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# TB Ch16 - Dilutive Securities and Earnings Per Share 

## Accountancy (Bicol University)

## CHAPTER 16

## DILUTIVE SECURITIES AND EARNINGS PER SHARE

IFRS questions are available at the end of this chapter.

## TRUE-FALSE—Dilutive Securities—Conceptual

| Answer | No. | Description |
| :---: | :---: | :---: |
| T | 1. | Accounting for convertible bond issue. |
| F | 2. | Reporting gain/loss on convertible debt retirement. |
| T | 3. | Reporting additional payment to encourage conversion. |
| F | 4. | Exercise of convertible preferred stock. |
| F | 5. | Convertible preferred stock exercise. |
| T | 6. | Allocating proceeds between debt and detachable warrants. |
| F | 7. | Allocating proceeds from nondetachable warrants. |
| T | 8. | Intrinsic value of a stock option. |
| F | 9. | Compensation expense in fair value method. |
| T | 10. | Service period in stock option plans. |
| F | 11. | Accounting for nonexercise of stock options. |
| F | 12. | Accounting for stock option forfeiture. |
| T | 13. | Cumulative preferred stock and EPS. |
| F | 14. | Restating shares for stock dividends and stock splits. |
| T | 15. | Stock dividend and weighted-average shares outstanding. |
| F | 16. | Preferred dividends and income before extraordinary items. |
| T. | 17. | Reporting EPS in complex capital structure. |
| F. | 18. | Dilutive stock options. |
| T | 19. | Contingent issue shares. |
| F | 20. | Reporting EPS for income from continuing operations. |
|  | MUL | TIPLE CHOICE—Dilutive Securities, Conceptual |
| Answer | No. | Description |
| d | 21. | Nature of convertible bonds. |
| d | 22. | Recording conversion of bonds. |
| b | 23. | Classification of early extinguishment of convertible bonds. |
| c | ${ }^{\text {s }} 24$. | Reasons for issuing convertible debt. |
| a | ${ }^{\text {s }} 25$. | Reporting gain/loss on conversion of bonds. |
| d | ${ }^{\text {s }} 26$. | Accounting for conversion of preferred stock. |
| b | 27. | Recording conversion of preferred stock. |
| d | 28. | Bonds issued with detachable stock warrants. |
| d | 29. | Debt equity features of debt issued with stock warrants. |
| d | 30. | Classification of stock warrants outstanding. |
| d | ${ }^{\text {P }} 31$. | Bonds issued with detachable stock warrants. |
| c | ${ }^{\text {P }} 32$. | Distribution of stock rights. |
| b | ${ }^{5} 3$. | Difference between convertible debt and stock warrants. |
| c | ${ }^{\text {s }} 34$. | Characteristics of noncompensatory stock option plan. |
| a | 35. | Measurement of compensation in stock option. |
| c | 36. | Recognition of compensation expense in a stock option plan. |
| a | 37. | Compensation expense in a stock option plan. |
| d | 38. | Characteristics of noncompensatory stock purchase plan. |
| a | *39. | Compensation expense in an incentive stock option plan. |

# MULTIPLE CHOICE—Dilutive Securities, Conceptual (cont.) 

| Answer | No. | Description |
| :---: | :---: | :--- |
| d | ${ }^{* 40 .}$ | Stock appreciation rights plan. |
| b | ${ }^{* 41 .}$ | Incentive stock option plan. |
| b | ${ }^{*} 42$. | Share-based liability awards. |

## MULTIPLE CHOICE—Dilutive Securities, Computational

| Answer | No. | Description |
| :---: | :---: | :---: |
| a | 43. | Conversion of convertible bonds. |
| b | 44. | Conversion of convertible bonds. |
| a | 45. | Exercise of stock purchase rights. |
| c | 46. | Conversion of convertible bonds. |
| b | 47. | Amortization of bond discount. |
| b | 48. | Unamortized bond discount related to converted bonds. |
| b | 49. | Conversion of convertible bonds. |
| d | 50. | Conversion of convertible preferred stock. |
| b | 51. | Bonds issued with detachable stock warrants. |
| c | 52. | Bonds issued with detachable stock warrants. |
| c | 53. | Bonds issued with detachable stock warrants. |
| c | 54. | Bonds issued with detachable stock warrants. |
| c | 55. | Recording paid-in capital from stock warrants. |
| b | 56. | Bonds issued with detachable stock warrants. |
| b | 57. | Exercise of stock purchase rights. |
| b | 58. | Bonds issued with detachable stock warrants. |
| c | 59. | Bonds issued with detachable stock warrants. |
| b | 60. | Recording paid-in capital from stock warrants. |
| b | 61. | Determine compensation expense in a stock option plan. |
| c | 62. | Determine compensation expense in a stock option plan. |
| c | 63. | Impact of stock options on net income. |
| b | 64. | Determine compensation expense in a stock option plan. |
| b | 65. | Determine compensation expense in a stock option plan. |
| d | 66. | Determine compensation expense in a stock option plan. |
| d | 67. | Determine paid-in capital amount in a stock option plan. |
| c | 68. | Determine compensation expense in a stock option plan. |
| c | 69. | Net income effect in a stock option plan. |
| c | 70. | Determine compensation expense in a stock option plan. |
| c | 71. | Impact of stock options on stockholders' equity. |
| b | 72. | Determine compensation expense in a stock option plan. |
| a | 73. | Determine compensation expense in a stock option plan. |
| c | 74. | Issuance of treasury stock in a stock option plan. |
| b | *75. | Compensation expense recognized in first year in an SAR plan. |
| b | *76. | Compensation expense recognized in second year in an SAR plan. |
| a | *77. | Compensation expense recognized in third year in an SAR plan. |
| ${ }^{\mathrm{P}}$ These questions also appear in the Problem-Solving Survival Guide. |  |  |
| ${ }^{5}$ These questions also appear in the Study Guide. |  |  |
| *This topic is dealt with in an Appendix to the chapter. |  |  |

