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## Ch14-Longterm-Liability_Questions that deal with the treatment of long term liabilities in accounting

Principles of Financial Accounting (Lahore University of Management Sciences)

## CHAPTER 14

## LONG-TERM LIABILITIES

IFRS questions are available at the end of this chapter.

## TRUE-FALSE-Conceptual

| Answer | No. | Description |
| :---: | :---: | :---: |
| T | 1. | Bond interest payments. |
| F | 2. | Debenture bonds. |
| T | 3. | Definition of serial bonds. |
| F | 4. | Market rate vs. coupon rate. |
| F | 5. | Definition of stated interest rate. |
| T | 6. | Stated rate and coupon rate. |
| F | 7. | Amortization of premium and discount. |
| F | 8. | Issuance of bonds. |
| F | 9. | Interest paid vs. interest expense. |
| T | 10. | Accounting for bond issue costs. |
| T | 11. | Refunding of bond issue. |
| F | 12. | Long-term notes payable. |
| T | 13. | Implicit interest rate. |
| T | 14. | Imputation and imputed interest rate. |
| T | 15. | Off-balance-sheet financing. |
| T | 16. | Debt to total assets ratio. |
| F | 17. | Refinancing long-term debt. |
| F | 18. | Times interest earned ratio. |
| F | *19. | Loss recognized on impaired loan. |
| F | *20. | Gain/loss in troubled debt restructuring. |
|  |  | MULTIPLE CHOICE-Conceptual |
| Answer | No. | Description |
| a | 21. | Liability identification. |
| a | 22. | Bond terms. |
| b | 23. | Definition of "debenture bonds." |
| a | ${ }^{\text {P2 }} 24$. | Definition of bearer bonds. |
| d | ${ }^{\text {s }} 25$. | Definition of income bonds. |
| a | ${ }^{\text {s }} 26$. | Effective-interest vs. straight-line method. |
| d | ${ }^{\text {s } 27 .}$ | Interest rate of the bond indenture. |
| d | 28. | Rate of interest earned by the bondholders. |
| d | 29. | Calculating the issue price of bonds. |
| d | 30. | Calculating the issue price of bonds. |
| b | 31. | Premium and interest rates. |
| a | 32. | Interest and discount amortization. |
| d | 33. | Effective-interest amortization method. |
| d | 34. | Impact of effective-interest method. |
| c | 35. | Recording bonds issued between interest dates. |
| d | 36. | Bonds issued at other than an interest date. |
| d | 37. | Classification of bond issuance costs. |
| c | 38. | Bond issuance costs. |

## MULTIPLE CHOICE-Conceptual (cont.)

Answer No. Description
b 39. Classification of treasury bonds.
d 40. Early extinguishment of bonds payable.
d 41. Gain or loss on extinguishment of debt.
c $\quad{ }^{\mathrm{P}} 42$. In-substance defeasance.
c $\quad{ }^{\text {P }} 43$. Reporting long-term debt.
a $\quad{ }^{\mathrm{s}} 44$. Debt instrument exchanged for property.
d 45. Valuation of note issued in noncash transaction.
d 46. Stated interest rate of note.
c 47. Accounting for discount on notes payable.
d 48. Off-balance-sheet financing.
c $\quad$ 49. Off-balance-sheet financing.
d $\quad{ }^{5} 50$. Long-term debt maturing within one year.
d 51. Required bond disclosures.
d 52. Long-term debt disclosures.
c 53. Times interest earned ratio.
c. 54. Debt to total assets ratio.
c *55. Modification of terms in debt restructure.
d *56. Gain/loss on troubled debt restructuring.
b *57. Gain/loss on troubled debt restructuring.
b *58. Interest and troubled debt restructuring.
c *59. Creditor's calculations for modification of terms.
${ }^{\mathrm{P}}$ These questions also appear in the Problem-Solving Survival Guide.
${ }^{\mathrm{s}}$ These questions also appear in the Study Guide.

* This topic is dealt with in an Appendix to the chapter.


## MULTIPLE CHOICE—Computational

| Answer | No. | Description |
| :---: | :--- | :--- |
| a | 60. | Calculate the present value of bond principal. |
| b | 61. | Calculate the present value of bond interest. |
| a | 62. | Determine the issue price of bonds. |
| c | 63. | Proceeds from bond issuance. |
| c | 64. | Bonds issued between interest dates. |
| c | 65. | Proceeds from bond issuance. |
| c | 66. | Bonds issued between interest dates. |
| c | 67. | Effective-interest method interest expense. |
| a | 68. | Effective-interest method carrying value. |
| d | 69. | Straight-line method carrying value. |
| d | 70. | Straight-line amortization/interest expense. |
| c | 71. | Effective-interest method interest expense. |
| a | 72. | Effective-interest method carrying value. |
| d | 73. | Straight-line method carrying value. |
| d | 74. | Straight-line method amortization/interest expense. |
| b | 75. | Interest expense using effective-interest method. |
| c | 76. | Interest expense using effective-interest method. |
| d | 77. | Entry to record issuance of bonds. |
| a | 78. | Calculate bond interest expense. |

## MULTIPLE CHOICE—Computational (cont.)

| Answer | No. | Description |
| :---: | ---: | :--- |
| b | 79. | Entry to record issuance of bonds. |
| c | 80. | Calculate bond interest expense. |
| b | 81. | Calculate interest expense for two periods. |
| b | 82. | Calculate unamortized bond discount balance. |
| b | 83. | Calculate unamortized bond premium balance. |
| c | 84. | Calculate interest expense for two periods. |
| b | 85. | Entry to record bond redemption. |
| b | 86. | Entry to record bond redemption. |
| b | 87. | Calculate loss on bond redemption. |
| c | 88. | Calculate loss on bond redemption. |
| c | 89. | Calculate gain on retirement of bonds. |
| b | 90. | Calculate gain on retirement of bonds. |
| b | 91. | Calculate loss on retirement of bonds. |
| b | 92. | Bond retirement with call premium. |
| b | 93. | Calculate loss on retirement of bonds. |
| b | 94. | Early extinguishment of debt. |
| b | 95. | Early extinguishment of debt. |
| a | 96. | Interest on noninterest-bearing note. |
| c | 97. | Interest on installment note payable. |
| b | 98. | Determine balance of discount on notes payable. |
| d | 99. | Calculate times interest earned ratio. |
| a | 100. | Calculate times interest earned ratio. |
| c | 101. | Calculate income before taxes with times interest earned ratio. |
| d | 102. | Determine total long-term liabilities. |
| b | $* 103$. | Transfer of equipment in debt settlement. |
| d | $* 104$. | Recognizing gain on debt restructure. |
| a | $* 105$. | Interest and troubled debt restructuring. |

## MULTIPLE CHOICE—CPA Adapted

| Answer | No. | Description |
| :---: | :---: | :--- |
| a | 106. | Determine proceeds from bond issue. |
| b | 107. | Determine unamortized bond premium. |
| a | 108. | Determine unamortized bond discount. |
| c | 109. | Calculate bond interest expense. |
| a | 110. | Calculate loss on retirement of bonds. |
| d | 111. | Calculate loss on retirement of bonds. |
| d | 112. | Calculate gain on retirement of bonds. |
| c | 113. | Determine carrying value of bonds to be retired. |
| c | 114. | Carrying value of bonds with call provision. |
| c | 115. | Classification of gain from debt refunding. |
| d | *116. | Classification of gain from troubled debt restructuring. |

## EXERCISES

## Item Description

E14-117 Terms related to long-term debt.
E14-118 Bond issue price and premium amortization.
E14-119 Amortization of discount or premium.
E14-120 Entries for bonds payable.
E14-121 Retirement of bonds.
E14-122 Early extinguishment of debt.
*E14-123 Accounting for a troubled debt settlement.
*E14-124 Accounting for troubled debt restructuring.
*E14-125 Accounting for troubled debt.

## PROBLEMS

## Item Description

P14-126 Bond discount amortization.
P14-127 Bond interest and discount amortization.
P14-128 Entries for bonds payable.
P14-129 Entries for bonds payable.
*P14-130 Accounting for a troubled debt settlement.

## CHAPTER LEARNING OBJECTIVES

1. Describe the formal procedures associated with issuing long-term debt.
2. Identify various types of bond issues.
3. Describe the accounting valuation for bonds at date of issuance.
4. Apply the methods of bond discount and premium amortization.
5. Describe the accounting for the extinguishment of debt.
6. Explain the accounting for long-term notes payable.
7. Explain the reporting of off-balance-sheet financing arrangements.
8. Indicate how to present and analyze long-term debt.
*9. Describe the accounting for a loan impairment.
*10. Describe the accounting for debt restructuring.

## SUMMARY OF LEARNING OBJECTIVES BY QUESTIONS

| Item | Type | Item | Type | Item | Type | Item | Type | Item | Type | Item | Type | Item | Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Learning Objective 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. | TF | 21. | MC | 22. | MC |  |  |  |  |  |  |  |  |
| Learning Objective 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. | TF | 3. | TF | 23. | MC | ${ }^{\mathrm{P}} 24$. | MC | ${ }^{\text {s }} 25$. | MC |  |  |  |  |
| Learning Objective 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. | TF | 27. | MC | 30. | MC | 62. | MC | 117. | E |  |  |  |  |
| 5. | TF | 28. | MC | 60. | MC | 63. |  | 118. | E |  |  |  |  |
| 6. | TF | 29. | MC | 61. | MC | 65. | MC | 126. | P |  |  |  |  |
| Learning Objective 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7. | TF | 34. | MC | 67. | MC | 75. | MC | 83. | MC | 119. | E |  |  |
| 8. | TF | 35. | MC | 68. | MC | 76. | MC | 84. | MC |  | E |  |  |
| 9. | TF | 36. | MC | 69. | MC | 77. | MC | 106. | MC |  | P |  |  |
| 10. | TF | 37. | MC | 70. | MC | 78. | MC | 107. | MC |  | P |  |  |
| 26. | MC | 38. | MC | 71. | MC | 79. | MC | 108. | MC |  |  |  |  |
| 31. | MC | 39. | MC | 72. | MC | 80. | MC | 109. | MC | 129. | P |  |  |
| 32. | MC | 64. | MC | 73. | MC | 81. | MC | 117. | E |  |  |  |  |
| 33. | MC | 66. | MC | 74. | MC | 82. | MC | 118. | E |  |  |  |  |
| Learning Objective 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11. | TF | 85. | MC | 89. | MC | 93. | MC | 111. | MC | 115. | MC | 122. | E |
| 40. | MC | 86. | MC | 90. | MC | 94. | MC | 112. | MC | 117. | E | 128. | P |
| 41. | MC | 87. | MC | 91. | MC | 95. | MC | 113. | MC | 120. | E |  |  |
| ${ }^{\mathrm{P}} 42$. | MC | 88. | MC | 92. | MC | 110. | MC | 114. | MC | 121. | E |  |  |
| Learning Objective 6 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12. | TF TF | 14. $\times 43$ | TF | 's44. | MC | 46. | MC | 96. | MC | 98. | MC |  |  |
| 13. | TF | 43. | MC | 45. | MC |  |  |  |  |  |  |  |  |
| Learning Objective 7 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15. | TF | 48. | MC | ${ }^{\text {s }} 49$. | MC |  |  |  |  |  |  |  |  |
| Learning Objective 8 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 16. | TF | 18. | TF | 51. | MC | 53. | MC | 99. | MC |  | MC |  |  |
| 17. | TF | ${ }^{5} 50$. | MC | 52. | MC | 54. | MC | 100. | MC | 102. | MC |  |  |
| Learning Objective *9 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 19. | TF | 56. | MC | 59. | MC | 105. | MC | 124. | E |  |  |  |  |
| 20. | TF | 57. | MC | 103. | MC | 106. | MC | 125. | E |  |  |  |  |
| 55. | MC | 58. | MC | 104. | MC | 123. | E | 130. | P |  |  |  |  |

