valuing financial instruments at fair value (the fair value option),
- a) ASPE allows this option only for certain financial instruments.
  - b) IFRS allows this for all financial instruments.
  - c) IFRS requires that this option be used only where fair value does not result in more relevant information.
  - d) IFRS requires that non-performance risk be included in the fair value measurement.

Answer: d

Difficulty: Hard

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Comprehension

17. When a note payable is issued for property, goods, or services, the present value of the note should preferably be measured by
- a) the present value of the property, goods or services.

- b) the fair value of the property, goods, or services.
- c) the fair value of the debt instrument.
- d) the present value of the debt instrument.

Answer: d

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Comprehension

18. A ten-year bond was issued in 2017 at a discount with a call provision to retire the bonds. When the bond issuer exercised the call provision on an interest date in 2016, the carrying value of the bond was less than the call price. The amount of bond liability removed from the accounts in 2019 would be the

- a) call price.
- b) maturity value.
- c) carrying value.
- d) face amount plus unamortized discount.

Answer: c

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Comprehension

19. If a debt refunding is viewed as a modification or renegotiation, then

- a) a new effective-interest rate is calculated.
- b) a gain or loss is recorded.
- c) there is no change in the accounting for the debt.
- d) the old debt is derecognized.

Answer: a

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Comprehension

20. In a troubled debt restructuring in which the debt is continued with modified terms and the carrying amount of the debt is less than the total future cash flows,

- a) an extraordinary gain should be recognized by the debtor.

- b) a gain should be recognized by the debtor.
- c) a new effective-interest rate must be calculated.
- d) no interest expense or revenue should be recognized in the future.

Answer: c

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Comprehension

21. A troubled debt restructuring will generally result in a

- a) loss by the debtor and a gain by the creditor.
- b) loss by both the debtor and the creditor.
- c) gain by both the debtor and the creditor.
- d) gain by the debtor and a loss by the creditor.

Answer: d

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Comprehension

22. In a troubled debt restructuring in which the debt is settled by a transfer of assets with a fair market value less the carrying amount of the debt, the debtor would

- a) not recognize a gain or loss on the settlement.
- b) recognize a gain on the settlement.
- c) recognize a loss on the settlement.
- d) only record a memo in the general ledger.

Answer: b

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Comprehension

23. In a troubled debt restructuring in which the debt is continued with modified terms and the carrying amount of the debt is less than the total future cash flows, the creditor should

- a) calculate a new effective-interest rate.
- b) not recognize a loss.

- c) calculate its loss using the historical effective rate of the loan.
- d) calculate its loss using the current effective rate of the loan.

Answer: c

Difficulty: Hard

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Comprehension

24. When the debtor sets aside money in a trust such that the investment and any return will be sufficient to pay the principal and the interest to the creditor, but the creditor does NOT release the company from the primary obligation to settle the debt, this type of arrangement is known as

- a) in substance defeasance.
- b) in substance refunding.
- c) substantive repayment.
- d) legal defeasance.

Answer: a

Difficulty: Easy

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Knowledge

25. Which of the following arrangements would NOT represent a possible example of “off-balance-sheet financing”?

- a) non-consolidated subsidiaries
- b) variable interest entities
- c) operating leases
- d) capital or financing leases

Answer: d

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Comprehension

26. How should long-term debt be reported if it matures within one year and the company has arranged, before its current year end, to convert the debt into shares?

- a) as non-current and accompanied with a note explaining the method to be used in its

liquidation

- b) in a special section between liabilities and shareholders' equity
- c) as non-current
- d) as a current liability

Answer: a

Difficulty: Medium

Learning Objective: Explain how long-term debt is presented on the statement of financial position.

Section Reference: Presentation, Disclosure, and Analysis

CPA: Financial Reporting

Bloomcode: Comprehension

27. Complex financial instruments make the distinction between debt and equity

- a) easier to define.
- b) harder to define.
- c) less important.
- d) irrelevant.

Answer: b

Difficulty: Medium

Learning Objective: Explain how long-term debt is presented on the statement of financial position.

Section Reference: Presentation, Disclosure, and Analysis

CPA: Financial Reporting

Bloomcode: Comprehension

28. Note disclosures for long-term debt generally include all of the following EXCEPT

- a) assets pledged as security.
- b) names of specific creditors.
- c) restrictions imposed by creditors.
- d) call provisions and conversion privileges.

Answer: b

Difficulty: Easy

Learning Objective: Identify disclosure requirements.

Section Reference: Disclosures

CPA: Financial Reporting

Bloomcode: Knowledge

29. Which of the following is a required disclosure with respect to liabilities?

- a) who the creditors are and how much is owed to each
- b) payment terms for trade accounts payable
- c) future payments and maturity amounts for each of the next ten years
- d) details of assets pledged as collateral

Answer: d

Difficulty: Medium

Learning Objective: Identify disclosure requirements.

Section Reference: Disclosures

CPA: Financial Reporting

Bloomcode: Knowledge

30. Which of the following is NOT a required disclosure with respect to liabilities?

- a) maturity dates and interest rates for each outstanding bond issue
- b) payment terms for trade accounts payable
- c) future payments and maturity amounts for each of the next five years
- d) details of assets pledged as collateral

Answer: b

Difficulty: Medium

Learning Objective: Identify disclosure requirements.

Section Reference: Disclosures

CPA: Financial Reporting

Bloomcode: Knowledge

31. The times interest earned ratio is calculated by dividing

- a) net income by interest expense.
- b) income before taxes by interest expense.
- c) income before income taxes and interest expense by interest expense.
- d) net income and interest expense by interest expense.

Answer: c

Difficulty: Easy

Learning Objective: Calculate and interpret key ratios related to solvency and liquidity.

Section Reference: Analysis

CPA: Financial Reporting

Bloomcode: Knowledge

32. The debt to total assets ratio is calculated by dividing

- a) total liabilities by total assets.
- b) long-term liabilities by total assets.
- c) current liabilities by total assets.
- d) total assets by total liabilities.

Answer: a

Difficulty: Easy

Learning Objective: Calculate and interpret key ratios related to solvency and liquidity.

Section Reference: Analysis

CPA: Financial Reporting  
Bloomcode: Knowledge

33. The times interest earned ratio measures
- a) the amount of interest expense related to long-term debt.
  - b) the percentage of total assets financed by creditors.
  - c) the profitability of an enterprise.
  - d) an enterprise's ability to meet interest payments as they come due.

Answer: d

Difficulty: Medium  
Learning Objective: Calculate and interpret key ratios related to solvency and liquidity.  
Section Reference: Analysis  
CPA: Financial Reporting  
Bloomcode: Comprehension

34. The debt to total assets earned ratio measures
- a) the amount of debt related to interest expense.
  - b) the percentage of total assets financed by creditors.
  - c) the likelihood an enterprise will default on its obligations.
  - d) the profitability of an enterprise.

Answer: b

Difficulty: Medium  
Learning Objective: Calculate and interpret key ratios related to solvency and liquidity.  
Section Reference: Analysis  
CPA: Financial Reporting  
Bloomcode: Comprehension

35. Which of the following statements is true?
- a) Refinanced long-term debt may be reported as long-term rather than current if the refinancing has been completed before the date of the financial statements, according to ASPE; and before the date of the issue of the financial statements, according to IFRS.
  - b) Refinanced long-term debt may be reported as long-term rather than current if the refinancing has been completed before the date of the financial statements, according to IFRS; and before the date of the issue of the financial statements, according to ASPE.
  - c) Refinanced long-term debt may be reported as long-term rather than current if the refinancing has been completed before the date of the financial statements, according to IFRS and ASPE.
  - d) Refinanced long-term debt may be reported as long-term rather than current if the refinancing has been completed before the issue of the financial statements, according to IFRS and ASPE.