# MULTIPLE CHOICE—Dilutive Securities, CPA Adapted 

| Answer | No. | Description |
| :---: | :---: | :--- |
| d | 78. | Cash proceeds from issuance of convertible bonds. |
| a | 79. | Bond issue with detachable stock warrants. |
| c | 80. | Compensation expense in a stock option plan. |
| c | $* 81$. | Compensation expense recognized in an SAR plan. |

## MULTIPLE CHOICE—Earnings Per Share, Conceptual

| Answer | No. | Description |
| :---: | :---: | :--- |
| c | 82. | Simple capital structure. |
| d | 83. | Computing EPS for a simple capital structure. |
| d | 84. | Computation of weighted-average shares outstanding. |
| c | 85. | Effect of treasury stock on EPS. |
| b | ${ }^{\text {s }} 86$. | Reporting EPS by companies. |
| b | ${ }^{\text {P }} 87$. | Diluted EPS and conversion of bonds. |
| d | 88. | Diluted EPS. |
| b | 89. | Dilutive convertible securities. |
| a | 90. | Cumulative convertible preferred stock income adjustment. |
| d | 91. | Treasury stock method. |
| a | 92. | Treasury stock method. |
| b | 93. | Treasury stock method. |
| d | 94. | Antidilutive securities. |
| d | *95. | EPS calculation with two dilutive convertible securities. |

## MULTIPLE CHOICE—Earnings Per Share, Computational

Answer No. Description
c 96. Weighted average number of common shares outstanding.
c 97. Weighted average number of common shares outstanding.
b 98. Weighted average number of common shares outstanding.
b 99. Weighted average number of shares outstanding

| MULTIPLE CHOICE——Earnings Per Share, Computational (cont.) |  |  |  |
| :---: | :---: | :---: | :---: |
| Answer | No. |  |  |
| ( Description |  |  |  |
| c | 118. |  |  |
| Diluted EPS. |  |  |  |
| b | 119. |  |  |

## MULTIPLE CHOICE—Earnings Per Share, CPA Adapted

| Answer | No. | Description |
| :---: | :---: | :--- |
| b | 128. | Determine earnings per common share. |
| b | 129. | Determine earnings per common share. |
| d | 130. | Determine diluted EPS. |
| b | 131. | Number of shares to calculate eiluted EPS. |
| b | 132. | DEPS with convertible securities. |
| d | 133. | Effect of dividends on nonconvertible preferred stock. |
| a | 134. | "If converted" method. |

## EXERCISES

## Item Description

E16-135 Convertible bonds.
E16-136 Convertible bonds (essay).
E16-137 Convertible debt and debt with warrants (essay).
E16-138 Stock options.
E16-139 Weighted average shares outstanding.
E16-140 Earnings per share (essay).
E16-141 Earnings per share.
E16-142 Diluted earnings per share.
*E16-143 Stock appreciation rights.

## PROBLEMS

## Item Description

P16-144 Convertible bonds and stock warrants.
P16-145 Earnings per share.
P16-146 Basic and diluted earnings per share.
P16-147 Basic and diluted earnings per share.
P16-148 Basic and diluted earnings per share.

## CHAPTER LEARNING OBJECTIVES

1. Describe the accounting for the issuance, conversion, and retirement of convertible securities.
2. Explain the accounting for convertible preferred stock.
3. Contrast the accounting for stock warrants and stock warrants issued with other securities.
4. Describe the accounting for stock compensation plans under generally accepted accounting principles.
5. Discuss the controversy involving stock compensation plans.
6. Compute earnings per share in a simple capital structure.
7. Compute earnings per share in a complex capital structure.
*8. Explain the accounting for stock-appreciation rights plans.
*9. Compute earnings per share in a complex situation.

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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 | ${ }^{\text {s }} 24$. | MC | 44. | MC | 47. | MC | 78. | MC | 144. | P |
| 2. | TF | 22. | MC | ${ }^{\text {s }} 25$. | MC | 45. | MC | 48. | MC | 135. | E |  |  |
| 3. | TF | 23. | MC | 43. | MC | 46. | MC | 49. | MC | 136. | E |  |  |
| Learning Objective 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. | TF | 5. | TF | ${ }^{\text {s }} 26$. | MC | 27. | MC | 50. | MC |  |  |  |  |
| Learning Objective 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6. | TF | 29. | MC | ${ }^{5} 33$. | MC | 54. |  | 58. | MC | 137. | E |  |  |
| 7. | TF | 30. | MC | 51. | MC | 55. | MC | 59. | MC | 144. | P |  |  |
| 8. | TF | ${ }^{\text {P }} 31$. | MC | 52. | MC | 56. | MC | 60. | MC |  |  |  |  |
| 28. | MC | ${ }^{\text {P }} 32$. | MC | 53. | MC | 57. | MC | 79. | MC |  |  |  |  |
| Learning Objective 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9. | TF | ${ }^{\text {s }} 34$. | MC | 38. | MC | 64. | MC | 68. | MC | 72. | MC | 138. | E |
| 10. | TF | 35. | MC | 61. | MC | 65. | MC | 69. | MC | 73. | MC |  |  |
| 11. | TF | 36. | MC | 62. | MC | 66. | MC | 70. | MC |  | MC |  |  |
| 12. | TF | 37. | MC | 63. | MC | 67. | MC | 71. | MC | 80. | MC |  |  |
| Learning Objective 6 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13. | TF | 82. | MC | ${ }^{\text {s }} 86$. | MC | 99. | MC | 103. | MC | 139. | E |  |  |
| 14. | TF | 83. | MC | 96. | MC | 100. | MC | 128. | MC | 140. | E |  |  |
| 15. | TF | 84. | MC | 97. | MC | 101. | MC | 129. | MC | 146. | P |  |  |
| 16. | TF | 85. | MC | 98. | MC | 102. | MC | 130. | MC | 147. | P |  |  |
| Learning Objective 7 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 17. | TF | 90. | MC | 106. | MC | 113. | MC | 120. | MC | 127. | MC | 142. | E |
| 18. | TF | 91. | MC | 107. | MC | 114. | MC | 121. | MC | 131. | MC | 145. | P |
| 19. | TF | 92. | MC | 108. | MC | 115. | MC | 122. | MC | 132. | MC | 146. | P |
| 20. | TF | 93. | MC | 109. | MC | 116. | MC | 123. | MC | 133. | MC | 147. | P |
| ${ }^{\text {P } 87 .}$ | MC | 94. | MC | 110. | MC | 117. | MC | 124. | MC | 134. | MC | 148. | P |
| 88. | MC | 104. | MC | 111. | MC | 118. | MC | 125. | MC | 140. | E |  |  |
| 89. | MC | 105. | MC | 112. | MC | 119. | MC | 126. | MC | 141. | E |  |  |
| Learning Objective 8* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 39. | MC | 41. | MC | 75. | MC |  | MC | 143. | E |  |  |  |  |
| 40. | MC | 42. | MC | 76. | MC |  | MC |  |  |  |  |  |  |
| Learning Objective 9* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 95. | MC |  |  |  |  |  |  |  |  |  |  |  |  |
| Note: | $\begin{aligned} & \mathrm{TF}= \\ & \mathrm{MC}= \\ & \mathrm{E}=\mathrm{E} \\ & \mathrm{P}=\mathrm{P} \end{aligned}$ | rue-F <br> Multipl ercise roblem | se Choi |  |  |  |  |  |  |  |  |  |  |