Note
TF = True-False
E = Exercise
MC = Multiple Choice
P = Problem

## TRUE FALSE-Conceptual

1. Companies usually make bond interest payments semiannually, although the interest rate is generally expressed as an annual rate.
2. A mortgage bond is referred to as a debenture bond.
3. Bond issues that mature in installments are called serial bonds.
4. If the market rate is greater than the coupon rate, bonds will be sold at a premium.
5. The interest rate written in the terms of the bond indenture is called the effective yield or market rate.
6. The stated rate is the same as the coupon rate.
7. Amortization of a premium increases bond interest expense, while amortization of a discount decreases bond interest expense.
8. A bond may only be issued on an interest payment date.
9. The cash paid for interest will always be greater than interest expense when using effective-interest amortization for a bond.
10. Bond issue costs are capitalized as a deferred charge and amortized to expense over the life of the bond issue.
11. The replacement of an existing bond issue with a new one is called refunding.
12. If a long-term note payable has a stated interest rate, that rate should be considered to be the effective rate.
13. The implicit interest rate is the rate that equates the cash received with the amounts received in the future.
14. The process of interest-rate approximation is called imputation, and the resulting interest rate is called an imputed interest rate.
15. Off-balance-sheet financing is an attempt to borrow monies in such a way to minimize the reporting of debt on the balance sheet.
16. The debt to total assets ratio will go up if an equal amount of assets and liabilities are added to the balance sheet.
17. If a company plans to retire long-term debt from a bond retirement fund, it should report the debt as current.
18. The times interest earned ratio is computed by dividing income before interest expense by interest expense.
*19. The loss to be recognized by a creditor on an impaired loan is the difference between the investment in the loan and the expected undiscounted future cash flows from the loan.
*20. In a troubled debt restructuring, the loss recognized by the creditor will equal the gain recognized by the debtor.

True False Answers-Conceptual

| Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | T | 6. | T | 11. | T | 16. | T |
| 2. | F | 7. | F | 12. | F | 17. | F |
| 3. | T | 8. | F | 13. | T | 18. | F |
| 4. | F | 9. | F | 14. | T | 19. | F |
| 5. | F | 10. | T | 15. | T | 20. | F |

## MULTIPLE CHOICE-

## Conceptual

21. An example of an item which is not a liability is
a. dividends payable in stock.
b. advances from customers on contracts.
c. accrued estimated warranty costs.
d. the portion of long-term debt due within one year.
22. The covenants and other terms of the agreement between the issuer of bonds and the lender are set forth in the
a. bond indenture.
b. bond debenture.
c. registered bond.
d. bond coupon.
23. The term used for bonds that are unsecured as to principal is
a. junk bonds.
b. debenture bonds.
c. indebenture bonds.
d. callable bonds.
${ }^{\mathrm{P}} 24$. Bonds for which the owners' names are not registered with the issuing corporation are called
a. bearer bonds.
b. term bonds.
c. debenture bonds.
d. secured bonds.
${ }^{\text {s }} 25$. Bonds that pay no interest unless the issuing company is profitable are called
a. collateral trust bonds.
b. debenture bonds.
c. revenue bonds.
d. income bonds.
${ }^{\text {s }} 26$. If bonds are issued initially at a premium and the effective-interest method of amortization is used, interest expense in the earlier years will be
a. greater than if the straight-line method were used.
b. greater than the amount of the interest payments.
c the same as if the straight-line method were used.
d. less than if the straight-line method were used.
24. The interest rate written in the terms of the bond indenture is known as the
a. coupon rate.
b. nominal rate.
c. stated rate.
d. coupon rate, nominal rate, or stated rate.
25. The rate of interest actually earned by bondholders is called the
a. stated rate.
b. yield rate.
c. effective rate.
d. effective, yield, or market rate.

Use the following information for questions 29 and 30:
Fox Co. issued $\$ 100,000$ of ten-year, $10 \%$ bonds that pay interest semiannually. The bonds are sold to yield $8 \%$.
29. One step in calculating the issue price of the bonds is to multiply the principal by the table value for
a. 10 periods and $10 \%$ from the present value of 1 table.
b. 20 periods and $5 \%$ from the present value of 1 table.
c. 10 periods and $8 \%$ from the present value of 1 table.
d. 20 periods and $4 \%$ from the present value of 1 table.
30. Another step in calculating the issue price of the bonds is to
a. multiply $\$ 10,000$ by the table value for 10 periods and $10 \%$ from the present value of an annuity table.
b. multiply $\$ 10,000$ by the table value for 20 periods and $5 \%$ from the present value of an annuity table.
c. multiply $\$ 10,000$ by the table value for 20 periods and $4 \%$ from the present value of an annuity table.
d. none of these.
31. Reich, Inc. issued bonds with a maturity amount of $\$ 200,000$ and a maturity ten years from date of issue. If the bonds were issued at a premium, this indicates that
a. the effective yield or market rate of interest exceeded the stated (nominal) rate.
b. the nominal rate of interest exceeded the market rate.
c. the market and nominal rates coincided.
d. no necessary relationship exists between the two rates.
32. If bonds are initially sold at a discount and the straight-line method of amortization is used, interest expense in the earlier years will
a. exceed what it would have been had the effective-interest method of amortization been used.
b. be less than what it would have been had the effective-interest method of amortization been used.
c. be the same as what it would have been had the effective-interest method of amortization been used.
d. be less than the stated (nominal) rate of interest.
33. Under the effective-interest method of bond discount or premium amortization, the periodic interest expense is equal to
a. the stated (nominal) rate of interest multiplied by the face value of the bonds.
b. the market rate of interest multiplied by the face value of the bonds.
c. the stated rate multiplied by the beginning-of-period carrying amount of the bonds.
d. the market rate multiplied by the beginning-of-period carrying amount of the bonds.
34. 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.
35. 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.
36. 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.
37. Theoretically, the costs of issuing bonds could be
a. expensed when incurred.
b. reported as a reduction of the bond liability.
c. debited to a deferred charge account and amortized over the life of the bonds.
d. any of these.
38. The printing costs and legal fees associated with the issuance of bonds should
a. be expensed when incurred.
b. be reported as a deduction from the face amount of bonds payable.
c. be accumulated in a deferred charge account and amortized over the life of the bonds.
d. not be reported as an expense until the period the bonds mature or are retired.
39. Treasury bonds should be shown on the balance sheet as
a. an asset.
b. a deduction from bonds payable issued to arrive at net bonds payable and outstanding.
c. a reduction of stockholders' equity.
d. both an asset and a liability.
40. An early extinguishment of bonds payable, which were originally issued at a premium, is made by purchase of the bonds between interest dates. At the time of reacquisition
a. any costs of issuing the bonds must be amortized up to the purchase date.
b. the premium must be amortized up to the purchase date.
c. interest must be accrued from the last interest date to the purchase date.
d. all of these.
41. The generally accepted method of accounting for gains or losses from the early extinguishment of debt treats any gain or loss as
a. an adjustment to the cost basis of the asset obtained by the debt issue.
b. an amount that should be considered a cash adjustment to the cost of any other debt issued over the remaining life of the old debt instrument.
c. an amount received or paid to obtain a new debt instrument and, as such, should be amortized over the life of the new debt.
d. a difference between the reacquisition price and the net carrying amount of the debt which should be recognized in the period of redemption.
${ }^{\mathrm{P}} 42$. "In-substance defeasance" is a term used to refer to an arrangement whereby
a. a company gets another company to cover its payments due on long-term debt.
b. a governmental unit issues debt instruments to corporations.
c. a company provides for the future repayment of a long-term debt by placing purchased securities in an irrevocable trust.
d. a company legally extinguishes debt before its due date.
${ }^{\mathrm{P}} 43$. A corporation borrowed money from a bank to build a building. The long-term note signed by the corporation is secured by a mortgage that pledges title to the building as security for the loan. The corporation is to pay the bank $\$ 80,000$ each year for 10 years to repay the loan. Which of the following relationships can you expect to apply to the situation?
a. The balance of mortgage payable at a given balance sheet date will be reported as a long-term liability.
b. The balance of mortgage payable will remain a constant amount over the 10 -year period.
c. The amount of interest expense will decrease each period the loan is outstanding, while the portion of the annual payment applied to the loan principal will increase each period.
d. The amount of interest expense will remain constant over the 10-year period.
${ }^{s} 44$. A debt instrument with no ready market is exchanged for property whose fair market value is currently indeterminable. When such a transaction takes place
a. the present value of the debt instrument must be approximated using an imputed interest rate.
b. it should not be recorded on the books of either party until the fair market value of the property becomes evident.
c. the board of directors of the entity receiving the property should estimate a value for the property that will serve as a basis for the transaction.
d. the directors of both entities involved in the transaction should negotiate a value to be assigned to the property.
45. When a note payable is issued for property, goods, or services, the present value of the note is measured by
a. the fair value of the property, goods, or services.
b. the market value of the note.
c. using an imputed interest rate to discount all future payments on the note.
d. any of these.
46. When a note payable is exchanged for property, goods, or services, the stated interest rate is presumed to be fair unless
a. no interest rate is stated.
b. the stated interest rate is unreasonable.
c. the stated face amount of the note is materially different from the current cash sales price for similar items or from current market value of the note.
d. any of these.
47. Discount on Notes Payable is charged to interest expense
a. equally over the life of the note.
b. only in the year the note is issued.
c. using the effective-interest method.
d. only in the year the note matures.
48. Which of the following is an example of "off-balance-sheet financing"?