Answer: b

Difficulty: Medium  
Learning Objective: Identify major differences in accounting standards between IFRS and ASPE, and what changes are expected in the near future.



Section Reference: IFRS/ASPE Comparison  
CPA: Financial Reporting  
Bloomcode: Knowledge

36. Which of the following statements is correct?

- a) IFRS requires the effective-interest method to be used to amortize bond premiums and discounts; ASPE permits either the effective-interest method or the straight-line method.
- b) ASPE requires the effective-interest method to be used to amortize bond premiums and discounts; IFRS permits either the effective-interest method or the straight-line method.
- c) Both IFRS and ASPE require the effective-interest method to be used to amortize bond premiums and discounts.
- d) Both IFRS and ASPE permit either the effective-interest method or the straight-line method to be used to amortize bond premiums and discounts.

Answer: a

Difficulty: Medium

Learning Objective: Identify major differences in accounting standards between IFRS and ASPE, and what changes are expected in the near future.

Section Reference: IFRS/ASPE Comparison

CPA: Financial Reporting

Bloomcode: Knowledge

## MULTIPLE CHOICE—Computational

Use the following information for questions 37–39.

On January 1, 2017, Satin Corp. issued eight-year, 6% bonds with a face value of \$500,000, with interest payable semi-annually on June 30 and December 31. The bonds were sold to yield 8%. Table values are:

Present value of 1 for 8 periods at 6%	.627
Present value of 1 for 8 periods at 8%	.540
Present value of 1 for 16 periods at 3%	.623
Present value of 1 for 16 periods at 4%	.534
Present value of annuity for 8 periods at 6%	6.210
Present value of annuity for 8 periods at 8%	5.747
Present value of annuity for 16 periods at 3%	12.561
Present value of annuity for 16 periods at 4%	11.652

37. The present value of the principal is

- a) \$267,000.
- b) \$270,000.
- c) \$311,500.
- d) \$313,500.

Answer: a

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $\$500,000 \times .534 = \$267,000$

38. The present value of the interest is

- a) \$172,410.
- b) \$174,780.
- c) \$186,300.
- d) \$188,415.

Answer: b

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $(\$500,000 \times .03) \times 11.652 = \$174,780$

39. The issue price of the bonds is

- a) \$441,780.
- b) \$442,410.
- c) \$444,780.
- d) \$499,800.

Answer: a

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $\$267,000 + \$174,780 = \$441,780$

40. On January 1, 2017, Lace Ltd. sold five year, 12% bonds with a face value of \$500,000. Interest will be paid semi-annually on June 30 and December 31. The bonds were sold for \$538,500 to yield 10%. Using the effective-interest method of amortization of bond discount or premium, interest expense for 2017 is

- a) \$50,000.
- b) \$53,696.
- c) \$53,850.
- d) \$60,000.

Answer: b

Difficulty: Hard

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

Feedback: Interest June 30:  $\$538,500 \times .05 =$  \$26,925

Amortization of premium  $\$30,000 - \$26,925 = \$3,075$

CV is now  $\$538,500 - \$3,075 = \$535,425$

Interest Dec 31:  $\$535,425 \times .05 =$  \$26,771

Total interest for 2017: \$53,696

41. On January 2, 2017, Muslin Ltd. sold five year, 8% bonds with a face value of \$900,000. Interest will be paid semi-annually on June 30 and December 31. The bonds were sold for \$830,400 to yield 10%. Using the effective-interest method of amortization of bond discount or premium, interest expense for 2017 is

- a) \$72,000.
- b) \$83,040.
- c) \$83,316.
- d) \$90,000.

Answer: c

Difficulty: Hard

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

Feedback: Interest June 30:  $\$830,400 \times .05 =$  \$41,520

Amortization of discount  $\$41,520 - \$36,000 = \$5,520$

CV is now  $\$830,400 + \$5,520 = \$835,920$

Interest Dec 31:  $\$835,920 \times .05 =$  41,796

Total interest for 2017: \$83,316

42. On January 1, 2017, Susan Hong lent \$60,104 to Ben Bachu. A zero-interest-bearing note (face amount, \$80,000) was exchanged solely for cash; no other rights or privileges were exchanged. The note is to be repaid on December 31, 2019. The market rate of interest for a loan of this type is 10%. To the nearest dollar, and using the effective-interest method, how much interest revenue should Ms. Hong recognize in 2017?

- a) \$ 6,010
- b) \$ 8,000
- c) \$18,030
- d) \$24,000

Answer: a

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $\$60,104 \times .10 = \$6,010$

43. On January 1, 2017, Alvin Corp. sold property to Marvin Ltd., for which Alvin had originally paid \$570,000. There was no established exchange price for this property. Marvin gave Alvin a \$900,000, zero-interest-bearing note, payable in three equal annual instalments of \$300,000, with the first payment due December 31, 2017. The note also has no ready market. The market rate of interest for a note of this type is 10%. The present value of a \$900,000 note payable in three equal annual instalments of \$300,000 at 10% is \$746,056. To the nearest dollar, and using the effective-interest method, how much interest revenue should Alvin recognize in 2017?

- a) \$ 0
- b) \$30,000
- c) \$74,606
- d) \$90,000

Answer: c

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $\$746,056 \times .10 = \$74,606$

44. On January 1, 2017, Queen Ltd. sold property to King Company. There was no established exchange price for the property, and King gave Queen a \$3,000,000, zero-interest-bearing note payable in five equal annual instalments of \$600,000, with the first payment due December 31, 2017. The market rate of interest for a note of this type is 9%. The present value of the note at 9% was \$2,333,791 at January 1, 2017. What should be the balance of the Note Payable to Queen Ltd. account on King's December 31, 2017 adjusted trial balance, assuming that the note is recorded at net and the effective-interest method is used? (Round to the nearest dollar, if necessary.)
- \$1,943,832
  - \$2,333,791
  - \$2,400,000
  - \$3,000,000

Answer: a

Difficulty: Hard

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

Feedback: Interest portion of Dec 31 payment =  $\$2,333,791 \times 9\% = \$210,041$ ; therefore principal reduction is  $\$600,000 - \$210,041 = \$389,959$ , and carrying value of note is  $\$2,333,791 - \$389,959 = \$1,943,832$

45. On July 1, 2017, Salmon Corp. issued \$600,000, 8% bonds at 99 plus accrued interest. The bonds are dated April 1, 2017 and mature on April 1, 2027. Interest is payable semi-annually on April 1 and October 1. How much did Salmon receive from the bond issuance?
- \$594,000
  - \$600,000
  - \$606,000
  - \$602,000

Answer: c

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $(\$600,000 \times .99) + (\$600,000 \times .08 \times 3 \div 12) = \$606,000$

46. On January 1, 2017, Varden Ltd. issued \$4,000,000, 10% bonds, which mature on January 1, 2027. The bonds were issued for \$4,540,000 to yield 8%. Varden uses the effective-interest method of amortizing bond premium. Interest is payable annually on December 31. At December 31, 2017, the adjusted balance in the Bonds Payable account should be
- \$4,540,000.
  - \$4,503,200.

- c) \$4,486,000.
- d) \$4,000,000.