## TRUE-FALSE—Conceptual

1. The recording of convertible bonds at the date of issue is the same as the recording of straight debt issues.
2. Companies recognize the gain or loss on retiring convertible debt as an extraordinary item.
3. The FASB states that when an issuer makes an additional payment to encourage conversion, the payment should be reported as an expense.
4. The market value method is used to account for the exercise of convertible preferred stock.
5. Companies recognize a gain or loss when stockholders exercise convertible preferred stock.
6. A company should allocate the proceeds from the sale of debt with detachable stock warrants between the two securities based on their market values.
7. Nondetachable warrants, as with detachable warrants, require an allocation of the proceeds between the bonds and the warrants.
8. The intrinsic value of a stock option is the difference between the market price of the stock and the exercise price of the options at the grant date.
9. Under the fair value method, companies compute total compensation expense based on the fair value of options on the date of exercise.
10. The service period in stock option plans is the time between the grant date and the vesting date.
11. If an employee fails to exercise a stock option before its expiration date, the company should decrease compensation expense.
12. If an employee forfeits a stock option because of failure to satisfy a service requirement, the company should record paid-in capital from expired options.
13. If preferred stock is cumulative and no dividends are declared, the company subtracts the current year preferred dividend in computing earnings per share.
14. When stock dividends or stock splits occur, companies must restate the shares outstanding after the stock dividend or split, in order to compute the weighted-average number of shares.
15. If a stock dividend occurs after year-end, but before issuing the financial statements, a company must restate the weighted-average number of shares outstanding for the year.
16. Preferred dividends are subtracted from net income but not income before extraordinary items in computing earnings per share.

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17. When a company has a complex capital structure, it must report both basic and diluted earnings per share.
18. In computing diluted earnings per share, stock options are considered dilutive when their option price is greater than the market price.
19. In a contingent issue agreement, the contingent shares are considered outstanding for computing diluted EPS when the earnings or market price level is met by the end of the year.
20. A company should report per share amounts for income before extraordinary items, but not for income from continuing operations.

## True-False Answers-Conceptual

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

## MULTIPLE CHOICE—Dilutive Securities, Conceptual

21. Convertible bonds
a. have priority over other indebtedness.
b. are usually secured by a first or second mortgage.
c. pay interest only in the event earnings are sufficient to cover the interest.
d. may be exchanged for equity securities.
22. The conversion of bonds is most commonly recorded by the
a. incremental method.
b. proportional method.
c. market value method.
d. book value method.
23. When a bond issuer offers some form of additional consideration (a "sweetener") to induce conversion, the sweetener is accounted for as a(n)
a. extraordinary item.
b. expense.
c. loss.
d. none of these.
${ }^{s} 24$. Corporations issue convertible debt for two main reasons. One is the desire to raise equity capital that, assuming conversion, will arise when the original debt is converted. The other is
a. the ease with which convertible debt is sold even if the company has a poor credit rating.
b. the fact that equity capital has issue costs that convertible debt does not.
c. that many corporations can obtain financing at lower rates.
d. that convertible bonds will always sell at a premium.
${ }^{\mathrm{s}} 25$. When convertible debt is retired by the issuer, any material difference between the cash acquisition price and the carrying amount of the debt should be
a. reflected currently in income, but not as an extraordinary item.
b. reflected currently in income as an extraordinary item.
c. treated as a prior period adjustment.
d. treated as an adjustment of additional paid-in capital.
${ }^{s} 26$. The conversion of preferred stock into common requires that any excess of the par value of the common shares issued over the carrying amount of the preferred being converted should be
a. reflected currently in income, but not as an extraordinary item.
b. reflected currently in income as an extraordinary item.
c. treated as a prior period adjustment.
d. treated as a direct reduction of retained earnings.
24. The conversion of preferred stock may be recorded by the
a. incremental method.
b. book value method.
c. market value method.
d. par value method.
25. When the cash proceeds from a bond issued with detachable stock warrants exceed the sum of the par value of the bonds and the fair market value of the warrants, the excess should be credited to
a. additional paid-in capital from stock warrants.
b. retained earnings.
c. a liability account.
d. premium on bonds payable.
26. Proceeds from an issue of debt securities having stock warrants should not be allocated between debt and equity features when
a. the market value of the warrants is not readily available.
b. exercise of the warrants within the next few fiscal periods seems remote.
c. the allocation would result in a discount on the debt security.
d. the warrants issued with the debt securities are nondetachable.
27. Stock warrants outstanding should be classified as
a. liabilities.
b. reductions of capital contributed in excess of par value.
c. assets.
d. none of these.
${ }^{P} 31$. A corporation issues bonds with detachable warrants. The amount to be recorded as paidin capital is preferably
a. zero.
b. calculated by the excess of the proceeds over the face amount of the bonds.
c. equal to the market value of the warrants.
d. based on the relative market values of the two securities involved.
${ }^{\mathrm{P}} 32$. The distribution of stock rights to existing common stockholders will increase paid-in capital at the

|  | Date of Issuance <br> of the Rights | Date of Exercise <br> of the Rights |
| :--- | :---: | :---: |
| a. | Yes | Yes |
| b. | Yes | No |
| c. | No | Yes |
| d. | No | No |