1. Non-consolidated subsidiary.
2. Special purpose entity.
3. Operating leases.
a. 1
b. 2
c. 3
d. All of these are examples of "off-balance-sheet financing."
${ }^{\text {s }} 49$. When a business enterprise enters into what is referred to as off-balance-sheet financing, the company
a. is attempting to conceal the debt from shareholders by having no information about the debt included in the balance sheet.
b. wishes to confine all information related to the debt to the income statement and the statement of cash flow.
c. can enhance the quality of its financial position and perhaps permit credit to be obtained more readily and at less cost.
d. is in violation of generally accepted accounting principles.
${ }^{s} 50$. Long-term debt that matures within one year and is to be converted into stock should be reported
a. as a current liability.
b. in a special section between liabilities and stockholders' equity.
c. as noncurrent.
d. as noncurrent and accompanied with a note explaining the method to be used in its liquidation.
4. Which of the following must be disclosed relative to long-term debt maturities and sinking fund requirements?
a. The present value of future payments for sinking fund requirements and long-term debt maturities during each of the next five years.
b. The present value of scheduled interest payments on long-term debt during each of the next five years.
c. The amount of scheduled interest payments on long-term debt during each of the next five years.
d. The amount of future payments for sinking fund requirements and long-term debt maturities during each of the next five years.
5. Note disclosures for long-term debt generally include all of the following except
a. assets pledged as security.
b. call provisions and conversion privileges.
c. restrictions imposed by the creditor.
d. names of specific creditors.
6. The times interest earned ratio is computed 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.
7. The debt to total assets ratio is computed by dividing
a. current liabilities by total assets.
b. long-term liabilities by total assets.
c. total liabilities by total assets.
d. total assets by total liabilities.
*55. 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. a loss should be recognized by the debtor.
b. a gain should be recognized by the debtor.
c. a new effective-interest rate must be computed.
d. no interest expense or revenue should be recognized in the future.
*56. A troubled debt restructuring will generally result in a
a. loss by the debtor and a gain by the creditor.
b. Ioss 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.
*57. In a troubled debt restructuring in which the debt is settled by a transfer of assets with a fair market value less than the carrying amount of the debt, the debtor would recognize
a. no gain or loss on the settlement.
b. a gain on the settlement.
c. a loss on the settlement.
d. none of these.
*58. In a troubled debt restructuring in which the debt is continued with modified terms, a gain should be recognized at the date of restructure, but no interest expense should be recognized over the remaining life of the debt, whenever the
a. carrying amount of the pre-restructure debt is less than the total future cash flows.
b. carrying amount of the pre-restructure debt is greater than the total future cash flows.
c. present value of the pre-restructure debt is less than the present value of the future cash flows.
d. present value of the pre-restructure debt is greater than the present value of the future cash flows.
*59. 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. compute 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.

Multiple Choice Answers-Conceptual

| Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21. | a | 27. | d | 33. | d | 39. | b | 45. | d | 51. | d | ${ }^{*} 57$. | b |
| 22. | a | 28. | d | 34. | d | 40. | d | 46. | d | 52. | d | ${ }^{*} 58$. | b |
| 23. | b | 29. | d | 35. | c | 41. | d | 47. | c | 53. | c | ${ }^{*} 59$. | c |
| 24. | a | 30. | d | 36. | d | 42. | c | 48. | d | 54. | c |  |  |
| 25. | d | 31. | b | 37. | d | 43. | c | 49. | c | ${ }^{*} 55$. | c |  |  |
| 26. | a | 32. | a | 38. | c | 44. | a | 50. | d | ${ }^{*} 56$. | d |  |  |

Solutions to those Multiple Choice questions for which the answer is "none of these."
30. multiply $\$ 5,000$ by the table value for 20 periods and $4 \%$ from the present value of an annuity table.

## MULTIPLE CHOICE—Computational

Use the following information for questions 60 through 62:
On January 1, 2010, Ellison Co. issued eight-year bonds with a face value of $\$ 1,000,000$ and a stated interest rate of $6 \%$, payable semiannually 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
60. The present value of the principal is
a. $\$ 534,000$.
b. $\$ 540,000$.
c. $\$ 623,000$.
d. $\$ 627,000$.
61. The present value of the interest is
a. $\$ 344,820$.
b. $\$ 349,560$.
c. $\$ 372,600$.
d. $\$ 376,830$.
62. The issue price of the bonds is
a. $\$ 883,560$.
b. $\$ 884,820$.
c. $\$ 889,560$.
d. $\$ 999,600$.
63. Downing Company issues $\$ 5,000,000,6 \%$, 5 -year bonds dated January 1, 2010 on January 1, 2010. The bonds pay interest semiannually on June 30 and December 31. The bonds are issued to yield $5 \%$. What are the proceeds from the bond issue?

|  | $2.5 \%$ | $3.0 \%$ | $5.0 \%$ | $6.0 \%$ |
| :--- | ---: | ---: | ---: | ---: |
| Present value of a single sum for 5 periods | .88385 | .86261 | .78353 | .74726 |
| Present value of a single sum for 10 periods | .78120 | .74409 | .61391 | .55839 |
| Present value of an annuity for 5 periods | 4.64583 | 4.57971 | 4.32948 | 4.21236 |
| Present value of an annuity for 10 periods | 8.75206 | 8.53020 | 7.72173 | 7.36009 |

a. $\$ 5,000,000$
b. $\$ 5,216,494$
c. $\$ 5,218,809$
d. $\$ 5,217,308$
64. Feller Company issues $\$ 20,000,000$ of 10 -year, $9 \%$ bonds on March 1, 2010 at 97 plus accrued interest. The bonds are dated January 1, 2010, and pay interest on June 30 and December 31. What is the total cash received on the issue date?
a. $\$ 19,400,000$
b. $\$ 20,450,000$
c. $\$ 19,700,000$
d. $\$ 19,100,000$
65. Everhart Company issues $\$ 10,000,000,6 \%$, 5 -year bonds dated January 1, 2010 on January 1, 2010. The bonds pays interest semiannually on June 30 and December 31. The bonds are issued to yield $5 \%$. What are the proceeds from the bond issue?

|  | $2.5 \%$ | $3.0 \%$ | $5.0 \%$ | $6.0 \%$ |
| :--- | ---: | ---: | ---: | ---: |
| Present value of a single sum for 5 periods | .88385 | .86261 | .78353 | .74726 |
| Present value of a single sum for 10 periods | .78120 | .74409 | .61391 | .55839 |
| Present value of an annuity for 5 periods | 4.64583 | 4.57971 | 4.32948 | 4.21236 |
| Present value of an annuity for 10 periods | 8.75206 | 8.53020 | 7.72173 | 7.36009 |

a. $\$ 10,000,000$
b. $\$ 10,432,988$
c. $\$ 10,437,618$
d. $\$ 10,434,616$
66. Farmer Company issues $\$ 10,000,000$ of 10-year, $9 \%$ bonds on March 1, 2010 at 97 plus accrued interest. The bonds are dated January 1, 2010, and pay interest on June 30 and December 31. What is the total cash received on the issue date?
a. $\$ 9,700,000$
b. $\$ 10,225,000$
c. $\$ 9,850,000$
d. $\$ 9,550,000$
67. A company issues $\$ 20,000,000,7.8 \%, 20$-year bonds to yield $8 \%$ on January 1, 2010. Interest is paid on June 30 and December 31. The proceeds from the bonds are $\$ 19,604,145$. Using effective-interest amortization, how much interest expense will be recognized in 2010?
a. $\$ 780,000$
b. $\$ 1,560,000$
c. $\$ 1,568,498$
d. $\$ 1,568,332$
68. A company issues $\$ 20,000,000,7.8 \%, 20$-year bonds to yield $8 \%$ on January $1,2010$. Interest is paid on June 30 and December 31. The proceeds from the bonds are $\$ 19,604,145$. Using effective-interest amortization, what will the carrying value of the bonds be on the December 31, 2010 balance sheet?
a. $\$ 19,612,643$
b. $\$ 20,000,000$
c. $\$ 19,625,125$
d. $\$ 19,608,310$
69. A company issues $\$ 20,000,000,7.8 \%, 20$-year bonds to yield $8 \%$ on January 1, 2009. Interest is paid on June 30 and December 31. The proceeds from the bonds are $\$ 19,604,145$. Using straight-line amortization, what is the carrying value of the bonds on December 31, 2011?
a. $\$ 19,670,231$
b. $\$ 19,940,622$
c. $\$ 19,633,834$
d. $\$ 19,663,523$
70. A company issues $\$ 20,000,000,7.8 \%, 20$-year bonds to yield $8 \%$ on January 1, 2010. Interest is paid on June 30 and December 31. The proceeds from the bonds are $\$ 19,604,145$. What is interest expense for 2011, using straight-line amortization?
a. $\$ 1,540,207$
b. $\$ 1,560,000$
c. $\$ 1,569,192$
d. $\$ 1,579,793$
71. A company issues $\$ 5,000,000,7.8 \%, 20$-year bonds to yield $8 \%$ on January 1, 2010. Interest is paid on June 30 and December 31. The proceeds from the bonds are $\$ 4,901,036$. Using effective-interest amortization, how much interest expense will be recognized in 2010?
a. $\$ 195,000$
b. $\$ 390,000$
c. $\$ 392,124$
d. $\$ 392,083$
72. A company issues $\$ 5,000,000,7.8 \%, 20$-year bonds to yield $8 \%$ on January 1, 2010. Interest is paid on June 30 and December 31. The proceeds from the bonds are $\$ 4,901,036$. Using effective-interest amortization, what will the carrying value of the bonds be on the December 31, 2010 balance sheet?
a. $\$ 4,903,160$
b. $\$ 5,000,000$
c. $\$ 4,906,281$
d. $\$ 4,902,077$
73. A company issues $\$ 5,000,000,7.8 \%, 20$-year bonds to yield $8 \%$ on January 1, 2009. Interest is paid on June 30 and December 31. The proceeds from the bonds are $\$ 4,901,036$. Using straight-line amortization, what is the carrying value of the bonds on December 31, 2011 ?
a. $\$ 4,917,558$
b. $\$ 4,985,156$
c. $\$ 4,908,458$
d. $\$ 4,915,881$
74. A company issues $\$ 5,000,000,7.8 \%, 20$-year bonds to yield $8 \%$ on January 1, 2010. Interest is paid on June 30 and December 31. The proceeds from the bonds are $\$ 4,901,036$. What is interest expense for 2011, using straight-line amortization?
a. $\$ 385,052$
b. $\$ 390,000$
c. $\$ 392,298$
d. $\$ 394,948$
75. On January 1, 2010, Huber Co. sold $12 \%$ bonds with a face value of $\$ 600,000$. The bonds mature in five years, and interest is paid semiannually on June 30 and December 31. The bonds were sold for $\$ 646,200$ to yield $10 \%$. Using the effective-interest method of amortization, interest expense for 2010 is
a. $\$ 60,000$.
b. $\$ 64,436$.
c. $\$ 64,620$.
d. $\$ 72,000$.
76. On January 2, 2010, a calendar-year corporation sold $8 \%$ bonds with a face value of $\$ 600,000$. These bonds mature in five years, and interest is paid semiannually on June 30 and December 31. The bonds were sold for $\$ 553,600$ to yield $10 \%$. Using the effectiveinterest method of computing interest, how much should be charged to interest expense in 2010?
a. $\$ 48,000$.
b. $\$ 55,360$.
c. $\$ 55,544$.
d. $\$ 60,000$.