Answer: b

Difficulty: Hard

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

Feedback: Amortization of premium  $\$400,000 - (\$4,540,000 \times .08) = \$36,800$

CV is  $\$4,540,000 - \$36,800 = \$4,503,200$

47. On July 1, 2017, Pike Inc. issued \$500,000, 9% bonds, which mature on July 1, 2027. The bonds were issued for \$469,500 to yield 10%. Pike uses the effective-interest method of amortizing bond discount. Interest is payable annually on June 30. At June 30, 2019, the adjusted balance in the Bonds Payable account should be
- a) \$500,000.
  - b) \$493,900.
  - c) \$473,595.
  - d) \$471,450.

Answer: c

Difficulty: Hard

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

Feedback: 2014–2015: CV is  $\$469,500 + [(\$469,500 \times .1) - \$45,000] = \$471,450$

2015–2016: CV is  $\$471,450 + [(\$471,450 \times .1) - \$45,000] = \$473,595$

48. On January 1, 2017, Trout Corp. sold \$500,000, 10% bonds for \$442,648 to yield 12%. Interest is payable semi-annually on January 1 and July 1. Trout uses the effective-interest method of amortizing bond discount. What amount should Trout report as interest expense for the six months ended June 30, 2017?
- a) \$30,000
  - b) \$26,559
  - c) \$25,000
  - d) \$22,133

Answer: b

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $\$442,648 \times .06 = \$26,559$

49. The December 31, 2017, statement of financial position of Cotton Corporation includes the following:

9% bonds payable due December 31, 2023 \$718,900

The bonds have a face value of \$700,000, and were issued on December 31, 2016, at 103, with interest payable on July 1 and December 31 of each year. Cotton uses straight-line amortization to amortize bond premium or discount. On March 1, 2018, Cotton retired \$280,000 of these bonds at 98 plus accrued interest. Ignoring income taxes, what should Cotton record as a gain on retirement of these bonds?

- a) \$ 7,560
- b) \$13,020
- c) \$13,160
- d) \$14,000

Answer: b

Difficulty: Hard

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $\left[ \$718,900 - \left( \frac{\$18,900}{18} \times \frac{2}{6} \right) \right] \times .4 = \$287,420$  (CV of retired bonds)

$\$287,420 - (\$280,000 \times .98) = \$13,020$

50. On January 1, 2017, Linen Corp. issued \$450,000 (face value), 10%, ten-year bonds at 103. The bonds are callable at 105. Linen has recorded amortization of the bond premium by the straight-line method. On December 31, 2023, Linen repurchased \$100,000 of the bonds in the open market at 96. Bond interest expense and premium amortization have been recorded for 2023. Ignoring income taxes, what is the loss or gain arising from this reacquisition?

- a) a gain of \$4,900
- b) a loss of \$4,900
- c) a gain of \$6,100
- d) a loss of \$6,100

Answer: a

Difficulty: Hard

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $[(\$450,000 \times 1.03) - (\$13,500 \times 7/10)] \times 100/450 = \$100,900$  (CV of retired bonds)

$\$100,900 - (\$100,000 \times .96) = \$4,900$  gain

51. At December 31, 2017, the 10% bonds payable of Paisley Inc. had a carrying value of \$760,000. The bonds, which had a face value of \$800,000, were issued at a discount to yield 12%. The amortization of the bond discount had been recorded using the effective-interest method. Interest was being paid on January 1 and July 1 of each year. The July 1, 2018 interest payment and discount amortization had been correctly recorded. On July 2, 2018, Paisley retired the bonds at 102. Ignoring income taxes, what is the loss that should be recorded on the early retirement of the bonds?

- a) \$16,000
- b) \$44,800
- c) \$50,400
- d) \$56,000

Answer: c

Difficulty: Hard

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $(\$760,000 \times 1.06) - (\$800,000 \times .05) = \$765,600$  (CV of bonds)

$\$765,600 - (\$800,000 \times 1.02) = \$50,400$

52. Suede Corp. called an outstanding bond obligation four years before maturity. At that time there was an unamortized discount of \$150,000. To extinguish this debt, Suede had to pay a call premium of \$75,000. Ignoring income tax considerations, how should these amounts be treated for accounting purposes?

- a) Amortize \$225,000 over four years.
- b) Record a \$225,000 loss in the year of extinguishment.
- c) Record a \$75,000 loss in the year of extinguishment and amortize \$150,000 over four years.
- d) Either amortize \$225,000 over four years or record a \$225,000 loss immediately, whichever management selects.

Answer: b

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $\$150,000 + \$75,000 = \$225,000$  loss

53. At December 31, 2017, the 12% bonds payable of Leather Corp. had a carrying value of \$312,000. The bonds, which had a face value of \$300,000, were issued at a premium to yield 10%. Leather uses the effective-interest method of amortization of bond premium. Interest is paid on June 30 and December 31. On June 30, 2018, Leather retired the bonds at 104 plus accrued interest. The loss on retirement, ignoring taxes, is

- a) \$ 0.



- b) \$ 2,400.
- c) \$ 3,720.
- d) \$12,000.

Answer: b

Difficulty: Hard

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $(\$312,000 - [(\$300,000 \times 0.06) - (\$312,000 \times 0.05)]) = \$309,600$  (CV of bonds)  
 $(\$300,000 \times 1.04) - \$309,600 = \$2,400$

Use the following information for questions 54–56.

On December 31, 2017, Diaz Corp. is in financial difficulty and cannot pay a \$900,000 note with \$90,000 accrued interest payable to Cameron Ltd., which is now due. Cameron agrees to accept from Diaz equipment that has a fair value of \$435,000, an original cost of \$720,000, and accumulated depreciation of \$345,000. Cameron also forgives the accrued interest, extends the maturity date to December 31, 2020, reduces the face amount of the note to \$375,000, and reduces the interest rate to 6%, with interest payable at the end of each year.

54. Diaz should recognize a gain or loss on the transfer of the equipment of
- a) \$0.
  - b) \$60,000 gain.
  - c) \$90,000 gain.
  - d) \$285,000 loss.

Answer: b

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $\$435,000 - (\$720,000 - \$345,000) = \$60,000$

55. Diaz should recognize a gain on the partial settlement and restructure of the debt of
- a) \$0.
  - b) \$22,500.
  - c) \$112,500.
  - d) \$180,000.

Answer: d

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $(\$900,000 + \$90,000) - (\$435,000 + \$375,000) = \$180,000$

56. Diaz should record interest expense for 2020 of

- a) \$0.
- b) \$22,500.
- c) \$45,000.
- d) \$67,500.

Answer: b

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $\$375,000 \times 0.06 = \$22,500$

57. On January 1, 2017, Bass Inc. redeemed its 15-year, \$900,000 par value bonds at 102. They were originally issued on January 1, 2005 at 98 with a maturity date of January 1, 2020. Bass amortizes bond discounts and premiums using the straight-line method. Ignoring income taxes, what amount of loss should Bass recognize on the redemption of these bonds?

- a) \$32,400
- b) \$21,600
- c) \$18,000
- d) \$14,400

Answer: b

Difficulty: Hard

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $(\$900,000 \times 1.02) - [\$882,000 + (\$18,000 \times 12 \div 15)] = \$21,600$

58. On its December 31, 2017 statement of financial position, Codfish Ltd. reported bonds payable of \$1,000,000. The bonds had been issued at par. On January 2, 2018, Codfish retired one half of the outstanding bonds at 103 plus a call premium of \$35,000. Ignoring income taxes, what amount should Codfish report on its 2018 income statement as loss on extinguishment of debt?