${ }^{s} 33$. The major difference between convertible debt and stock warrants is that upon exercise of the warrants
a. the stock is held by the company for a defined period of time before they are issued to the warrant holder.
b. the holder has to pay a certain amount of cash to obtain the shares.
c. the stock involved is restricted and can only be sold by the recipient after a set period of time.
d. no paid-in capital in excess of par can be a part of the transaction.
$s_{34}$. Which of the following is not a characteristic of a noncompensatory stock option plan?
a. Substantially all full-time employees may participate on an equitable basis.
b. The plan offers no substantive option feature.
c. Unlimited time period permitted for exercise of an option as long as the holder is still employed by the company.
d. Discount from the market price of the stock no greater than would be reasonable in an offer of stock to stockholders or others.
35. The date on which to measure the compensation element in a stock option granted to a corporate employee ordinarily is the date on which the employee
a. is granted the option.
b. has performed all conditions precedent to exercising the option.
c. may first exercise the option.
d. exercises the option.
36. Compensation expense resulting from a compensatory stock option plan is generally
a. recognized in the period of exercise.
b. recognized in the period of the grant.
c. allocated to the periods benefited by the employee's required service.
d. allocated over the periods of the employee's service life to retirement.
37. The date on which total compensation expense is computed in a stock option plan is the date
a. of grant.
b. of exercise.
c. that the market price coincides with the option price.
c. that the market price exceeds the option price.
38. Which of the following is not a characteristic of a noncompensatory stock purchase plan?
a. It is open to almost all full-time employees.
b. The discount from market price is small.
c. The plan offers no substantive option feature.
d. All of these are characteristics.
*39. Under the intrinsic value method, compensation expense resulting from an incentive stock option is generally
a. not recognized because no excess of market price over the option price exists at the date of grant.
b. recognized in the period of the grant.
c. allocated to the periods benefited by the employee's required service.
d. recognized in the period of exercise.
*40. For stock appreciation rights, the measurement date for computing compensation is the date
a. the rights mature.
b. the stock's price reaches a predetermined amount.
c. of grant.
d. of exercise.
*41. An executive pays no taxes at time of exercise in a(an)
a. stock appreciation rights plan.
b. incentive stock option plan.
c. nonqualified stock option plan.
d. Taxes would be paid in all of these.
*42. A company estimates the fair value of SARs, using an option-pricing model, for
a. share-based equity awards.
b. share-based liability awards.
c. both equity awards and liability awards.
d. neither equity awards or liability awards.

Multiple Choice Answers-Dilutive Securities, Conceptual

| Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21. | d | 25. | a | 29. | d | 33. | b | 37. | a | ${ }^{*} 41$. | b |
| 22. | d | 26. | d | 30. | d | 34. | c | 38. | d | ${ }^{4} 42$. | b |
| 23. | b | 27. | b | 31. | d | 35. | a | ${ }^{*} 39$. | c |  |  |
| 24. | c | 28. | d | 32. | c | 36. | c | $* 40$. | d |  |  |

Solutions to those Multiple Choice questions for which the answer is "none of these."
30. additions to contributed capital.

## MULTIPLE CHOICE—Dilutive Securities, Computational

43. Fogel Co. has $\$ 5,000,000$ of $8 \%$ convertible bonds outstanding. Each $\$ 1,000$ bond is convertible into 30 shares of $\$ 30$ par value common stock. The bonds pay interest on January 31 and July 31. On July 31, 2012, the holders of $\$ 1,600,000$ bonds exercised the conversion privilege. On that date the market price of the bonds was 105 and the market price of the common stock was $\$ 36$. The total unamortized bond premium at the date of conversion was $\$ 350,000$. Fogel should record, as a result of this conversion, a
a. credit of $\$ 272,000$ to Paid-in Capital in Excess of Par.
b. credit of $\$ 240,000$ to Paid-in Capital in Excess of Par.
c. credit of $\$ 112,000$ to Premium on Bonds Payable.
d. Ioss of $\$ 16,000$.
44. On July 1, 2012, an interest payment date, $\$ 80,000$ of Parks Co. bonds were converted into 1,600 shares of Parks Co. common stock each having a par value of $\$ 45$ and a market value of $\$ 54$. There is $\$ 3,200$ unamortized discount on the bonds. Using the book value method, Parks would record
a. no change in paid-in capital in excess of par.
b. a $\$ 4,800$ increase in paid-in capital in excess of par.
c. a $\$ 9,600$ increase in paid-in capital in excess of par.
d. a $\$ 6,400$ increase in paid-in capital in excess of par.
45. Morgan Corporation had two issues of securities outstanding: common stock and an $8 \%$ convertible bond issue in the face amount of $\$ 20,000,000$. Interest payment dates of the bond issue are June 30th and December 31st. The conversion clause in the bond indenture entitles the bondholders to receive forty shares of $\$ 20$ par value common stock in exchange for each $\$ 1,000$ bond. On June 30, 2012, the holders of $\$ 3,000,000$ face value bonds exercised the conversion privilege. The market price of the bonds on that date was $\$ 1,100$ per bond and the market price of the common stock was $\$ 35$. The total unamortized bond discount at the date of conversion was $\$ 1,250,000$. In applying the book value method, what amount should Morgan credit to the account "paid-in capital in excess of par," as a result of this conversion?
a. $\$ 412,500$.
b. $\$ 200,000$.
c. $\$ 1,800,000$.
d. $\$ 900,000$.