The following information applies to both questions 77 and 78. On October 1, 2010 Macklin Corporation issued $5 \%, 10$-year bonds with a face value of $\$ 1,000,000$ at 104. Interest is paid on October 1 and April 1, with any premiums or discounts amortized on a straight-line basis.
77. The entry to record the issuance of the bonds would include a credit of
a. $\$ 25,000$ to interest Payable.
b. $\$ 40,000$ to Discount on Bonds Payable.
c. $\$ 960,000$ to Bonds Payable.
d. $\$ 40,000$ to Premium on Bonds Payable.
78. Bond interest expense reported on the December 31, 2010 income statement of Macklin Corporation would be
a. $\$ 11,500$
b. $\$ 12,500$
c. $\$ 13,500$
d. $\$ 23,000$

The following information applies to both questions 79 and 80. On October 1, 2010 Bartley Corporation issued $5 \%, 10$-year bonds with a face value of $\$ 500,000$ at 104 . Interest is paid on October 1 and April 1, with any premiums or discounts amortized on a straight-line basis.
79. The entry to record the issuance of the bonds would include a
a. credit of $\$ 12,500$ to interest Payable.
b. credit of $\$ 20,000$ to Premium on Bonds Payable.
c. credit of $\$ 480,000$ to Bonds Payable.
d. debit of $\$ 20,000$ to Discount on Bonds Payable.
80. Bond interest expense reported on the December 31, 2010 income statement of Bartley Corporation would be
a. $\$ 6,750$
b. $\$ 11,500$
c. $\$ 5,750$
d. $\$ 6,250$
81. At the beginning of 2010, Wallace Corporation issued $10 \%$ bonds with a face value of $\$ 900,000$. These bonds mature in the five years, and interest is paid semiannually on June 30 and December 31. The bonds were sold for 833,760 to yield $12 \%$. Wallace uses a calendar-year reporting period. Using the effective-interest method of amortization, what amount of interest expense should be reported for 2010? (Round your answer to the nearest dollar.)
a. $\$ 103,248$
b. $\$ 100,353$
c. $\$ 100,050$
d. $\$ 99,750$
82. On January 1, Patterson Inc. issued $\$ 5,000,000,9 \%$ bonds for $\$ 4,695,000$. The market rate of interest for these bonds is $10 \%$. Interest is payable annually on December 31. Patterson uses the effective-interest method of amortizing bond discount. At the end of the first year, Patterson should report unamortized bond discount of
a. $\$ 274,500$.
b. $\$ 285,500$.
c. $\$ 258,050$.
d. $\$ 255,000$.
83. On January 1, Martinez Inc. issued $\$ 3,000,000,11 \%$ bonds for $\$ 3,195,000$. The market rate of interest for these bonds is $10 \%$. Interest is payable annually on December 31. Martinez uses the effective-interest method of amortizing bond premium. At the end of the first year, Martinez should report unamortized bond premium of:
a. $\$ 185,130$
b. $\$ 184,500$
c. $\$ 173,550$
d. $\$ 165,000$
84. At the beginning of 2010, Winston Corporation issued $10 \%$ bonds with a face value of $\$ 600,000$. These bonds mature in five years, and interest is paid semiannually on June 30 and December 31. The bonds were sold for 555,840 to yield $12 \%$. Winston uses a calendar-year reporting period. Using the effective-interest method of amortization, what amount of interest expense should be reported for 2010? (Round your answer to the nearest dollar.)
a. $\$ 66,500$
b. $\$ 66,700$
c. $\$ 66,901$
d. $\$ 68,832$
85. Kant Corporation retires its $\$ 100,000$ face value bonds at 102 on January 1, following the payment of interest. The carrying value of the bonds at the redemption date is $\$ 96,250$. The entry to record the redemption will include a
a. credit of $\$ 3,750$ to Loss on Bond Redemption.
b. credit of $\$ 3,750$ to Discount on Bonds Payable.
c. debit of $\$ 5,750$ to Gain on Bond Redemption.
d. debit of $\$ 2,000$ to Premium on Bonds Payable.
86. Carr Corporation retires its $\$ 100,000$ face value bonds at 105 on January 1, following the payment of interest. The carrying value of the bonds at the redemption date is $\$ 103,745$. The entry to record the redemption will include a
a. credit of $\$ 3,745$ to Loss on Bond Redemption.
b. debit of $\$ 3,745$ to Premium on Bonds Payable.
c. credit of $\$ 1,255$ to Gain on Bond Redemption.
d. debit of $\$ 5,000$ to Premium on Bonds Payable.
87. At December 31, 2010 the following balances existed on the books of Foxworth Corporation:

Bonds Payable \$2,000,000
Discount on Bonds Payable 160,000
Interest Payable 50,000
Unamortized Bond Issue Costs 120,000

If the bonds are retired on January 1, 2011, at 102, what will Foxworth report as a loss on redemption?
a. $\$ 370,000$
b. $\$ 320,000$
c. $\$ 270,000$
d. $\$ 200,000$
88. At December 31, 2010 the following balances existed on the books of Rentro Corporation:

| Bonds Payable | $\$ 1,500,000$ |
| :--- | ---: |
| Discount on Bonds Payable | 120,000 |
| Interest Payable | 37,000 |
| Unamortized Bond Issue Costs | 90,000 |

If the bonds are retired on January 1, 2011, at 102, what will Rentro report as a loss on redemption?
a. $\$ 150,000$
b. $\$ 202,500$
c. $\$ 240,000$
d. $\$ 277,500$
89. The December 31, 2010, balance sheet of Hess Corporation includes the following items:

9\% bonds payable due December 31, 2019 \$1,000,000
Unamortized premium on bonds payable
27,000
The bonds were issued on December 31, 2009, at 103, with interest payable on July 1 and December 31 of each year. Hess uses straight-line amortization. On March 1, 2011, Hess retired $\$ 400,000$ of these bonds at 98 plus accrued interest. What should Hess record as a gain on retirement of these bonds? Ignore taxes.
a. $\$ 18,800$.
b. $\$ 10,800$.
c. $\$ 18,600$.
d. $\$ 20,000$.
90. On January 1, 2004, Hernandez Corporation issued $\$ 4,500,000$ of $10 \%$ ten-year bonds at 103. The bonds are callable at the option of Hernandez at 105. Hernandez has recorded amortization of the bond premium on the straight-line method (which was not materially different from the effective-interest method).

On December 31, 2010, when the fair market value of the bonds was 96, Hernandez repurchased $\$ 1,000,000$ of the bonds in the open market at 96 . Hernandez has recorded interest and amortization for 2010. Ignoring income taxes and assuming that the gain is material, Hernandez should report this reacquisition as
a. a loss of $\$ 49,000$.
b. a gain of $\$ 49,000$.
c. a loss of $\$ 61,000$.
d. a gain of $\$ 61,000$.
91. The $10 \%$ bonds payable of Nixon Company had a net carrying amount of $\$ 570,000$ on December 31, 2010. The bonds, which had a face value of $\$ 600,000$, were issued at a discount to yield $12 \%$. The amortization of the bond discount was recorded under the effective-interest method. Interest was paid on January 1 and July 1 of each year. On July 2, 2011, several years before their maturity, Nixon retired the bonds at 102. The interest payment on July 1, 2011 was made as scheduled. What is the loss that Nixon should record on the early retirement of the bonds on July 2, 2011? Ignore taxes.
a. $\$ 12,000$.
b. $\$ 37,800$.
c. $\$ 33,600$.
d. $\$ 42,000$.
92. A corporation called an outstanding bond obligation four years before maturity. At that time there was an unamortized discount of $\$ 300,000$. To extinguish this debt, the company had to pay a call premium of $\$ 100,000$. Ignoring income tax considerations, how should these amounts be treated for accounting purposes?
a. Amortize $\$ 400,000$ over four years.
b. Charge $\$ 400,000$ to a loss in the year of extinguishment.
c. Charge $\$ 100,000$ to a loss in the year of extinguishment and amortize $\$ 300,000$ over four years.
d. Either amortize $\$ 400,000$ over four years or charge $\$ 400,000$ to a loss immediately, whichever management selects.
93. The $12 \%$ bonds payable of Nyman Co. had a carrying amount of $\$ 832,000$ on December 31, 2010. The bonds, which had a face value of $\$ 800,000$, were issued at a premium to yield $10 \%$. Nyman uses the effective-interest method of amortization. Interest is paid on June 30 and December 31. On June 30, 2011, several years before their maturity, Nyman retired the bonds at 104 plus accrued interest. The loss on retirement, ignoring taxes, is
a. $\$ 0$.
b. $\$ 6,400$.
c. $\$ 9,920$.
d. $\$ 32,000$.
94. Didde Company issues $\$ 10,000,000$ face value of bonds at 96 on January 1, 2009. The bonds are dated January 1, 2009, pay interest semiannually at $8 \%$ on June 30 and December 31, and mature in 10 years. Straight-line amortization is used for discounts and premiums. On September 1, 2012, $\$ 6,000,000$ of the bonds are called at 102 plus accrued interest. What gain or loss would be recognized on the called bonds on September 1, 2012?
a. $\$ 600,000$ loss
b. $\$ 272,000$ loss
c. $\$ 360,000$ loss
d. $\$ 453,333$ loss
95. Cortez Company issues $\$ 5,000,000$ face value of bonds at 96 on January 1, 2009. The bonds are dated January 1, 2009, pay interest semiannually at $8 \%$ on June 30 and December 31, and mature in 10 years. Straight-line amortization is used for discounts and premiums. On September 1, 2012, $\$ 3,000,000$ of the bonds are called at 102 plus accrued interest. What gain or loss would be recognized on the called bonds on September 1, 2012?
a. $\$ 300,000$ loss
b. $\$ 136,000$ loss
c. $\$ 180,000$ loss
d. $\$ 226,667$ loss
96. On January 1, 2010, Ann Price loaned $\$ 45,078$ to Joe Kiger. A zero-interest-bearing note (face amount, $\$ 60,000$ ) was exchanged solely for cash; no other rights or privileges were exchanged. The note is to be repaid on December 31, 2012. The prevailing rate of interest for a loan of this type is $10 \%$. The present value of $\$ 60,000$ at $10 \%$ for three years is $\$ 45,078$. What amount of interest income should Ms. Price recognize in 2010 ?
a. $\$ 4,508$.
b. $\$ 6,000$.
c. $\$ 18,000$.
d. $\$ 13,524$.
97. On January 1, 2010, Jacobs Company sold property to Dains Company which originally cost Jacobs $\$ 760,000$. There was no established exchange price for this property. Danis gave Jacobs a $\$ 1,200,000$ zero-interest-bearing note payable in three equal annual installments of $\$ 400,000$ with the first payment due December 31, 2010. The note has no ready market. The prevailing rate of interest for a note of this type is $10 \%$. The present value of a $\$ 1,200,000$ note payable in three equal annual installments of $\$ 400,000$ at a $10 \%$ rate of interest is $\$ 994,800$. What is the amount of interest income that should be recognized by Jacobs in 2010, using the effective-interest method?
a. \$0.
b. $\$ 40,000$.
c. $\$ 99,480$.
d. $\$ 120,000$.
98. On January 1, 2010, Crown Company sold property to Leary Company. There was no established exchange price for the property, and Leary gave Crown a $\$ 2,000,000$ zero-interest-bearing note payable in 5 equal annual installments of $\$ 400,000$, with the first payment due December 31, 2010. The prevailing rate of interest for a note of this type is $9 \%$. The present value of the note at $9 \%$ was $\$ 1,442,000$ at January 1,2010 . What should be the balance of the Discount on Notes Payable account on the books of Leary at December 31, 2010 after adjusting entries are made, assuming that the effective-interest method is used?
a. $\$ 0$
b. $\$ 428,220$
c. $\$ 446,400$
d. $\$ 558,000$
99. Putnam Company's 2010 financial statements contain the following selected data:

| Income taxes | $\$ 40,000$ |
| :--- | ---: |
| Interest expense | 20,000 |
| Net income | 60,000 |

Putnam's times interest earned for 2010 is
a. 3 times
b. 4 times
c. 5 times
d. 6 times.
100. In the recent year Hill Corporation had net income of $\$ 140,000$, interest expense of $\$ 40,000$, and tax expense of $\$ 20,000$. What was Hill Corporation's times interest earned ratio for the year?
a. 5.0
b. 4.0
c. 3.5
d. 3.0
101. In recent year Cey Corporation had net income of $\$ 250,000$, interest expense of $\$ 50,000$, and a times interest earned ratio of 9 . What was Cey Corporation's income before taxes for the year?
a. $\$ 500,000$
b. $\$ 450,000$
c. $\$ 400,000$
d. None of the above.
102. The adjusted trial balance for Lifesaver Corp. at the end of the current year, 2010, contained the following accounts.

| 5-year Bonds Payable 8\% | $\$ 1,500,000$ |
| :--- | ---: |
| Bond Interest Payable | 50,000 |
| Premium on Bonds Payable | 100,000 |
| Notes Payable (3 mo.) | 40,000 |
| Notes Payable (5 yr.) | 165,000 |
| Mortgage Payable (\$15,000 due currently) | 200,000 |
| Salaries Payable | 18,000 |
| Taxes Payable (due 3/15 of 2011) | 25,000 |

The total long-term liabilities reported on the balance sheet are
a. $\$ 1,865,000$.
b. $\$ 1,850,000$.
c. $\$ 1,965,000$.
d. $\$ 1,950,000$.