- a) \$50,000
- b) \$35,000
- c) \$15,000
- d) \$0

Answer: a

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $[(\$500,000 \times 1.03) + \$35,000] - [\$1,000,000 \times \frac{1}{2}] = \$50,000$

59. On January 1, 2017, Halibut Corp. issued \$1,000,000, 10% bonds for \$1,040,000. These bonds were to mature on January 1, 2027 but were callable at 101 any time after December 31, 2017. Interest was payable semi-annually on July 1 and January 1. On July 1, 2022, Halibut called all of the bonds and retired them. Bond premium was amortized on a straight-line basis. Ignoring income taxes, Halibut's gain or loss in 2022 on this early extinguishment of debt was

- a) \$8,000 loss.
- b) \$8,000 gain.
- c) \$10,000 loss.
- d) \$12,000 gain.

Answer: b

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $[\$1,040,000 - (\$40,000 \times 11/20)] - (\$1,000,000 \times 1.01) = \$8,000$

60. On July 1, 2017, Tilapia Corp. had outstanding 8%, \$1,000,000, 10-year bonds maturing on June 30, 2027. Interest is payable semi-annually on June 30 and December 31. Assume all appropriate entries had been prepared and posted at June 30, 2018. The carrying value of the bond at June 30, 2018 was \$965,000. At this time, Tilapia purchased all the bonds at 94 and retired them. What is the gain or loss on this early extinguishment of debt?

- a) \$60,000 gain
- b) \$35,000 loss
- c) \$25,000 gain
- d) \$25,000 loss

Answer: c

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including

how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $\$965,000 - (\$1,000,000 \times .94) = \$25,000$  gain

61. Pineapple owes Dole a \$600,000, 12%, three-year note dated December 31, 2015. Pineapple has been experiencing financial difficulties, and still owes accrued interest of \$72,000 on this note at December 31, 2017. Under a troubled debt restructuring, on December 31, 2017, Dole agrees to settle the note plus the accrued interest for land that Pineapple owns, which has a fair value of \$540,000. Pineapple's original cost of the land is \$435,000. Ignoring income taxes, on its 2017 income statement, what should Pineapple report as a result of the troubled debt restructuring?

	<u>Gain on Disposition of Land</u>	<u>Gain on Restructuring of Debt</u>
a)	\$237,000	\$0
b)	\$165,000	\$0
c)	\$105,000	\$60,000
d)	\$105,000	\$132,000

Answer: d

Difficulty: Hard

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $\$540,000 - \$435,000 = \$105,000$

$(\$600,000 + \$72,000) - \$540,000 = \$132,000$

62. Continental Company's 2017 financial statements contain the following selected data:

Income tax expense       \$80,000

Interest expense         20,000

Net income               160,000

Continental's times interest earned for 2017 is

a) 8 times.

b) 11 times.

c) 12 times.

d) 13 times.

Answer: d

Difficulty: Medium

Learning Objective: Calculate and interpret key ratios related to solvency and liquidity.

Section Reference: Analysis

CPA: Financial Reporting

Bloomcode: Application

Feedback:  $(\$160,000 + \$80,000 + \$20,000) \div \$20,000 = 13$  times

63. Granger Ltd. reported the following information on their most recent statement of financial position:

Current assets	\$200,000
Total assets	797,000
Current liabilities	160,000
Total equity	350,000

To the nearest percent, what is Granger's debt to total assets?

- a) 20%
- b) 44%
- c) 56%
- d) 80%

Answer: c

Difficulty: Medium

Learning Objective: Calculate and interpret key ratios related to solvency and liquidity.

Section Reference: Analysis

CPA: Financial Reporting

Bloomcode: Application

Feedback: Total liabilities =  $\$797,000 - \$350,000 = \$447,000$

Debt to total assets =  $\$447,000 \div \$797,000 \times 100 = 56\%$

## EXERCISES

**Ex. 14-64** Underwriting for bond issues

Explain the difference between firm underwriting and best efforts underwriting.

**Solution 14-64**

With firm underwriting, an investment bank or brokerage will underwrite a bond issue by guaranteeing a specified amount to the bond issuer. Thus the broker assumes the risk of selling the bonds for whatever they can get.

On the other hand, with best efforts underwriting, the agent (broker) will sell the bond issue for a commission that will be deducted from the sale proceeds.

Difficulty: Easy

Learning Objective: Understand the nature of long-term debt financing arrangements.

Section Reference: Understanding Debt Instruments Measurement

CPA: Financial Reporting

Bloomcode: Knowledge

**Ex. 14-65** Terms related to long-term debt

Place the letter of the best matching phrase before each term.

- |                         |                                     |
|-------------------------|-------------------------------------|
| _____ 1. Debenture      | _____ 6. Debt to total assets ratio |
| _____ 2. Bearer bonds   | _____ 7. Term bonds                 |
| _____ 3. Income bonds   | _____ 8. Leverage                   |
| _____ 4. Carrying value | _____ 9. Callable bonds             |
| _____ 5. Stated rate    | _____ 10. Market rate               |

- a) Bonds that mature on a single date.
- b) Rate set by party issuing the bonds which appears on the bond indenture.
- c) Bonds that pay no interest unless the issuer is profitable.
- d) Rate of interest actually earned by the bondholders.
- e) Results when bonds are sold below par.
- f) The practice of using other peoples' money to maximize returns to shareholders.
- g) Bonds not recorded in the holder's name; can be easily transferred from one party to another.
- h) Give the issuer the right to call in and retire bonds before maturity.
- i) Maturity value of bonds less any discount or plus any premium at any given date.
- j) Ratio of current assets to current liabilities.
- k) Unsecured debt instruments not backed by collateral.
- l) Measures the percentage of total assets provided by creditors.
- m) Indicates the company's ability to meet interest payments as they come due.

**Solution 14-65**

1. k
2. g
3. c
4. i
5. b
6. l
7. a
8. f
9. h
10. d

Difficulty: Easy

Learning Objective: Understand the nature of long-term debt financing arrangements.

Section Reference: Understanding Debt Instruments Measurement

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

Learning Objective: Calculate and interpret key ratios related to solvency and liquidity.

Section Reference: Analysis

CPA: Financial Reporting

Bloomcode: Knowledge

**Ex. 14-66** Amortization of discount or premium

On May 1, 2014, Salinas Industries Ltd. issued \$2,000,000, 8% bonds and received cash proceeds of \$1,774,526. The bonds pay interest semi-annually on May 1 and November 1. The maturity date on these bonds is November 1, 2026. Salinas uses the effective-interest method of amortizing bond discounts and premiums. The bonds were sold to yield an effective-interest rate of 10%.

**Instructions**

Calculate the total dollar amount of discount or premium amortization during the first year that these bonds were outstanding. Show calculations and round values to the nearest dollar.

**Solution 14-66**

<u>Date</u>	<u>Interest Expense</u>	<u>Cash Paid</u>	<u>Discount Amortization</u>	<u>Carrying Value of Bonds</u>
May 1/14				\$1,774,526
Nov 1/14	\$88,726	\$80,000	\$ 8,726	1,783,252
May 1/15	89,163	80,000	<u>9,163</u>	1,792,415
Total			<u>\$17,889</u>	

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

**Ex. 14-67** Bond issue price and discount amortization

On January 1, 2014, Oxnard Corp. issued ten-year, 10% bonds with a face value of \$500,000, with interest payable semi-annually on June 30 and December 31. At the time, the market rate was 12%.

**Instructions**

- Use your calculator to calculate the issue price of the bonds. Round the answer to the nearest dollar.
- Independent of your solution to part a), assume that the issue price was \$442,000. Prepare the amortization table for 2014. Round values to the nearest dollar.