## Use the following information for questions 46 through 48.

Chang Corporation issued \$6,000,000 of 9\%, ten-year convertible bonds on July 1, 2012 at 96.1 plus accrued interest. The bonds were dated April 1, 2010 with interest payable April 1 and October 1. Bond discount is amortized semiannually on a straight-line basis. On April 1, 2013, $\$ 1,200,000$ of these bonds were converted into 500 shares of $\$ 20$ par value common stock. Accrued interest was paid in cash at the time of conversion.
46. If "interest payable" were credited when the bonds were issued, what should be the amount of the debit to "interest expense" on October 1, 2012?
a. $\$ 129,000$.
b. $\$ 135,000$.
c. $\$ 141,000$.
d. $\$ 270,000$.
47. What should be the amount of the unamortized bond discount on April 1, 2013 relating to the bonds converted?
a. $\$ 46,800$.
b. $\$ 43,200$.
c. $\$ 23,400$.
d. $\$ 44,400$.
48. What was the effective interest rate on the bonds when they were issued?
a. $9 \%$
b. Above 9\%
c. Below $9 \%$
d. Cannot determine from the information given.
49. Litke Corporation issued at a premium of $\$ 5,000$ a $\$ 100,000$ bond issue convertible into 2,000 shares of common stock (par value \$25). At the time of the conversion, the unamortized premium is $\$ 2,000$, the fair value of the bonds is $\$ 110,000$, and the stock is quoted on the market at $\$ 60$ per share. If the bonds are converted into common, what is the amount of paid-in capital in excess of par to be recorded on the conversion of the bonds?
a. $\$ 55,000$
b. $\$ 52,000$
c. $\$ 62,000$
d. $\$ 70,000$
50. In 2012, Eklund, Inc., issued for $\$ 103$ per share, 80,000 shares of $\$ 100$ par value convertible preferred stock. One share of preferred stock can be converted into three shares of Eklund's $\$ 25$ par value common stock at the option of the preferred stockholder. In August 2013, all of the preferred stock was converted into common stock. The market value of the common stock at the date of the conversion was $\$ 30$ per share. What total amount should be credited to additional paid-in capital from common stock as a result of the conversion of the preferred stock into common stock?
a. $\$ 1,360,000$.
b. $\$ 1,040,000$.
c. $\$ 2,000,000$.
d. $\$ 2,240,000$.
51. On December 1, 2012, Lester Company issued at 103, four hundred of its $9 \%, \$ 1,000$ bonds. Attached to each bond was one detachable stock warrant entitling the holder to purchase 10 shares of Lester's common stock. On December 1, 2012, the market value of the bonds, without the stock warrants, was 95 , and the market value of each stock purchase warrant was $\$ 50$. The amount of the proceeds from the issuance that should be accounted for as the initial carrying value of the bonds payable would be
a. $\$ 387,280$.
b. $\$ 391,400$.
c. $\$ 400,000$.
d. $\$ 412,000$.
52. On March 1, 2012, Ruiz Corporation issued $\$ 1,000,000$ of $8 \%$ nonconvertible bonds at 104, which are due on February 28, 2032. In addition, each $\$ 1,000$ bond was issued with 25 detachable stock warrants, each of which entitled the bondholder to purchase for $\$ 50$ one share of Ruiz common stock, par value $\$ 25$. The bonds without the warrants would normally sell at 95 . On March 1,2012 , the fair value of Ruiz's common stock was $\$ 40$ per share and the fair value of the warrants was $\$ 2$. What amount should Ruiz record on March 1, 2010 as paid-in capital from stock warrants?
a. $\$ 36,000$
b. $\$ 42,600$
c. $\$ 52,000$
d. $\$ 50,000$

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53. During 2012, Gordon Company issued at 104 five hundred, $\$ 1,000$ bonds due in ten years. One detachable stock warrant entitling the holder to purchase 15 shares of Gordon's common stock was attached to each bond. At the date of issuance, the market value of the bonds, without the stock warrants, was quoted at 96 . The market value of each detachable warrant was quoted at $\$ 40$. What amount, if any, of the proceeds from the issuance should be accounted for as part of Gordon's stockholders' equity?
a. $\$ 0$
b. $\$ 20,000$
c. $\$ 20,800$
d. $\$ 19,760$
54. On April 7, 2012, Kegin Corporation sold a $\$ 3,000,000$, twenty-year, 8 percent bond issue for $\$ 3,180,000$. Each $\$ 1,000$ bond has two detachable warrants, each of which permits the purchase of one share of the corporation's common stock for $\$ 30$. The stock has a par value of $\$ 25$ per share. Immediately after the sale of the bonds, the corporation's securities had the following market values:

| $8 \%$ bond without warrants | $\$ 1,008$ |
| :--- | ---: |
| Warrants | 21 |
| Common stock | 28 |

What accounts should Kegin credit to record the sale of the bonds?
a. Bonds Payable
\$3,000,000
Premium on Bonds Payable
116,400
Paid-in Capital—Stock Warrants
63,600
b. Bonds Payable
\$3,000,000
Premium on Bonds Payable
24,000
Paid-in Capital—Stock Warrants
126,000
c. Bonds Payable
Premium on Bonds Payable
\$3,000,000
Paid-in Capital—Stock Warrants
52,800
d. Bonds Payable
127,200
Premiums on Bonds Payable
\$3,000,000
180,000