Use the following information for questions *103 through *105:
On December 31, 2008, Nolte Co. is in financial difficulty and cannot pay a note due that day. It is a $\$ 600,000$ note with $\$ 60,000$ accrued interest payable to Piper, Inc. Piper agrees to accept from Nolte equipment that has a fair value of $\$ 290,000$, an original cost of $\$ 480,000$, and accumulated depreciation of $\$ 230,000$. Piper also forgives the accrued interest, extends the maturity date to December 31, 2011, reduces the face amount of the note to $\$ 250,000$, and reduces the interest rate to $6 \%$, with interest payable at the end of each year.
*103. Nolte should recognize a gain or loss on the transfer of the equipment of
a. $\$ 0$.
b. $\$ 40,000$ gain.
c. $\$ 60,000$ gain.
d. $\$ 190,000$ loss.
*104. Nolte should recognize a gain on the partial settlement and restructure of the debt of
a. $\$ 0$.
b. $\$ 15,000$.
c. $\$ 55,000$.
d. $\$ 75,000$.
*105. Nolte should record interest expense for 2011 of
a. $\$ 0$.
b. $\$ 15,000$.
c. $\$ 30,000$.
d. $\$ 45,000$.

Multiple Choice Answers-Computational

| Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 60. | a | 67. | c | 74. | d | 81. | b | 88. | c | 95. | b | 102. | d |
| 61. | b | 68. | a | 75. | b | 82. | b | 89. | c | 96. | a | $* 103$. | b |
| 62. | a | 69. | d | 76. | c | 83. | b | 90. | b | 97. | c | $* 104$. | d |
| 63. | c | 70. | d | 77. | d | 84. | c | 91. | b | 98. | b | $* 105$. | a |
| 64. | c | 71. | c | 78. | a | 85. | b | 92. | b | 99. | d |  |  |
| 65. | c | 72. | a | 79. | b | 86. | b | 93. | b | 100. | a |  |  |
| 66. | c | 73. | d | 80. | c | 87. | b | 94. | b | 101. | c |  |  |

## MULTIPLE CHOICE-CPA Adapted

106. On July 1, 2010, Spear Co. issued 1,000 of its $10 \%, \$ 1,000$ bonds at 99 plus accrued interest. The bonds are dated April 1, 2010 and mature on April 1, 2020. Interest is payable semiannually on April 1 and October 1. What amount did Spear receive from the bond issuance?
a. $\$ 1,015,000$
b. $\$ 1,000,000$
c. $\$ 990,000$
d. $\$ 965,000$
107. On January 1, 2010, Solis Co. issued its $10 \%$ bonds in the face amount of $\$ 3,000,000$, which mature on January 1, 2020. The bonds were issued for $\$ 3,405,000$ to yield $8 \%$, resulting in bond premium of $\$ 405,000$. Solis uses the effective-interest method of amortizing bond premium. Interest is payable annually on December 31. At December 31, 2010, Solis's adjusted unamortized bond premium should be
a. $\$ 405,000$.
b. $\$ 377,400$.
c. $\$ 364,500$.
d. $\$ 304,500$.
108. On July 1, 2009, Noble, Inc. issued $9 \%$ bonds in the face amount of $\$ 5,000,000$, which mature on July 1, 2015. The bonds were issued for $\$ 4,695,000$ to yield $10 \%$, resulting in a bond discount of $\$ 305,000$. Noble uses the effective-interest method of amortizing bond discount. Interest is payable annually on June 30. At June 30, 2011, Noble's unamortized bond discount should be
a. $\$ 264,050$.
b. $\$ 255,000$.
c. $\$ 244,000$.
d. $\$ 215,000$.
109. On January 1, 2010, Huff Co. sold $\$ 1,000,000$ of its $10 \%$ bonds for $\$ 885,296$ to yield $12 \%$. Interest is payable semiannually on January 1 and July 1. What amount should Huff report as interest expense for the six months ended June 30, 2010 ?
a. $\$ 44,266$
b. $\$ 50,000$
c. $\$ 53,118$
d. $\$ 60,000$
110. On January 1, 2011, Doty Co. redeemed its 15 -year bonds of $\$ 2,500,000$ par value for 102. They were originally issued on January 1, 1999 at 98 with a maturity date of January 1, 2014. The bond issue costs relating to this transaction were $\$ 150,000$. Doty amortizes discounts, premiums, and bond issue costs using the straight-line method. What amount of loss should Doty recognize on the redemption of these bonds (ignore taxes)?
a. $\$ 90,000$
b. $\$ 60,000$
c. $\$ 50,000$
d. $\$ 0$
111. On its December 31, 2010 balance sheet, Emig Corp. reported bonds payable of $\$ 6,000,000$ and related unamortized bond issue costs of $\$ 320,000$. The bonds had been issued at par. On January 2, 2011, Emig retired $\$ 3,000,000$ of the outstanding bonds at par plus a call premium of $\$ 70,000$. What amount should Emig report in its 2011 income statement as loss on extinguishment of debt (ignore taxes)?
a. \$0
b. $\$ 70,000$
c. $\$ 160,000$
d. $\$ 230,000$
112. On January 1, 2006, Goll Corp. issued 1,000 of its $10 \%, \$ 1,000$ bonds for $\$ 1,040,000$. These bonds were to mature on January 1, 2016 but were callable at 101 any time after December 31, 2009. Interest was payable semiannually on July 1 and January 1. On July 1, 2011, Goll called all of the bonds and retired them. Bond premium was amortized on a straight-line basis. Before income taxes, Goll's gain or loss in 2011 on this early extinguishment of debt was
a. $\$ 30,000$ gain.
b. $\$ 12,000$ gain.
c. $\$ 10,000$ loss.
d. $\$ 8,000$ gain.
113. On June 30, 2011, Omara Co. had outstanding 8\%, \$3,000,000 face amount, 15-year bonds maturing on June 30, 2021. Interest is payable on June 30 and December 31. The unamortized balances in the bond discount and deferred bond issue costs accounts on June 30, 2011 were $\$ 105,000$ and $\$ 30,000$, respectively. On June 30, 2011, Omara acquired all of these bonds at 94 and retired them. What net carrying amount should be used in computing gain or loss on this early extinguishment of debt?
a. $\$ 2,970,000$.
b. $\$ 2,895,000$.
c. $\$ 2,865,000$.
d. $\$ 2,820,000$.
114. A ten-year bond was issued in 2009 at a discount with a call provision to retire the bonds. When the bond issuer exercised the call provision on an interest date in 2011, the carrying amount of the bond was less than the call price. The amount of bond liability removed from the accounts in 2011 should have equaled the
a. call price.
b. call price less unamortized discount.
c. face amount less unamortized discount.
d. face amount plus unamortized discount.
115. Paige Co. took advantage of market conditions to refund debt. This was the fourth refunding operation carried out by Paige within the last three years. The excess of the carrying amount of the old debt over the amount paid to extinguish it should be reported as a
a. gain, net of income taxes.
b. loss, net of income taxes.
c. part of continuing operations.
d. deferred credit to be amortized over the life of the new debt.
*116. Eddy Co. is indebted to Cole under a $\$ 400,000,12 \%$, three-year note dated December 31, 2009. Because of Eddy's financial difficulties developing in 2011, Eddy owed accrued interest of $\$ 48,000$ on the note at December 31, 2011. Under a troubled debt restructuring, on December 31, 2011, Cole agreed to settle the note and accrued interest for a tract of land having a fair value of $\$ 360,000$. Eddy's acquisition cost of the land is $\$ 290,000$. Ignoring income taxes, on its 2011 income statement Eddy should report as a result of the troubled debt restructuring

|  | Gain on Disposal |  | Restructuring |
| :--- | :---: | :---: | :---: |
|  | $\$ 158,000$ |  | $\$ 0$ |
| a. | $\$ 110,000$ |  | $\$ 0$ |
| c. | $\$ 70,000$ |  | $\$ 40,000$ |
| d. | $\$ 70,000$ |  | $\$ 88,000$ |

## Multiple Choice Answers-CPA Adapted

| Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 106. | a | 108. | a | 110. | a | 112. | d | 114. | c | ${ }^{*} 116$. | d |
| 107. | b | 109. | c | 111. | d | 113. | c | 115. | c |  |  |

## DERIVATIONS - Computational

## No. Answer Derivation

60. a $\$ 1,000,000 \times .534=\$ 534,000$.
61. b $\quad(\$ 1,000,000 \times .03) \times 11.652=\$ 349,560$.
62. a $\$ 534,000+\$ 349,560=\$ 883,560$.
63. $\quad$ c $(\$ 5,000,000 \times .78120)+(\$ 150,000 \times 8.75206)=\$ 5,218,809$.
64. C $(\$ 20,000,000 \times .97)+(\$ 1,800,000 \times 2 / 12)=\$ 19,700,000$.
65. C $\quad(\$ 10,000,000 \times .78120)+(\$ 300,000 \times 8.75206)=\$ 10,437,618$.
66. C $(\$ 10,000,000 \times .97)+(\$ 900,000 \times 2 / 12)=\$ 9,850,000$.
67. $c \quad(\$ 19,604,145 \times .04)+(\$ 19,608,310 \times .04)=\$ 1,568,498$.
68. a $\$ 19,604,145+[(\$ 19,604,145 \times .04)-\$ 780,000]$
$+[\$ 19,608,310 \times .04)-\$ 780,000]=\$ 19,612,643$.
69. $d \quad \$ 19,604,145+(\$ 395,855 \times 3 / 20)=\$ 19,663,523$.
70. $d \quad(\$ 20,000,000 \times .078)+(\$ 395,855 \div 20)=\$ 1,579,793$.
71. C $(\$ 4,901,036 \times .04)+(\$ 4,902,077 \times .04)=\$ 392,124$.
72. a $\$ 4,901,036+[(\$ 4,901,036 \times .04)-\$ 195,000]+[(\$ 4,902,077 \times .04)-\$ 195,000]$ $=\$ 4,903,160$.
73. $d \quad \$ 4,901,036+(\$ 98,964 \times 3 / 20)=\$ 4,915,881$.
74. $\mathrm{d} \quad(\$ 5,000,000 \times .078)+(\$ 98,964 \div 20)=\$ 394,948$.
75. b $\begin{array}{ll}\$ 646,200 \times .05 & =\$ 32,310 \\ {[\$ 646,200-(\$ 36,000-\$ 32,310)] \times .05} & =\underline{32,126} \\ & \underline{\underline{\$ 64,436}}\end{array}$
76. C $\begin{array}{ll}\$ 553,600 \times .05 & =\$ 27,680 \\ {[\$ 553,600+(\$ 27,680-\$ 24,000)] \times .05} & =\underline{27,864} \\ & \end{array}$