**Solution 14-67**

a) N 20 %i 6 FV 500,000 PMT 25000 CPT PV => \$442,650

<u>Date</u>	<u>Cash Paid</u>	<u>Interest Expense</u>	<u>Discount Amortized</u>	<u>Carrying Value of Bonds</u>
Jan 1/14				\$442,000
Jun 30/14	\$25,000	\$26,520	\$1,520	443,520
Dec 31/14	25,000	26,611	1,611	445,131

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

**Ex. 14-68** Note issued for cash and other rights

Rebecca Land Corp. issued a 5-year, zero-interest-bearing note with a \$1,000,000 face value to Lindsay Inc. for \$1,000,000 cash. Rebecca also gave Lindsay the right to use a parcel of land for equipment storage for 5 years. Interest rates for notes of this type were 8% at issue.

**Instructions**

Prepare the journal entries to record the issuance of the note by (1) Rebecca and (2) Lindsay. Use your calculator and round values to the nearest dollar.

**Solution 14-68**

Rebecca

Cash .....	1,000,000	
Notes Payable .....		*680,583
Unearned Revenue (Rent).....		319,417



Lindsay

Notes Receivable .....	*680,583	
Prepaid Rent .....	319,417	
Cash.....		1,000,000

\* N 5 %i 8 1000000 FV CPT PV => 680,583

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

**Ex. 14-69** Note issued for non-cash consideration

On July 1, 2014, Modesto Holdings Ltd. issued a \$50,000 face value note due June 30, 2017 with a stated interest rate of 4% to Modern Consultants in return for consulting services provided in 2014. The value of the consulting services is not readily determinable and the note is not readily marketable. On the basis of a credit analysis, a reasonable imputed interest rate would be 12%.

**Instructions**

Prepare the journal entry to record the issuance of the note by Modesto. Use your calculator and round values to the nearest dollar.

**Solution 14-69**

Operating (consulting) Expense .....	40,393	
Notes Payable .....		40,393

N 3 %i 12 FV 50000 PMT 2000 (50,000 x 4%) CPT PV => 40,393

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

**Ex. 14-70** Entries for bonds payable

Prepare journal entries to record the following transactions related to Chico Ltd.'s long-term bonds:

- a) On April 1, 2014, Chico issued \$600,000, 9% bonds (dated January 1, 2014) for \$645,442 including accrued interest. Interest is payable annually on January 1, and the bonds mature on January 1, 2024.
- b) On July 1, 2016, Chico retired 30% of the bonds at 102 plus accrued interest. Chico uses straight-line amortization.

**Solution 14-70**

a) Cash .....	645,442	
Bonds Payable .....		631,942

Interest Expense ( $\$600,000 \times 9\% \times 3 \div 12$ ) .....		13,500
b) Interest Expense .....	7,609	
Bonds Payable ( $\$31,942 \times 30\% \times 6 \div 117$ ) .....	491	
Cash ( $\$600,000 \times 30\% \times 9\% \times 6 \div 12$ ) .....		8,100
Bonds Payable .....	*187,371	
Cash ( $\$600,000 \times 30\% \times 1.02$ ) .....		183,600
Gain on Redemption of Bonds .....		3,771

\*\$180,000 plus unamortized Premium of ( $\$31,942 \times 30\% \times 90 \div 117 = \$7,371$ ) = \$187,371

Difficulty: Hard

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

**Ex. 14-71** Sale and subsequent buyback of bonds

On July 1, 2014, Davis Corp. issued \$800,000 par value, 10%, 10-year bonds, with interest payable semi-annually on January 1 and July 1. The bonds were issued for \$908,722. On January 2, 2016, Davis offered to buy back the bonds at 103. Forty percent of the bondholders accepted the offer. Davis uses the effective-interest method of amortizing premium or discount.

**Instructions**

- Prepare the journal entry to record the bond issuance.
- Prepare the adjusting entry at December 31, 2014, the end of the fiscal year.
- Prepare the entry for the interest payment on January 1, 2015.
- Prepare the entry to record the retirement of the bonds on January 2, 2016. Round all values to the nearest dollar.

**Solution 14-71**

First you need to solve for the yield, which is 8%.

PV 908722 N 20 PMT (40000) CPT %i => 8%

<u>Date</u>	<u>Interest Payment</u>	<u>Interest Expense</u>	<u>Premium Amortization</u>	<u>Carrying Value</u>
Jul 1/14				908,722
Jan 1/15	40,000	36,349	3,651	905,071
Jul 1/15	40,000	36,203	3,797	901,274
Jan 1/16	40,000	36,051	3,949	897,325

a) Cash .....	908,722	
Bonds Payable .....		908,722
b) Interest Expense .....	36,349	

Bonds Payable .....	3,651	
Interest Payable .....		40,000
(Interest expense: $\$908,722 \times 8\% \times \frac{1}{2} = \$36,349$ )		
c) Interest Payable .....	40,000	
Cash.....		40,000
d) Bonds Payable ( $897,325 \times 40\%$ ).....	358,930	
Cash.....		329,600
Gain on Redemption of Bonds.....		29,330

Bond retirement price =  $800,000 \times 1.03 \times 40\% = 329,600$

Difficulty: Hard

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

**Ex. 14-72 Retirement of bonds**

On December 31, 2013, LaBrea Corp.'s statement of financial position included the following:

7.5% bonds payable, due December 31, 2021                      \$576,000

The bonds have a face value of \$600,000, and were issued on December 31, 2011 at 95.

Interest is payable semi-annually on June 30 and December 31. LaBrea uses straight-line amortization.

On April 1, 2014, LaBrea retired 20% of these bonds at 101 plus accrued interest.

**Instructions**

Prepare journal entries to record the retirement. Show calculations and round values to the nearest dollar.

**Solution 14-72**

Interest Expense .....	2,400	
Cash ( $\$600,000 \times 20\% \times 7.5\% \times 3 \div 12$ ).....		2,250
Bonds Payable ( $\$30,000 \times 20\% \times 3 \div 120$ ).....		150
Bonds Payable .....	*115,350	
Loss on Redemption of Bonds .....	5,850	
Cash.....		121,200

\*\$120,000 less unamortized discount of ( $\$30,000 \times 20\% \times 93 \div 120 = \$4,650$ ) = \$115,350

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting  
Bloomcode: Application

**Ex. 14-73** Early extinguishment of debt

On August 1, 2012, Fresno Inc. sold 8%, five year bonds with a maturity value of \$2,000,000 for \$1,964,000. Interest on the bonds is payable semi-annually on August 1 and February 1. The bonds are callable at 104 at any time after August 1, 2014. By October 1, 2014, the market rate of interest has declined, and the market price of Fresno's bonds has increased to 102. The company decides to refund the bonds by selling a new 6% bond issue to mature in five years. Fresno begins to reacquire its 8% bonds in the market and is able to purchase \$600,000 worth at 102. The remainder of the outstanding bonds are acquired by exercising the bond call feature.

**Instructions**

Calculate Fresno's total gain or loss in reacquiring the 8% bonds. Assume the company uses straight-line amortization. Show calculations.

**Solution 14-73**

Reacquisition price:			
\$600,000 × 1.02 =	\$612,000		
\$1,400,000 × 1.04 =	<u>1,456,000</u>	\$2,068,000	
Less carrying value:			
Face value	2,000,000		
Unamortized discount			
(\$36,000 × 34 ÷ 60) = 20,400	<u>1,979,600</u>		
Loss on redemption			<u>\$ 88,400</u>

Difficulty: Hard

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

**Ex. 14-74** Accounting procedures for bond redemptions

Describe the accounting procedures for the early redemption of bonds.