Use the following information for questions 55 and 56.
On May 1, 2012, Payne Co. issued $\$ 500,000$ of $7 \%$ bonds at 103 , which are due on April 30, 2022. Twenty detachable stock warrants entitling the holder to purchase for $\$ 40$ one share of Payne's common stock, $\$ 15$ par value, were attached to each $\$ 1,000$ bond. The bonds without the warrants would sell at 96 . On May 1, 2012, the fair value of Payne's common stock was $\$ 35$ per share and of the warrants was $\$ 2$.
55. On May 1, 2012, Payne should credit Paid-in Capital from Stock Warrants for
a. $\$ 19,200$.
b. $\$ 20,000$.
c. $\$ 20,600$.
d. $\$ 35,000$.
56. On May 1, 2012, Payne should record the bonds with a
a. discount of $\$ 20,000$.
b. discount of $\$ 5,600$.
c. discount of $\$ 5,000$.
d. premium of $\$ 15,000$.
57. On July 4, 2012, Chen Company issued for $\$ 6,300,000$ a total of 60,000 shares of $\$ 100$ par value, $7 \%$ noncumulative preferred stock along with one detachable warrant for each share issued. Each warrant contains a right to purchase one share of Chen $\$ 10$ par value common stock for $\$ 15$ per share. The stock without the warrants would normally sell for $\$ 6,150,000$. The market price of the rights on July 1, 2012, was $\$ 2.50$ per right. On October 31, 2012, when the market price of the common stock was $\$ 19$ per share and the market value of the rights was $\$ 3.00$ per right, 24,000 rights were exercised. As a result of the exercise of the 24,000 rights and the issuance of the related common stock, what journal entry would Chen make?
a. Cash

| Common Stock |  | 240,000 |
| :---: | :---: | :---: |
| Paid-in Capital in Excess of Par |  | 120,000 |
|  | 360,000 |  |
| n Capital-Stock Warrants | 60,000 |  |
| Common Stock |  | 240,000 |
| Paid-in Capital in Excess of Par |  | 180,000 |
|  | 360,000 |  |
| - Capital—Stock Warrants | 150,000 |  |
| Common Stock |  | 240,000 |
| Paid-in Capital in Excess of Par |  | 270,000 |
|  | 360,000 |  |
| - Capital—Stock Warrants | 90,000 |  |
| Common Stock |  | 240,000 |
| Paid-in Capital in Excess of Par |  | 210,000 |

58. Vernon Corporation offered detachable 5-year warrants to buy one share of common stock (par value $\$ 5$ ) at $\$ 20$ (at a time when the stock was selling for $\$ 32$ ). The price paid for $4,000, \$ 1,000$ bonds with the warrants attached was $\$ 410,000$. The market price of the Vernon bonds without the warrants was $\$ 360,000$, and the market price of the warrants without the bonds was $\$ 40,000$. What amount should be allocated to the warrants?
a. $\$ 40,000$
b. $\$ 41,000$
c. $\$ 48,000$
d. $\$ 50,000$

Use the following information for questions 59 and 60.
On May 1, 2012, Marly Co. issued $\$ 1,000,000$ of $7 \%$ bonds at 103 , which are due on April 30, 2022. Twenty detachable stock warrants entitling the holder to purchase for $\$ 40$ one share of Marly's common stock, $\$ 15$ par value, were attached to each $\$ 1,000$ bond. The bonds without the warrants would sell at 96 . On May 1, 2012, the fair value of Marly's common stock was $\$ 35$ per share and of the warrants was $\$ 2$.
59. On May 1, 2012, Marly should record the bonds with a
a. discount of $\$ 40,000$.
b. discount of $\$ 10,000$.
c. discount of $\$ 11,200$.
d. premium of $\$ 30,000$.

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60. On May 1, 2012, Marly should credit Paid-in Capital from Stock Warrants for
a. $\$ 70,000$
b. $\$ 41,200$
c. $\$ 40,000$
d. $\$ 38,400$
61. On July 1, 2012, Ellison Company granted Sam Wine, an employee, an option to buy 600 shares of Ellison Co. stock for $\$ 30$ per share, the option exercisable for 5 years from date of grant. Using a fair value option pricing model, total compensation expense is determined to be $\$ 2,700$. Wine exercised his option on October 1, 2012 and sold his 600 shares on December 1, 2012. Quoted market prices of Ellison Co. stock in 2012 were:

| July 1 | $\$ 30$ per share |
| :--- | :--- |
| October 1 | $\$ 36$ per share |
| December 1 | $\$ 40$ per share |

The service period is for three years beginning January 1, 2012. As a result of the option granted to Wine, using the fair value method, Ellison should recognize compensation expense on its books in the amount of
a. $\$ 2,700$.
b. $\$ 900$.
c. $\$ 675$.
d. $\$ 0$.
62. On January 1, 2012, Trent Company granted Dick Williams, an employee, an option to buy 300 shares of Trent Co. stock for $\$ 30$ per share, the option exercisable for 5 years from date of grant. Using a fair value option pricing model, total compensation expense is determined to be $\$ 2,700$. Williams exercised his option on September 1, 2012, and sold his 300 shares on December 1, 2012. Quoted market prices of Trent Co. stock during 2012 were:

| January 1 | $\$ 30$ per share |
| :--- | :--- |
| September 1 | $\$ 36$ per share |
| December 1 | $\$ 40$ per share |

The service period is for two years beginning January 1, 2012. As a result of the option granted to Williams, using the fair value method, Trent should recognize compensation expense for 2012 on its books in the amount of
a. $\$ 3,000$.
b. $\$ 2,700$.
c. $\$ 1,350$.
d. $\$ 0$.
63. On December 31, 2012, Gonzalez Company granted some of its executives options to purchase 120,000 shares of the company's $\$ 10$ par common stock at an option price of $\$ 50$ per share. The Black-Scholes option pricing model determines total compensation expense to be $\$ 900,000$. The options become exercisable on January 1, 2013, and represent compensation for executives' services over a three-year period beginning January 1, 2013. At December 31, 2013 none of the executives had exercised their options. What is the impact on Gonzalez's net income for the year ended December 31, 2013 as a result of this transaction under the fair value method?
a. $\$ 300,000$ increase.
b. $\$ 900,000$ decrease.
c. $\$ 300,000$ decrease .
d. $\$ 0$.
64. On January 1, 2013 Reese Company granted Jack Buchanan, an employee, an option to buy 200 shares of Reese Co. stock for $\$ 40$ per share, the option exercisable for 5 years from date of grant. Using a fair value option pricing model, total compensation expense is determined to be $\$ 2,400$. Buchanan exercised his option on September 1, 2013, and sold his 200 shares on December 1, 2013. Quoted market prices of Reese Co. stock during 2013 were:

| January 1 | $\$ 40$ per share |
| :--- | :--- |
| September 1 | $\$ 48$ per share |
| December 1 | $\$ 54$ per share |