## DERIVATIONS — Computational (cont.)

## No. Answer Derivation

77. d $(\$ 1,000,000 \times 1.04)-\$ 1,000,000=\$ 40,000$ premium.
78. a $[(\$ 1,000,000 \times .05) \times 3 / 12]-[(\$ 40,000 \div 10) \times 3 / 12]=\$ 11,500$.
79. b $\quad(\$ 500,000 \times 1.04)-\$ 500,000=\$ 20,000$ premium.
80. c $[(\$ 500,000 \times .05) \times 3 / 12]-[(\$ 20,000 \div 10) \times 3 / 12]=\$ 5,750$.
81. b $\quad(\$ 833,760 \times .06)=\$ 50,026 ;[\$ 50,026-(\$ 900,000 \times .05)]=\$ 5,026$
$(\$ 833,760+\$ 5,026) \times .06=\$ 50,327$
$\$ 50,026+\$ 50,327=\$ 100,353$.
82. b $\quad(\$ 4,695,000 \times .10)-(\$ 5,000,000 \times .09)=\$ 19,500$ $(\$ 5,000,000-\$ 4,695,000)-\$ 19,500=\$ 285,500$.
83. b $\quad(\$ 3,000,000 \times .11)-(\$ 3,195,000 \times .10)=\$ 10,500$ $(\$ 3,195,000-\$ 3,000,000)-\$ 10,500=\$ 184,500$.
84. C $(\$ 555,840 \times .06)=\$ 33,350 ;[\$ 33,350-(\$ 600,000 \times .05)]=\$ 3,350$ $(\$ 555,840+\$ 3,350) \times .06=\$ 33,551$ $\$ 33,350+\$ 33,551=\$ 66,901$.
85. b $\$ 100,000-\$ 96,250=\$ 3,750$ discount.
86. b $\$ 103,745-\$ 100,000=\$ 3,745$ premium.
87. b $\quad(\$ 2,000,000 \times 1.02)-(\$ 2,000,000-\$ 160,000-\$ 120,000)=\$ 320,000$.
88. $C \quad(\$ 1,500,000 \times 1.02)-(\$ 1,500,000-\$ 120,000-\$ 90,000)=\$ 240,000$.
89. c $\left[\$ 1,027,000-\left(\frac{\$ 27,000}{18} \times \frac{2}{6}\right)\right] \times .4=\$ 410,600$ (CV of retired bonds) $\$ 410,600-(\$ 400,000 \times .98)=\$ 18,600$.
90. b $\left[\$ 4,500,000 \times 1.03-\left(\frac{\$ 135,000}{10} \times 7.\right)\right] \times 2 / 9=\$ 1,009,000$ (CV of retired bonds) $\$ 1,009,000-(\$ 1,000,000 \times .96)=\$ 49,000$.
91. b $\$ 570,000+[(\$ 570,000 \times .06)-(\$ 600,000 \times .05)]=\$ 574,200(C V$ of bonds $)$ $\$ 574,200-(\$ 600,000 \times 1.02)=\$ 37,800$.
92. b $\$ 300,000+\$ 100,000=\$ 400,000$.
93. b $\$ 832,000-[(\$ 800,000 \times .06)-(\$ 832,000 \times .05)]=\$ 825,600(\mathrm{CV}$ of bonds $)$ $(\$ 800,000 \times 1.04)-\$ 825,600=\$ 6,400$.

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## DERIVATIONS — Computational (cont.)

| No. 94. | Answer b | Derivation $\begin{aligned} & \{\$ 9,600,000+[\$ 400,000 \times(32 / 3 \div 10)]\} \times .60=\$ 5,848,000 \\ & \$ 6,120,000-\$ 5,848,000=\$ 272,000 . \end{aligned}$ |
| :---: | :---: | :---: |
| 95. | b | $\begin{aligned} & \{\$ 4,800,000+[\$ 200,000 \times(32 / 3 \div 10)]\} \times .60=\$ 2,924,000 \\ & \$ 3,060,000-\$ 2,924,000=\$ 136,000 . \end{aligned}$ |
| 96. | a | \$45,078 $\times .10=\$ 4,508$. |
| 97. | C | \$994,800 $\times .10=\$ 99,480$. |
| 98. | b | \$2,000,000-\$1,442,000-(\$1,442,000 $\times .09)=\$ 428,220$. |
| 99 | d | \$60,000 + \$40,000 + \$20,000 |
| 99. | d | \$20,000 $=6$ times. |
| 100. | a | $(\$ 140,000+\$ 40,000+\$ 20,000) \div \$ 40,000=5.0$. |
| 101. | C | $\begin{aligned} & (\$ 250,000+\$ 50,000+X) \div \$ 50,000=9 \\ & (\$ 300,000+X)=9 \times \$ 50,000 \\ & X=\$ 150,000 ; I B T=\$ 400,000(\$ 250,000+\$ 150,000) . \end{aligned}$ |
| 102. | d | \$1,500,000 + \$100,000 + \$165,000 + (\$200,000-\$15,000) = \$1,950,000. |
| *103. | b | \$290,000 - (\$480,000-\$230,000) = \$40,000. |
| *104. | d | $\begin{aligned} & (\$ 600,000+\$ 60,000)-[\$ 290,000+\$ 250,000+(\$ 250,000 \times .06 \times 3)] \\ & =\$ 75,000 \end{aligned}$ |
| *105. | a | 0. The effective-interest rate is $0 \%$. |
|  |  | DERIVATIONS - CPA Adapted |
| No. | Answer | Derivation |
| 106. | a | $(\$ 1,000,000 \times .99)+(\$ 1,000,000 \times .10 \times 3 / 12)=\$ 1,015,000$. |
| 107. | b | \$405,000-[(\$3,000,000 $\times .10)-(\$ 3,405,000 \times .08)]=\$ 377,400$. |
| 108. | a | $\begin{aligned} 2009-2010: & \$ 4,695,000+[(\$ 4,695,000 \times .1)-(\$ 5,000,000 \times .09)] \\ & =\$ 4,714,500 . \end{aligned}$ |
|  |  | $\begin{gathered} 2010-2011: \$ 4,714,500+(\$ 471,450-\$ 450,000)=\$ 4,735,950 \\ \$ 5,000,000-\$ 4,735,950=\$ 264,050 . \end{gathered}$ |
| 109. | c | \$885,296 $\times .06=\$ 53,118$. |
| 110. | a | $(\$ 2,500,000 \times 1.02)-\left[\$ 2,300,000+\left(\frac{\$ 200,000}{15} \times 12\right)\right]=\$ 90,000 .$ |

No. Answer Derivation
106.
107. b $\$ 405,000-[(\$ 3,000,000 \times .10)-(\$ 3,405,000 \times .08)]=\$ 377,400$.
108. a 2009-2010:\$4,695,000 + [(\$4,695,000 $\times .1)-(\$ 5,000,000 \times .09)]$

2010-2011: \$4,714,500 $+(\$ 471,450-\$ 450,000)=\$ 4,735,950$ \$5,000,000 - \$4,735,950 = \$264,050.
109. $\mathrm{c} \quad \$ 885,296 \times .06=\$ 53,118$.
110. a $(\$ 2,500,000 \times 1.02)-\left[\$ 2,300,000+\left(\frac{\$ 200,000}{15} \times 12\right)\right]=\$ 90,000$.

## DERIVATIONS — CPA Adapted (cont.)

No. Answer Derivation
111. d $(\$ 3,000,000+\$ 70,000)-[(\$ 6,000,000-\$ 320,000) \times 1 / 2]=\$ 230,000$.
112. d $\left[\$ 1,040,000-\left(\frac{\$ 40,000}{20} \times 1 \frac{1}{\mathrm{~g}}\right]\right]-(\$ 1,000,000 \times 1.01)=\$ 8,000$.
113. $\mathrm{c} \quad \$ 3,000,000-(\$ 105,000+\$ 30,000)=\$ 2,865,000$.
114. C Conceptual.
115. c Conceptual.
*116. d $\$ 360,000-\$ 290,000=\$ 70,000$
$(\$ 400,000+\$ 48,000)-\$ 360,000=\$ 88,000$.

## EXERCISES

Ex. 14-117—Terms related to long-term debt.
Place the letter of the best matching phrase before each word.
$\qquad$

1. Indenture
2. Treasury Bonds
3. Bonds Issued at Par
4. Carrying Value
5. Nominal Rate
$\qquad$ 6. Times Interest Earned Ratio
$\qquad$ 7. Mortgage
$\qquad$ 8. Premium on Bonds
$\qquad$ 9. Reacquisition Price
$\qquad$ 10. Market Rate
a. Requires that bond discount be reported in the balance sheet as a direct deduction from the face of the bond.
b. Rate set by party issuing the bonds which appears on the bond instrument.
c. The interest paid each period is the effective interest at date of issuance.
d. Rate of interest actually earned by the bondholders.
e. Results when bonds are sold below par.
f. Results when bonds are sold above par.
g. Bonds payable reacquired by the issuing corporation that have not been canceled.
h. Price paid by issuing corporation for its own bonds.
i. Book value of bonds at any given date.
j. Ratio of current assets to current liabilities.
k. The bond contract or agreement.
l. Indicates the company's ability to meet interest payments as they come due.

## Ex. 14-117 (Cont.)

m. Ratio of debt to equity.
n. Exclusive right to manufacture a product.
o. A document that pledges title to property as security for a loan.

## Solution 14-117

1. $k$
2. C
3. b
4. 0
5. h
6. g
7. i
6 I
8 f
8. d

Ex. 14-118-Bond issue price and premium amortization.
On January 1, 2011, Piper Co. issued ten-year bonds with a face value of $\$ 1,000,000$ and a stated interest rate of $10 \%$, payable semiannually on June 30 and December 31. The bonds were sold to yield $12 \%$. Table values are:

Present value of 1 for 10 periods at 10\% .................................. . 386
Present value of 1 for 10 periods at 12\% .................................. . 322
Present value of 1 for 20 periods at 5\% .................................... . 377
Present value of 1 for 20 periods at $6 \%$.................................... . 312
Present value of annuity for 10 periods at $10 \%$........................ 6.145
Present value of annuity for 10 periods at 12\% ........................ 5.650
Present value of annuity for 20 periods at 5\% .......................... 12.462
Present value of annuity for 20 periods at 6\% .......................... 11.470

## Instructions

(a) Calculate the issue price of the bonds.
(b) Without prejudice to your solution in part (a), assume that the issue price was $\$ 884,000$. Prepare the amortization table for 2011, assuming that amortization is recorded on interest payment dates.

Solution 14-118


Ex. 14-119—Amortization of discount or premium.
Grider Industries, Inc. issued $\$ 6,000,000$ of $8 \%$ debentures on May 1, 2010 and received cash totaling $\$ 5,323,577$. The bonds pay interest semiannually on May 1 and November 1. The maturity date on these bonds is November 1, 2018. The firm uses the effective-interest method of amortizing 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 (5/1/10 through $4 / 30 / 11$ ) these bonds were outstanding. (Show computations and round to the nearest dollar.)