**Solution 14-74**

At the time of redemption, any unamortized premium or discount must be amortized up to the reacquisition date. The amount paid on early redemption, including any call premium and expense of reacquisition, is the reacquisition price. Any excess of the carrying value over the reacquisition price is a gain from redemption, while any excess of the reacquisition price over the carrying value is a loss from redemption.

Difficulty: Easy

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Knowledge

**Ex. 14-75** Accounting for a troubled debt settlement

At December 31, 2014, Oscar Ltd. owes Wilde Corp. for a \$300,000 note payable, plus accrued interest of \$27,000. Oscar is now in financial difficulty and cannot repay Wilde. To settle the debt, Wilde agrees to accept from Oscar equipment with a fair value of \$285,000, an original cost of \$420,000, and accumulated depreciation to date of \$98,000.

**Instructions**

- a) Calculate the gain or loss to Oscar on the settlement of the debt.
- b) Calculate the gain or loss to Oscar on the transfer of the equipment.
- c) Prepare the journal entry on Oscar's books to record the settlement of the debt.
- d) Prepare the journal entry on Wilde's books to record the settlement of the receivable.

**Solution 14-75**

a) Note payable	\$300,000
Interest payable	<u>27,000</u>
Carrying value of debt	327,000
Fair value of equipment	<u>285,000</u>
Gain on settlement of debt	<u>\$ 42,000</u>

b) Cost	\$420,000
Accumulated depreciation	<u>98,000</u>
Book value	322,000
Fair value of equipment	<u>285,000</u>
Loss on disposal of equipment	<u>\$ 37,000</u>

c) Notes Payable.....	300,000	
Interest Payable .....	27,000	
Accumulated Depreciation .....	98,000	
Loss on Disposal of Equipment.....	37,000	
Equipment.....		420,000
Gain on Settlement of Debt .....		42,000

d) Equipment.....	285,000	
Loss on Settlement of Debt.....	42,000	
Notes Receivable .....		300,000
Interest Receivable.....		27,000

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

**Ex. 14-76** Accounting for a troubled debt restructuring

On December 31, 2014, Riverside Inc. is in financial difficulty and cannot pay a \$350,000 note

(with \$35,000 accrued interest payable) to Stockton Corp. Stockton agrees to forgive the accrued interest, extend the maturity date to December 31, 2016, and reduce the interest rate to 4%. The present value of the restructured cash flows is \$299,500.

### Instructions

Prepare entries for the following:

- the restructure on Riverside's books
- the payment of interest on December 31, 2015
- the restructure on Stockton's books.

### Solution 14-76

- Old debt:  $PV = \$350,000 + \$35,000 = \$385,000$   
 New debt:  $PV \text{ (given)} = \$299,500$   
 The new debt differs by more than 10%:  $\$85,500 \div \$385,000 = 22.2\%$

Notes Payable (old).....	350,000	
Interest Payable .....	35,000	
Notes Payable (new) .....		299,500
Gain on Restructuring.....		85,500

- Imputed interest rate FV 350000 PV 299500 PMT (14000) ( $\$350,000 \times 4\%$ )  
 CPT %i => 12.61%

Interest Expense ( $\$299,500 \times 12.61\%$ ) .....	37,767	
Cash.....		14,000
Notes Payable .....		23,767

- Loss on Restructuring .....
 85,500 |  || Notes Receivable ..... |  | 50,500 |
| Interest Receivable..... |  | 35,000 |

Difficulty: Hard

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Analysis

### Ex. 14-77 Accounting for troubled debt

- What are the general rules for measuring and recognizing gain or loss by the debtor on a settlement of troubled debt, which includes the transfer of non-cash assets?
- What are the general rules for measuring and recognizing a gain and for recording future payments by the debtor in a troubled debt restructuring?

### Solution 14-77

- If the settlement of debt includes the transfer of non-cash assets, a gain is measured by the debtor as the difference between the fair value of the assets transferred and the carrying amount of the debt, including accrued interest. The debtor also recognizes a gain or loss on the disposal of assets as the difference between the fair value of the assets transferred and

their book value.

- b) If the carrying amount of the payable is greater than the discounted total future cash flows, based on currently prevailing interest rates, the gain is measured as the difference between the carrying amount and the discounted future cash flows. The gain is separately classified in the income statement and the nature of the restructuring is disclosed if the amount of the gain is material. The same treatment is given if a loss results. Future payments are used to reduce the principal and record interest expense.

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Knowledge

## PROBLEMS

### Pr. 14-78 Bond interest and discount amortization

On June 1, 2017, Santa Ana Corp. sold 10-year, \$500,000 (face value) bonds for \$438,800. The bonds have a stated interest rate of 8% and a yield of 10%, and pay interest annually on May 31 of each year. The bonds are to be accounted for using the effective-interest method.

#### Instructions

- Construct a bond amortization table for this bond to indicate the amount of interest expense and discount amortization at each May 31. Include only the first four years. Make sure all columns and rows are properly labelled, and round to the nearest dollar.
- The sales price of \$438,800 was determined from present value tables. Explain how one would determine the price using present value tables, or by using a calculator.
- Assuming that interest and discount amortization are recorded each May 31, prepare the adjusting entry at December 31, 2019 (fiscal year end). Round values to the nearest dollar.

#### Solution 14-78

<u>Date</u>	<u>Cash Paid</u>	<u>Interest Expense</u>	<u>Discount Amortization</u>	<u>Carrying Amount of Bonds</u>
Jun 1/17				\$438,800
May 31/18	\$40,000	\$43,880	\$3,880	442,680
May 31/19	40,000	44,268	4,268	446,948
May 31/20	40,000	44,695	4,695	451,643
May 31/21	40,000	45,164	5,164	456,807

- Find the present value of \$500,000 due in 10 years at 10%.
  - Find the present value of 10 annual payments of \$40,000 at 10%.
  - Add (1) and (2) to obtain the present value of the principal and the interest payments.

Calculator: N 10 %I 5 PMT 40000 FV 500000 CPT PV

c) Interest Expense .....	*26,072	
Interest Payable .....		**23,333
Bonds Payable .....		2,739

\*7 ÷ 12 × \$44,695 (from Table) = \$26,072

\*\* 7 ÷ 12 × 8% × \$500,000 = \$23,333

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

### Pr. 14-79 Bond interest and discount amortization

On October 1, 2017, Irvine Corp. issued \$400,000 8% bonds, due on October 1, 2022. Interest is to be paid semi-annually on April 1 and October 1. The bonds were sold to yield 10% effective annual interest. Irvine has a calendar year end.



**Instructions**

- a) Complete the following amortization schedule for the dates indicated. Round all answers to the nearest dollar. Use the effective-interest method.

	<u>Cash Paid</u>	<u>Interest Expense</u>	<u>Discount Amortization</u>	<u>Carrying Amount of Bonds</u>
Oct 1/17				\$369,113
Apr 1/18				
Oct 1/18				

- b) Prepare the adjusting entry required for these bonds at December 31, 2018.  
 c) Calculate the interest expense to be reported in the income statement for the year ended December 31, 2018.

**Solution 14-79**

a)

	<u>Cash Paid</u>	<u>Interest Expense</u>	<u>Discount Amortization</u>	<u>Carrying Amount of Bonds</u>
Oct 1/17				\$369,113
Apr 1/18	\$16,000	\$18,456	\$2,456	371,569
Oct 1/18	16,000	18,579	2,579	374,148

b)

Interest Expense ( $\$374,148 \times 10\% \times 3 \div 12$ ) .....	9,354	
Interest Payable ( $1/2 \times \$16,000$ ) .....		8,000
Bonds Payable ( $\$9,354 - \$8,000$ ) .....		1,354

c)

\$ 9,228 (1/2 of \$18,456)
18,579
<u>9,354</u>
<u>\$37,161</u>

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Application

**Pr. 14-80** Fair value option

Explain the fair value option for accounting for long-term debt, including both the ASPE approach and the IFRS requirements.