The service period is for two years beginning January 1, 2013. As a result of the option granted to Buchanan, using the fair value method, Reese should recognize compensation expense for 2013 on its books in the amount of
a. $\$ 0$.
b. $\$ 1,200$.
c. $\$ 2,400$
d. $\$ 2,800$
65. On June 30, 2012, Yang Corporation granted compensatory stock options for 30,000 shares of its $\$ 24$ par value common stock to certain of its key employees. The market price of the common stock on that date was $\$ 31$ per share and the option price was $\$ 28$. Using a fair value option pricing model, total compensation expense is determined to be $\$ 96,000$. The options are exercisable beginning January 1, 2014, providing those key employees are still in the employ of the company at the time the options are exercised. The options expire on June 30, 2015.
On January 4, 2014, when the market price of the stock was $\$ 36$ per share, all options for the 30,000 shares were exercised. The service period is for two years beginning January 1, 2012. Using the fair value method, what should be the amount of compensation expense recorded by Yang Corporation for these options on December 31, 2012 ?
a. $\$ 96,000$
b. $\$ 48,000$
c. $\$ 22,500$
d. \$0
66. In order to retain certain key executives, Smiley Corporation granted them incentive stock options on December 31, 2011. 100,000 options were granted at an option price of $\$ 35$ per share. Market prices of the stock were as follows:

December 31, $2012 \$ 46$ per share
December 31, $2013 \quad 51$ per share
The options were granted as compensation for executives' services to be rendered over a two-year period beginning January 1, 2012. The Black-Scholes option pricing model determines total compensation expense to be $\$ 1,000,000$. What amount of compensation expense should Smiley recognize as a result of this plan for the year ended December 31, 2012 under the fair value method?
a. $\$ 1,750,000$.
b. $\$ 1,100,000$.
c. $\$ 1,000,000$.
d. $\$ 500,000$.
67. On January 1, 2013, Ritter Company granted stock options to officers and key employees for the purchase of 20,000 shares of the company's $\$ 1$ par common stock at $\$ 20$ per share as additional compensation for services to be rendered over the next three years. The options are exercisable during a five-year period beginning January 1, 2016 by grantees still employed by Ritter. The Black-Scholes option pricing model determines total compensation expense to be $\$ 180,000$. The market price of common stock was $\$ 26$ per share at the date of grant. The journal entry to record the compensation expense related to these options for 2013 would include a credit to the Paid-in Capital—Stock Options account for
a. $\$ 0$.
b. $\$ 36,000$.
c. $\$ 40,000$.
d. $\$ 60,000$.
68. On January 1, 2013, Evans Company granted Tim Telfer, an employee, an option to buy 2,000 shares of Evans Co. stock for $\$ 25$ per share, the option exercisable for 5 years from date of grant. Using a fair value option pricing model, total compensation expense is determined to be $\$ 15,000$. Telfer exercised his option on September 1, 2013, and sold his 1,000 shares on December 1, 2013. Quoted market prices of Evans Co. stock during 2013 were

```
January 1 $25 per share
September 1 $30 per share
December 1 $34 per share
```

The service period is for three years beginning January 1, 2013. As a result of the option granted to Telfer, using the fair value method, Evans should recognize compensation expense for 2013 on its books in the amount of
a. $\$ 18,000$.
b. $\$ 15,000$.
c. $\$ 5,000$.
d. $\$ 3,000$.
69. On December 31, 2012, Kessler Company granted some of its executives options to purchase 75,000 shares of the company's $\$ 10$ par common stock at an option price of $\$ 50$ per share. The options become exercisable on January 1, 2013, and represent compensation for executives' services over a three-year period beginning January 1, 2013. The Black-Scholes option pricing model determines total compensation expense to be $\$ 450,000$. At December 31, 2013, none of the executives had exercised their options. What is the impact on Kessler's net income for the year ended December 31, 2013 as a result of this transaction under the fair value method?
a. $\$ 150,000$ increase
b. $\$ 0$
c. $\$ 150,000$ decrease
d. $\$ 450,000$ decrease
70. Weiser Corp. on January 1, 2009, granted stock options for 60,000 shares of its $\$ 10$ par value common stock to its key employees. The market price of the common stock on that date was $\$ 23$ per share and the option price was $\$ 20$. The Black-Scholes option pricing model determines total compensation expense to be $\$ 360,000$. The options are exercisable beginning January 1, 2012, provided those key employees are still in Weiser's employ at the time the options are exercised. The options expire on January 1, 2013.
On January 1, 2012, when the market price of the stock was $\$ 29$ per share, all 60,000 options were exercised. The amount of compensation expense Weiser should record for 2011 under the fair value method is
a. \$0.
b. $\$ 60,000$.
c. $\$ 120,000$.
d. $\$ 180,000$.
71. On December 31, 2010, Houser Company granted some of its executives options to purchase 75,000 shares of the company's $\$ 50$ par common stock at an option price of $\$ 60$ per share. The Black-Scholes option pricing model determines total compensation expense to be $\$ 1,500,000$. The options become exercisable on January 1, 2013, and represent compensation for executives' past and future services over a three-year period beginning January 1, 2013. What is the impact on Houser's total stockholders' equity for the year ended December 31, 2012, as a result of this transaction under the fair value method?
a. $\$ 1,500,000$ decrease
b. $\$ 500,000$ decrease
c. \$0
d. $\$ 500,000$ increase
72. On June 30, 2010, Norman Corporation granted compensatory stock options for 40,000 shares of its $\$ 20$ par value common stock to certain of its key employees. The market price of the common stock on that date was $\$ 36$ per share and the option price was $\$ 30$. The Black-Scholes option pricing model determines total compensation expense to be $\$ 480,000$. The options are exercisable beginning January 1, 2013, provided those key employees are still in Norman's employ at the time the options are exercised. The options expire on June 30, 2014.