## Solution 14-119

| Date | Interest <br> Expense | Cash <br> Interest |  | Discount <br> Amortized | Carrying <br> Value of Bonds |
| :---: | ---: | ---: | ---: | ---: | ---: |
| $5 / 1 / 10$ |  |  |  | $\$ 5,323,577$ |  |
| $5 / 1 / 10$ | $\$ 266,179$ | $\$ 240,000$ |  | $\$ 26,179$ | $5,349,756$ |
|  | 267,488 | 240,000 | Total | $\underline{\underline{\$ 53,488}}$ | $5,377,244$ |

## Ex. 14-120—Entries for Bonds Payable.

Prepare journal entries to record the following transactions related to long-term bonds of Quirk Co.
(a) On April 1, 2009, Quirk issued $\$ 500,000,9 \%$ bonds for $\$ 537,868$ including accrued interest. Interest is payable annually on January 1, and the bonds mature on January 1, 2019.
(b) On July 1, 2011 Quirk retired $\$ 150,000$ of the bonds at 102 plus accrued interest. Quirk uses straight-line amortization.

## Solution 14-120

(a) Cash ..... 537,868
Bonds Payable ..... 500,000
Interest Expense (\$500,000 $\times 9 \% \times 3 / 12$ ) ..... 1,250
Premium on Bonds Payable ..... 26,618
(b) Interest Expense ..... 6,340
Premium on Bonds Payable ( $\$ 26,618 \times .3 \times 6 / 117$ ) ..... 410
Cash ( $\$ 150,000 \times 9 \% \times 6 / 12$ )
150,000
Bonds Payable
6,142
Premium on Bonds Payable ( $\$ 26,618 \times .3 \times 90 / 117$ )
Cash153,000
Gain on Redemption of Bonds ..... 3,142

Ex. 14-121—Retirement of bonds.
Prepare journal entries to record the following retirement. (Show computations and round to the nearest dollar.)

The December 31, 2010 balance sheet of Wolfe Co. included the following items:
7.5\% bonds payable due December 31, 2018
\$1,200,000
Unamortized discount on bonds payable
48,000

The bonds were issued on December 31, 2008 at 95, with interest payable on June 30 and December 31. (Use straight-line amortization.)

On April 1, 2011, Wolfe retired $\$ 240,000$ of these bonds at 101 plus accrued interest.

## Solution 14-121

| Interest Expense | 4,800 |  |
| :---: | :---: | :---: |
| Cash ( $\$ 240,000 \times 7.5 \% \times 3 / 12$ ). |  | 4,500 |
| Discount on Bonds Payable (\$48,000 $\times 1 / 5 \times 1 / 8 \times 3 / 12$ ) $\ldots$. |  | 300 |
| Bonds Payable....................................................................... | 240,000 |  |
| Loss on Redemption of Bonds. | 11,700 |  |
| Discount on Bonds Payable [(1/5 × 448,000 ) \$ 300$] . \ldots . . . .$. |  | 9,300 |
| Cash. |  | 242,400 |

Ex. 14-122—Early extinguishment of debt.
Hurst, Incorporated sold its $8 \%$ bonds with a maturity value of $\$ 3,000,000$ on August 1, 2009 for $\$ 2,946,000$. At the time of the sale the bonds had 5 years until they reached maturity. Interest on the bonds is payable semiannually on August 1 and February 1. The bonds are callable at 104 at any time after August 1, 2011. By October 1, 2011, the market rate of interest has declined and the market price of Hurst's bonds has risen to a price of 101. The firm decides to refund the bonds by selling a new $6 \%$ bond issue to mature in 5 years. Hurst begins to reacquire its $8 \%$ bonds in the market and is able to purchase $\$ 500,000$ worth at 101 . The remainder of the outstanding bonds is reacquired by exercising the bonds' call feature. In the final analysis, how much was the gain or loss experienced by Hurst in reacquiring its $8 \%$ bonds? (Assume the firm used straight-line amortization.) Show calculations.

## Solution 14-122

Reacquisition price:
$\$ 500,000 \times 1.01=\quad \$ 505,000$
$\$ 2,500,000 \times 1.04=\quad \underline{2,600,000}$
\$3,105,000
Less net carrying amount:
$\$ 2,946,000+(\$ 54,000 \times 26 / 60)=$
2,969,400
Loss on early extinguishment
\$ 135,600
*Ex. 14-123-Accounting for a troubled debt settlement.
Mann, Inc., which owes Doran Co. \$600,000 in notes payable with accrued interest of $\$ 54,000$, is in financial difficulty. To settle the debt, Doran agrees to accept from Mann equipment with a fair value of $\$ 570,000$, an original cost of $\$ 840,000$, and accumulated depreciation of $\$ 195,000$.

## Instructions

(a) Compute the gain or loss to Mann on the settlement of the debt.
(b) Compute the gain or loss to Mann on the transfer of the equipment.
(c) Prepare the journal entry on Mann 's books to record the settlement of this debt.
(d) Prepare the journal entry on Doran's books to record the settlement of the receivable.

## *Solution 14-123

(a) Note payable \$600,000Interest payableCarrying amount of debtFair value of equipmentGain on settlement of debt
54,000
654,000570,000\$84,000
(b) Cost ..... \$840,000
Accumulated depreciation ..... 195,000Book value645,000
Fair value of plant assetsLoss on disposal of equipment570,000\$ 75,000
(c) Notes Payable. ..... 600,000
Interest Payable ..... 54,000
Accumulated Depreciation. ..... 195,000
Loss on Disposal of Equipment. ..... 75,000
Equipment840,000
Gain on Settlement of Debt ..... 84,000
(d) Equipment. ..... 570,000
Allowance for Doubtful Accounts ..... 84,000
Notes Receivable. ..... 600,000
Interest Receivable ..... 54,000
*Ex. 14-124—Accounting for a troubled debt restructuring.
On December 31, 2009, Short Co. is in financial difficulty and cannot pay a note due that day. It is a $\$ 500,000$ note with $\$ 50,000$ accrued interest payable to Bryan, Inc. Bryan agrees to forgive the accrued interest, extend the maturity date to December 31, 2011, and reduce the interest rate to $4 \%$. The present value of the restructured cash flows is $\$ 428,000$.

## Instructions

Prepare entries for the following:
(a) The restructure on Short's books.
(b) The payment of interest on December 31, 2010.
(c) The restructure on Bryan's books.

## *Solution 14-124

| (a) | Interest Payable. | 50,000 |  |
| :---: | :---: | :---: | :---: |
|  | Notes Payable (\$500,000 $\times 4 \% \times 2$ ). |  | 40,000 |
|  | Gain on Restructuring.. |  | 10,000 |
| (b) | Notes Payable. | 20,000 |  |
|  | Cash.. |  | 20,000 |
| (c) | Allowance for Doubtful Accounts. | 122,000 |  |
|  | Notes Receivable. |  | 72,000 |
|  | Interest Receivable |  | 50,000 |

*Ex. 14-125-Accounting for troubled debt.
(a) What are the general rules for measuring and recognizing a gain or loss by the debtor on a settlement of troubled debt which includes the transfer of noncash assets?
(b) 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 14-125

(a) If the settlement of debt includes the transfer of noncash 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 undiscounted total future cash flows, the gain is measured by the debtor as the difference between the carrying amount and the future cash flows. Future payments reduce the principal; no interest expense is recorded by the debtor.

If the carrying amount of the payable is less than the future cash flows, no restructuring gain is recognized by the debtor. A new effective-interest rate is calculated that equates the present value of the future cash flows with the carrying amount of the debt. A part of the future cash flows is recorded as interest expense by the debtor.

## PROBLEMS

Pr. 14-126—Bond discount amortization.
On June 1, 2009, Everly Bottle Company sold $\$ 400,000$ in long-term bonds for $\$ 351,040$. The bonds will mature in 10 years and have a stated interest rate of $8 \%$ and a yield rate of $10 \%$. The bonds pay interest annually on May 31 of each year. The bonds are to be accounted for under the effective-interest method.

## Instructions

(a) Construct a bond amortization table for this problem 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 labeled. (Round to the nearest dollar.)
(b) The sales price of $\$ 351,040$ was determined from present value tables. Specifically explain how one would determine the price using present value tables.
(c) Assuming that interest and discount amortization are recorded each May 31, prepare the adjusting entry to be made on December 31, 2011. (Round to the nearest dollar.)

## Solution 14-126

(a)

| Date | Credit Cash | Debit Interest Expense | Credit Bond Discount | Carrying Amount of Bonds |
| :---: | :---: | :---: | :---: | :---: |
| 6/1/09 |  |  |  | \$351,040 |
| 5/31/10 | \$32,000 | \$35,104 | \$3,104 | 354,144 |
| 5/31/11 | 32,000 | 35,414 | 3,414 | 357,558 |
| 5/31/12 | 32,000 | 35,756 | 3,756 | 361,314 |
| 5/31/13 | 32,000 | 36,131 | 4,131 | 365,445 |

(b) (1) Find the present value of $\$ 400,000$ due in 10 years at $10 \%$.
(2) Find the present value of 10 annual payments of $\$ 32,000$ at $10 \%$.

Add (1) and (2) to obtain the present value of the principal and the interest payments.
(c) Interest Expense $\qquad$ 20,858*
Interest Payable 18,667** Discount on Bonds Payable
*7/12 $\times \$ 35,756$ (from Table) $=\$ 20,858$
** $7 / 12 \times 8 \% \times \$ 400,000=\$ 18,667$

Pr. 14-127-Bond interest and discount amortization.
Grove Corporation issued \$800,000 of 8\% bonds on October 1, 2010, due on October 1, 2015. The interest is to be paid twice a year on April 1 and October 1. The bonds were sold to yield $10 \%$ effective annual interest. Grove Corporation closes its books annually on December 31.

## Instructions

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

Credit Cash \begin{tabular}{c}
Debit <br>
Interest Expense

$\quad$

Credit <br>
Bond Discount

 


| Carrying Amount |
| :---: |
| of Bonds | <br>

$\$ 738,224$
\end{tabular}

October 1, 2010
\$738,224
April 1, 2011
October 1, 2011
(b) Prepare the adjusting entry for December 31, 2011. Use the effective-interest method.
(c) Compute the interest expense to be reported in the income statement for the year ended December 31, 2011.

## Solution 14-127

(a)

October 1, 2010
April 1, 2011
October 1, 2011

| Credit Cash | Debit Interest Expense | Credit <br> Bond Discount | Carrying Amount of Bonds |
| :---: | :---: | :---: | :---: |
|  |  |  | \$738,224 |
| \$32,000 | \$36,911 | \$4,911 | 743,135 |
| 32,000 | 37,157 | 5,157 | 748,292 |

(b) Interest Expense (\$748,292 $\times 10 \% \times 3 / 12$ )

18,707
Interest Payable ( $1 / 2 \times \$ 32,000$ )
Discount on Bonds Payable (\$18,707-\$16,000)
2,707
(c) $\quad \$ 18,456 \quad(1 / 2$ of $\$ 36,911)$

37,157
18,707
$\underline{\underline{\$ 74,320}}$

Pr. 14-128-Entries for bonds payable.
Prepare the necessary journal entries to record the following transactions relating to the long-term issuance of bonds of Pitts Co.:

## March 1

Issued $\$ 800,000$ face value Pitts Co. second mortgage, $8 \%$ bonds for $\$ 872,160$, including accrued interest. Interest is payable semiannually on December 1 and June 1 with the bonds maturing 10 years from this past December 1. The bonds are callable at 102.