**Solution 14-80**

Long-term debt is usually accounted for at amortized cost. However, both ASPE and IFRS allow the use of the *fair value option*, whereby financial instruments are carried at fair (market) value, an option encouraged by standard setters, although the requirements differ.

ASPE allows the use of the fair value option for all financial instruments, with all changes in fair value recognized in net income.

IFRS explicitly requires that the option be used only where fair value results in *more relevant* information. As well, IFRS 13 requires that non-performance risk (including credit risk) be included in the fair value measurement. This gives rise to a peculiar situation, since, if the credit risk is deemed to be high, the carrying value of the debt should be reduced (e.g. Dr Bond Payable) and a gain recognized. Any such gain is booked to Other Comprehensive Income.

Difficulty: Medium

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

CPA: Financial Reporting

Bloomcode: Knowledge

### Pr. 14-81 Entries for bonds payable

Prepare the necessary journal entries to record the following transactions relating to the long-term issuance of bonds by Glendale Corp. Show calculations and round to the nearest dollar.

#### March 1

Issued \$200,000 (face value) 8% bonds for \$218,040, including accrued interest. Interest is payable semi-annually on December 1 and June 1 with the bonds maturing 10 years from the previous December 1. The bonds are callable at 102.

#### June 1

Paid semi-annual interest on the bonds. Use straight-line amortization for any premium or discount.

#### December 1

Paid semi-annual interest on the bonds, and then purchased \$100,000 face value bonds at the call price in accordance with the provisions of the bond indenture.

### Solution 14-81

#### March 1

Cash .....	218,040	
Bonds Payable .....		214,040
Interest Expense ( $\$200,000 \times 8\% \times 3 \div 12$ ) .....		4,000

#### June 1

Interest Expense .....	7,640	
Bonds Payable ( $\$14,040 \times 3 \div 117$ ) .....	360	
Cash.....		8,000

#### December 1

Interest Expense .....	7,280	
Bonds Payable ( $\$14,040 \times 6/117$ ) .....	720	
Cash.....		8,000

Bonds Payable.....	*106,480	
Gain on Redemption of Bonds.....		4,480
Cash.....		102,000

\*\$100,000 plus unamortized Premium ( $\$14,040 \times 108/117 \times 50\% = \$6,480$ ) = 106,480

Difficulty: Hard

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

**Pr. 14-82** Entries for bonds payable

Prepare journal entries to record the following transactions relating to long-term bonds of Lancaster Inc. Show calculations and round to the nearest dollar.

- a) On June 1, 2017, Lancaster Inc. issued \$400,000, 6% bonds for \$391,760, including accrued interest. The bonds were dated February 1, 2017, and interest is payable semi-annually on February 1 and August 1 with the bonds maturing on February 1, 2027. The bonds are callable at 102.
- b) On August 1, 2017, Lancaster paid the semi-annual interest and recorded the amortization of the discount or premium, using straight-line amortization.
- c) On February 1, 2019, Lancaster paid the semi-annual interest and recorded amortization of the discount or premium.
- d) The company then purchased \$240,000 of the bonds at the call price. Assume that a reversing entry was made on January 1, 2019.

**Solution 14-82**

a) Cash .....	391,760	
Bonds Payable .....		383,760
Interest Expense ( $\$400,000 \times 6\% \times 4 \div 12$ ) .....		8,000
b) Interest Expense ( $\$400,000 \times 6\% \times 6 \div 12$ ) + \$280 .....	12,280	
Cash.....		12,000
Bonds Payable ( $\$16,240 \times 2 \div 116$ ) .....		280
c) Interest Expense ( $\$12,000 + \$840$ ) .....	12,840	
Cash.....		12,000
Bonds Payable ( $\$16,240 \times 6 \div 116$ ) .....		840
d) Bonds Payable.....	*231,936	
Loss on Bond Redemption .....	12,864	
Cash.....		244,800

\*\$240,000 less unamortized Discount ( $\$16,240 \times 96 \div 116 \times 60\% = \$8,064$ ) = \$231,936

Difficulty: Hard

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

**Pr. 14-83** Accounting for bond issuance and retirement

Twilight Corp. desired to raise cash to fund its expansion by issuing long-term bonds. The corporation hired an investment banker to manage the issue (best efforts underwriting) and also hired the services of a lawyer, an audit firm, etc. On June 1, 2017, Twilight sold \$500,000 in long-term bonds. The bonds will mature in 10 years and have a stated interest rate of 8%. Other bonds that Twilight has issued with identical terms are traded based on a market rate of 10%. The bonds pay interest semi-annually on May 31 and November 30. The bonds are to be accounted for using the effective-interest method. On June 1, 2019 Twilight decided to retire 20% of the bonds. At that time the bonds were selling at 98.

**Instructions** (Round all values to the nearest dollar)

- Prepare the journal entry for the issuance of the bonds on June 1, 2017.
- What was the interest expense related to these bonds that would be reported on Twilight's calendar 2017 income statement?
- Prepare all entries from after the issue of the bond till December 31, 2017.
- Calculate the gain or loss on the partial retirement of the bonds on June 1, 2019.
- Prepare the journal entries to record the partial retirement on June 1, 2019.

**Solution 14-83**

PV of bonds (i.e. selling price) N 20 %i 5 PMT 20000 (500,000x 4%) FV 500000  
 CPT PV => \$437,689

a)

Cash .....	437,689	
Bonds payable.....		437,689

b)

<u>Date</u>	<u>Cash</u>	<u>Interest Expense</u>	<u>Discount Amortization</u>	<u>Carrying Value of Bonds</u>
Jun 1/17				437,689
Nov 30/17	20,000	21,884	1,884	439,573
May 31/18	20,000	21,979	1,979	441,552
Nov 30/18	20,000	22,078	2,078	443,630
May 31/19	20,000	22,181	2,181	445,811

Interest expense for 2017 = 21,884 + (1 ÷ 6 x 21,979) = 25,548

c)

Nov 30/17

Interest expense.....	21,884	
Cash.....		20,000
Bonds payable.....		1,884

Dec 31/17

Interest expense (1 ÷ 6 x \$21,979).....	3,663	
Interest payable (1 ÷ 6 x \$20,000) .....		3,333

Bonds payable..... 330

d) Per the amortization table in part b), the carrying value of the bond as of May 31, 2019 is \$445,811.

Cost to repurchase (\$500,000 x 20% x.98) .....	\$98,000
Bond carrying value (\$445,811 x 20%) .....	<u>89,162</u>
Loss on bond redemption.....	\$ (8,838)

e)

Bonds payable .....	89,162	
Loss on bond redemption.....	8,838	
Cash.....		98,000

Difficulty: Hard

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

**Pr. 14-84** Bond accounting, ratios, debt covenants

Superior Equipment Corporation is a public Canadian company manufacturing high-precision equipment. On January 1, 2014, Superior issued a 12%, \$10,000,000 bond, maturing in ten years. At January 1, 2017, the bond had a carrying value of \$9,300,000. Interest is payable semi-annually on June 30 and December 31. The company uses the straight-line method of amortizing any bond premium or discount.

The bond carries covenants that call for the firm’s debt to total assets ratio to be no higher than 50% and their times interest earned ratio to be at least 2.

You are the CEO of Superior. You have been on the job for a year after the previous CEO was fired for missing earnings targets. You are an MBA with a major in Accounting.