June 1
Paid semiannual interest on Pitts Co. bonds. (Use straight-line amortization of any premium or discount.)

## December 1

Paid semiannual interest on Pitts Co. bonds and purchased $\$ 400,000$ face value bonds at the call price in accordance with the provisions of the bond indenture.

## Solution 14-128

| March 1: | Cash.. | 872,160 |  |
| :---: | :---: | :---: | :---: |
|  | Bonds Payable. |  | 800,000 |
|  | Premium on Bonds Payable. |  | 56,160 |
|  | Interest Expense (\$800,000 $\times 8 \% \times 3 / 12$ ).............. |  | 16,000 |
| June 1: | Interest Expense. | 30,560 |  |
|  | Premium on Bonds Payable (\$56,160 $\times 3 / 117$ )................. | 1,440 |  |
|  | Cash............................................................... |  | 32,000 |
| Dec. 1: | Interest Expense......................................................... | 29,120 |  |
|  | Premium on Bonds Payable (\$56,160 $\times 6 / 117$ )............ | 2,880 |  |
|  | Cash.................. |  | 32,000 |
|  | Bonds Payable............................................................. | 400,000 |  |
|  | Premium on Bonds Payable*........................................ | 25,920 |  |
|  | Gain on Redemption of Bonds............................. |  | 17,920 |
|  | Cash.... |  | 408,000 |
|  | *1/2 $\times(\$ 56,160-\$ 1,440-\$ 2,880)=\$ 25,920$. |  |  |

Pr. 14-129—Entries for bonds payable.
Prepare journal entries to record the following transactions relating to long-term bonds of Kirby, Inc. (Show computations.)
(a) On June 1, 2009, Kirby, Inc. issued \$600,000, 6\% bonds for \$587,640, which includes accrued interest. Interest is payable semiannually on February 1 and August 1 with the bonds maturing on February 1, 2019. The bonds are callable at 102.
(b) On August 1, 2009, Kirby paid interest on the bonds and recorded amortization. Kirby uses straight-line amortization.
(c) On February 1, 2011, Kirby paid interest and recorded amortization on all of the bonds, and purchased $\$ 360,000$ of the bonds at the call price. Assume that a reversing entry was made on January 1, 2011.

## Solution 14-129

(a) Cash ..... 587,640
Discount on Bonds Payable ..... 24,360
Bonds Payable ..... 600,000
Interest Expense ( $\$ 600,000 \times 6 \% \times 4 / 12$ ) ..... 12,000
(b) Interest Expense $(\$ 600,000 \times 6 \% \times 6 / 12)+\$ 420$ ..... 18,420
Cash ..... 18,000
Discount on Bonds Payable ( $\$ 24,360 \times 2 / 116$ ) ..... 420

## Solution 14-129 (Cont.)

(c) Interest Expense $(\$ 18,000+\$ 1,260)$. ..... 19,260
Cash ..... 18,000
Discount on Bonds Payable ( $\$ 24,360 \times 6 / 116$ ) ..... 1,260
Bonds Payable

$\qquad$ ..... 360,000
Loss on Bond Redemption ..... 19,296
Discount on Bonds Payable [. $6 \times(\$ 24,360-\$ 4,200)$ ] ..... 12,096
Cash ..... 367,200
*Pr. 14-130—Accounting for a troubled debt settlement.
Ludwig, Inc., which owes Giffin Co. $\$ 800,000$ in notes payable, is in financial difficulty. To eliminate the debt, Giffin agrees to accept from Ludwig land having a fair market value of $\$ 610,000$ and a recorded cost of $\$ 450,000$.

## Instructions

(a) Compute the amount of gain or loss to Ludwig, Inc. on the transfer (disposition) of the land.
(b) Compute the amount of gain or loss to Ludwig, Inc. on the settlement of the debt.
(c) Prepare the journal entry on Ludwig 's books to record the settlement of this debt.
(d) Compute the gain or loss to Giffin Co. from settlement of its receivable from Ludwig.
(e) Prepare the journal entry on Giffin's books to record the settlement of this receivable.

## *Solution 14-130

(a) Fair market value of the land

Cost of the land to Ludwig, Inc.
Gain on disposition of land
(b) Carrying amount of debt

Fair market value of the land given
Gain on settlement of debt
\$610,000
450,000
\$160,000
\$800,000
610,000
\$190,000
(c) Notes Payable............................................................................ 800,000
Land................................................................................ 450,000

Gain on Disposition of Land. 160,000
Gain on Settlement of Debt. 190,000
(d) Carrying amount of receivable
\$800,000
Land received in settlement 610,000
Loss on settled debt
\$190,000
(e) Land........................................................................................ 610,000

Allowance for Doubtful Accounts.................................................. 190,000
Notes Receivable.

## IFRS QUESTIONS

## True/False

1. Similar to U.S. practice, iGAAP requires that companies present current and noncurrent liabilities on the face of the balance sheet, with current liabilities generally presented in order of liquidity.
2. Similar to U.S. practice, iGAAP requires that companies present current and noncurrent liabilities on the face of the balance sheet, with current liabilities generally presented in order of magnitude.
3. Both iGAAP and U.S. GAAP prohibit the recognition of liabilities for future losses.
4. iGAAP and U.S. GAAP are similar in the treatment of asset retirement obligations.
5. The recognition criteria for an asset retirement obligation (ARO) are more stringent under iGAAP.
6. iGAAP and U.S. GAAP are dissimilar in their treatment of contingencies.
7. The criteria for recognizing contingent assets are more stringent under U.S. GAAP.
8. Under iGAAP, the measurement of a provision related to a contingency is based on an average estimate of the expenditure required to settle the obligation.
9. U.S. GAAP permits recognition of a restructuring liability, once a company has committed to a restructuring plan.
10. The recognition criteria for an ARO are more stringent under U.S. GAAP: The ARO is not recognized unless there is a present legal obligation and the fair value of the obligation can be reasonably estimated.

## Answers to True/False:

1. True
2. False
3. True
4. True
5. False
6. False
7. False
8. False
9. False
10. True

## Multiple Choice Questions

1. The primary iGAAP related to reporting and recognition of liabilities is found in
a. IAS 10 and IAS 39 .
b. IAS 17 and IAS 23 .
c. IAS 1 and IAS 37 .
d. IAS 27 and IAS 32.
2. Similar to U.S. practice, iGAAP requires that companies present current and noncurrent liabilities on the face of the balance sheet with current liabilities
a. generally presented in order of magnitude.
b. presented in alphabetic order.
c. presented in order of liquidity.
d. presented in the order in which they were incurred.
3. Under iGAAP, the measurement of a provision related to a contingency is based on
a. the best estimate of the expenditure required to settle the obligation.
b. the minimum amount from among a number of alternative estimates.
c. an average from among a number of alternative estimates.
d. whatever management feels that shareholders would be willing to accept because of the impact on current earnings.
4. Both U.S. GAAP and iGAAP prohibit
a. the recognition of a restructuring liability, once a company has committed to a restructuring plan.
b. the recognition of liabilities for future losses.
c. communicating information on a restructuring plan to employees, before a liability can be established.
d. all of the above.
5. iGAAP and U.S. GAAP are
a. similar in the treatment of asset retirement obligations (AROs).
b. significantly different when it comes to the treatment of asset retirement obligations (AROs).
c. continuing to evolve in the area of asset retirement obligations (AROs).
d. in conflict with respect to the accounting for and presentation of asset retirement obligations (AROs).
6. Both iGAAP and U.S. GAAP permit valuation of long-term debt and other liabilities at
a. present value discounted at the firm's cost of capital.
b. current market values of the obligations, based on changes in the discount rate with unrealized gains and losses reflected in a separate account in stockholders' equity.
c. fair value with gains and losses on changes in fair value recorded in income in certain situations.
d. historic costs without reflecting changes in valuation as obligations will be retired at their maturity date.
7. As there is no comparable institution to the SEC in international securities markets, many international companies (those not registered with the SEC)
a. voluntarily adhere to SEC criteria in providing information related to contractual obligations.
b. are not required to provide disclosures such as those related to contractual obligations.
c. follow the requirements established for contractual obligations put forth by the IASB.
d. follow the requirements established for contractual obligations put forth by the FASB.
8. Under U.S. GAAP, contingent assets for insurance recoveries are recognized if $\qquad$ ; iGAAP requires the recovery be " $\qquad$ " before recognition of an asset is permitted.
a. probable and virtually certain
b. possible and very likely
c. possible and definite
d. certain and probable
9. iGAAP rules for establishing restructuring liabilities could be used as an earnings management tool because iGAAP rules are
a. more-stringent that U.S. GAAP.
b. less-stringent that U.S. GAAP.
c. virtually the same as U.S. GAAP.
d. totally different than U.S. GAAP.
10. A concern with iGAAP is that its less-stringent rules for establishing restructuring liabilities could be used as
a. a more appropriate method than that employed under U.S. GAAP.
b. an appropriate method, but complex and difficult to explain to shareholders.
c. a method readily employed to make the understanding of financial information more comprehensible to shareholders.
d. an earinings management tool.

## Answers to multiple choice:

1. c
2. c
3. a
4. b
5. a
6. c
7. b
8. a
9. b
10. d

## IFRS Short Answer:

1. Briefly describe some of the similarities and differences between U.S. GAAP and iGAAP with respect to the accounting for liabilities.
2. Among the similarities are: (1) iGAAP requires that companies present current and noncurrent liabilities on the face of the balance sheet, with current liabilities generally presented in order of liquidity, (2) Both GAAPs prohibit the recognition of liabilities for future losses; (3) iGAAP and U.S. GAAP are similar in the treatment of asset retirement obligations (AROs), and (4) iGAAP and U.S. GAAP are similar in their treatment of contingencies.

Although the two GAAPs are similar with respect to the above topics, there are differences, including: (1) Under iGAAP, the measurement of a provision related to a contingency is based on the best estimate of the expenditure required to settle the obligation. If a range of estimates is predicted and no amount in the range is more likely than any other amount in the range, the 'mid-point' of the range is used to measure the liability. In U.S. GAAP, the minimum
amount in a range is used; (2) iGAAP permits recognition of a restructuring liability, once a company has committed to a restructuring plan. U.S. GAAP has additional criteria (i.e., related to communicating the plan to employees), before a restructuring liability can be established; (3) the recognition criteria for an asset retirement obligation are more stringent under U.S. GAAP-the ARO is not recognized unless there is a present legal obligation and the fair value of the obligation can be reasonably estimated; and (4) the criteria for recognizing contingent assets for insurance recoveries are recognized if probable; iGAAP requires the recovery be "virtually certain," before recognition of an asset is permited.
2. Briefly discuss how accounting convergence efforts addressing liabilities is related to the IASB/FASB conceptual framework project.
2. The IASB and FASB are working on a conceptual framework project, part of which will examine the definition of a liability. In addition, this project will address the difference in measurements used between iGAAP and U.S. GAAP for contingent liabilities. Also, in its project on business combinations, the IASB is considering changing its definition of a contingent asset to converge with U.S. GAAP.