Superior’s business is cyclical and the last two years have been tough. In recent months however, there have been signs of recovery in the industry, and many distributors have placed large orders for Superior’s equipment. Delivery of the equipment is expected in 2018 and 2019. You are under pressure from the board of directors to show improvement in the bottom line.

It is now November 30, 2017, and you have just met with the company’s CFO, Ms. Grimm. In preparation for the coming year end on December 31, 2017, she has prepared forecasted financial statements, but has not included the effects of the \$10,000,000 bond issue.

Below is a summary of those statements:

Income Statement

	\$
Sales	28,000,000

COGS	<u>20,000,000</u>
Gross profit	8,000,000
Operating expenses	<u>5,465,000</u>
Operating income before interest expense	2,535,000
Bond interest expense	?
Income before income tax	?
Income tax (35%)	?
Net income	<u>?</u>

Statement of financial position

Current assets	14,700,000
Non-current assets	<u>22,000,000</u>
Total assets	<u>36,700,000</u>
Current liabilities	9,000,000
Bonds payable	?
Shareholders' equity	?
Total liabilities and equity	<u>36,700,000</u>

Additional information:

1. Except for the bond, the company did not incur any other interest expense.
2. The last time entries were recorded for the bond was at the end of the third quarter (September 30, 2017), when adjusting entries were prepared.

**Instructions**

- a) Prepare the journal entries related to the bond payable for the last quarter of 2017. The entries should reflect the payment of interest and related amortization of the premium or discount.
- b) Complete the forecasted financial statements for December 31, 2017 by including the effects of the bond payable.
- c) Using the financial statements from part b), calculate the times interest earned and debt to total assets ratios.
- d) Given your calculations in part c), is Superior forecasted to be in violation of the debt covenants? If yes, what action(s) would you recommend? Discuss the advantages/disadvantages of each recommendation.

**Solution 14-84**

- a) The interest to be paid on December 31, 2017 is \$600,000 ( $\$10,000,000 \times 12\% \times 6 \div 12$ ). Half of this is to be recorded as interest expense for this quarter. Amortization of the premium is \$100,000 per year, \$25,000 for the fourth quarter.

On September 30, 2017, at the end of the third quarter, the following entry would have been posted:

Interest expense.....	325,000	
Bond interest payable.....		300,000
Bond payable .....		25,000

On December 31, 2017, Superior should post the following entry:

Interest expense.....	325,000
Bond interest payable.....	300,000

Cash.....	600,000
Bond payable .....	25,000

b)  
Income Statement

	Sales	28,000,000
	COGS	<u>20,000,000</u>
	Gross profit	8,000,000
	Operating expenses	<u>5,465,000</u>
	Operating income before interest expense	2,535,000
	Bond interest expense	<u>1,300,000<sup>1</sup></u>
	Income before income tax	1,235,000
	Income tax (35%)	<u>432,250<sup>2</sup></u>
	Net Income	<u><u>802,750</u></u>

<sup>1</sup> Interest expense = (\$10,000,000 x 12%) + \$100,000 = \$1,300,000

<sup>2</sup> Income tax = \$1,235,000 x 35% = \$432,250

Statement of financial position

	Current assets	14,100,000 <sup>3</sup>	
	Non-current assets	<u>22,000,000</u>	
	Total assets	<u>36,100,000</u>	
	Current Liabilities	8,700,000	
	Bonds payable	9,400,000 <sup>4</sup>	
	Shareholders' equity	<u>18,000,000</u>	(plug number)
	Total liabilities and equity	<u>36,100,000</u>	

<sup>1</sup> Interest expense = (\$10,000,000 x 12%) + \$100,000 = \$1,300,000

<sup>2</sup> Income tax = \$1,235,000 x 35% = \$432,250

<sup>3</sup> Current assets = \$14,700,000 – \$600,000 = \$14,100,000

<sup>4</sup> Bonds payable = carrying value Jan 1/14 + 2017 amortization = \$9,300,000 + \$100,000 = \$9,400,000

c) Times Interest Earned =  $\frac{\text{Income before income taxes and interest}}{\text{Interest Expense}} = \frac{2,535,000}{1,300,000} = 1.95$

Debt to Total Assets =  $\frac{\text{Total debt}}{\text{Total assets}} = \frac{(8,700,000 + 9,400,000)}{36,100,000} = \frac{18,100,000}{36,100,000} = 0.5014$

- d) Superior is forecasted to be in violation of the debt covenant. However, the ratios are very close to the minimum requirements. As CEO, you could recommend one of the following:
1. Do nothing and run the risk of a default on the bond, or possibly run the risk of a negative stock-market reaction for being in violation of the covenants.
  2. Meet the creditors, present your case of expected economic recovery and ask them to wait one more quarter before acting or to waive the covenants for a short period.
  3. Renegotiate with the creditors.

The above options might be challenging given the need to convince many creditors and the possible market reaction.

4. If these are callable bonds or they can be purchased on the open market, buy some of them back to extinguish some of the debt, which will also reduce the related interest expense.
5. Sell some operating assets that will yield a gain and use the proceeds to lower debt. For example, using the proceeds to pay your suppliers earlier may improve relations if a potential debt restructuring is to be negotiated.
6. Apply earnings management techniques to increase earnings and total assets. For example, cut back on discretionary expenses such as advertising, repairs & maintenance, promotion, etc.

Option 4 might help to avoid the debt to total assets ratio violation, but might be too late to avoid interest expense and the violation of the times interest earned ratio violation.

Difficulty: Hard

Learning Objective: Understand how long-term debt is measured and accounted for.

Section Reference: Measurement

Learning Objective: Explain how long-term debt is presented on the statement of financial position.

Section Reference: Presentation, Disclosure, and Analysis

Learning Objective: Calculate and interpret key ratios related to solvency and liquidity.

Section Reference: Analysis

CPA: Financial Reporting

Bloomcode: Analysis

#### Pr. 14-85 Accounting for a troubled debt settlement

Santa Ltd., who owes Claus Corp. \$600,000 in notes payable, is in financial difficulty. To eliminate the debt, Claus agrees to accept from Santa land having a fair value of \$455,000 and a recorded cost of \$340,000.

#### Instructions

- a) Calculate the amount of gain or loss to Santa on the transfer (disposition) of the land.
- b) Calculate the amount of gain or loss to Santa on the settlement of the debt.
- c) Prepare the journal entry on Santa's books to record the settlement of the debt.
- d) Calculate the gain or loss to Claus from settlement of the receivable from Santa.
- e) Prepare the journal entry on Claus's books to record the settlement of the receivable.

#### Solution 14-85

a) Fair value of land	455,000
Cost of land to Santa	<u>340,000</u>
Gain on disposition of land	<u>\$ 115,000</u>

b) Carrying amount of debt	\$600,000
Fair value of land given	<u>455,000</u>
Gain on settlement of debt	<u>\$ 145,000</u>

c) Note Payable .....	600,000	
Land .....		340,000
Gain on Disposition of Land.....		115,000



	Gain on Settlement of Debt .....	145,000
d)	Carrying amount of receivable      \$600,000	
	Land received in settlement <u>455,000</u>	
	Loss on settlement of debt <u>\$145,000</u>	
e)	Land.....	455,000
	Loss on Settlement of Debt .....	145,000
	Note Receivable .....	600,000

Difficulty: Medium

Learning Objective: Understand when long-term debt is recognized and derecognized, including how to account for troubled debt restructurings.

Section Reference: Recognition and Derecognition

CPA: Financial Reporting

Bloomcode: Application

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