On January 4, 2013, when the market price of the stock was $\$ 42$ per share, all 40,000 options were exercised. What should be the amount of compensation expense recorded by Norman Corporation for the calendar year 2012 using the fair value method?
a. $\$ 0$.
b. $\$ 192,000$.
c. $\$ 240,000$.
d. $\$ 480,000$.
73. In order to retain certain key executives, Jensen Corporation granted them incentive stock options on December 31, 2011. 70,000 options were granted at an option price of $\$ 35$ per share. Market prices of the stock were as follows:

December 31, 2012
December 31, 2013
\$46 per share
51 per share

The options were granted as compensation for executives' services to be rendered over a two-year period beginning January 1, 2012. The Black-Scholes option pricing model determines total compensation expense to be $\$ 700,000$. What amount of compensation expense should Jensen recognize as a result of this plan for the year ended December 31, 2012 under the fair value method?
a. $\$ 350,000$.
b. $\$ 700,000$.
c. $\$ 770,000$.
d. $\$ 2,450,000$.
74. Grant, Inc. had 50,000 shares of treasury stock ( $\$ 10$ par value) at December 31, 2012, which it acquired at $\$ 11$ per share. On June 4, 2013, Grant issued 25,000 treasury shares to employees who exercised options under Grant's employee stock option plan. The market value per share was $\$ 13$ at December 31, 2012, $\$ 15$ at June 4, 2013, and $\$ 18$ at December 31, 2013. The stock options had been granted for $\$ 12$ per share. The cost method is used. What is the balance of the treasury stock on Grant's balance sheet at December 31, 2013?
a. $\$ 175,000$.
b. $\$ 225,000$.
c. $\$ 275,000$.
d. $\$ 300,000$.

## Use the following information for questions 75 through 77.

On January 1, 2012, Korsak, Inc. established a stock appreciation rights plan for its executives. It entitled them to receive cash at any time during the next four years for the difference between the market price of its common stock and a pre-established price of $\$ 20$ on 80,000 SARs. Current market prices of the stock are as follows:

January 1, 2012 \$35 per share
December 31, 201238 per share
December 31, $2013 \quad 30$ per share
December 31, 2014
Compensation expense relating to the plan is to be recorded over a four-year period beginning January 1, 2012.
*75. What amount of compensation expense should Korsak recognize for the year ended December 31, 2012?
a. $\$ 240,000$
b. $\$ 360,000$
c. $\$ 300,000$
d. $\$ 1,440,000$
*76. What amount of compensation expense should Korsak recognize for the year ended December 31, 2013?
a. $\$ 0$
b. $\$ 40,000$
c. $\$ 400,000$
d. $\$ 200,000$
*77. On December 31, 2014, 16,000 SARs are exercised by executives. What amount of compensation expense should Korsak recognize for the year ended December 31, 2014 ?
a. $\$ 380,000$
b. $\$ 260,000$
c. $\$ 780,000$
d. $\$ 104,000$

Multiple Choice Answers-Dilutive Securities, Computational

| Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 43. | a | 48. | b | 53. | c | 58. | b | 63. | c | 68. | c | 73. | a |
| 44. | b | 49. | b | 54. | c | 59. | c | 64. | b | 69. | c | 74. | c |
| 45. | a | 50. | d | 55. | c | 60. | b | 65. | b | 70. | c | ${ }^{*} 75$. | b |
| 46. | c | 51. | b | 56. | b | 61. | b | 66. | d | 71. | c | ${ }^{*} 76$. | b |
| 47. | b | 52. | c | 57. | b | 62. | c | 67. | d | 72. | b | ${ }^{*} 77$. | a |

## MULTIPLE CHOICE—Dilutive Securities, CPA Adapted

78. On January 2, 2012, Farr Co. issued 10-year convertible bonds at 105. During 2012, these bonds were converted into common stock having an aggregate par value equal to the total face amount of the bonds. At conversion, the market price of Farr's common stock was 50 percent above its par value. On January 2, 2012, cash proceeds from the issuance of the convertible bonds should be reported as
a. paid-in capital for the entire proceeds.
b. paid-in capital for the portion of the proceeds attributable to the conversion feature and as a liability for the balance.
c. a liability for the face amount of the bonds and paid-in capital for the premium over the face amount.
d. a liability for the entire proceeds.
79. Lang Co. issued bonds with detachable common stock warrants. Only the warrants had a known market value. The sum of the fair value of the warrants and the face amount of the bonds exceeds the cash proceeds. This excess is reported as
a. Discount on Bonds Payable.
b. Premium on Bonds Payable.
c. Common Stock Subscribed.
d. Paid-in Capital in Excess of Par—Stock Warrants.
80. On January 1, 2012, Sharp Corp. granted an employee an option to purchase 9,000 shares of Sharp's $\$ 5$ par value common stock at $\$ 20$ per share. The Black-Scholes option pricing model determines total compensation expense to be $\$ 210,000$. The option became exercisable on December 31, 2013, after the employee completed two years of service. The market prices of Sharp's stock were as follows:

January 1, 2012 \$30
December 31, 201350
For 2013, should recognize compensation expense under the fair value method of
a. $\$ 135,000$.
b. $\$ 45,000$.
c. $\$ 105,000$.
d. $\$ 0$.
*81. On January 2, 2012, for past services, Rosen Corp. granted Nenn Pine, its president, 20,000 stock appreciation rights that are exercisable immediately and expire on January 2, 2013. On exercise, Nenn is entitled to receive cash for the excess of the market price of the stock on the exercise date over the market price on the grant date. Nenn did not exercise any of the rights during 2012. The market price of Rosen's stock was $\$ 30$ on January 2, 2012, and $\$ 45$ on December 31, 2012. As a result of the stock appreciation rights, Rosen should recognize compensation expense for 2012 of
a. $\$ 0$.
b. $\$ 100,000$.
c. $\$ 300,000$.
d. $\$ 600,000$.

Multiple Choice Answers-Dilutive Securities, CPA Adapted

| Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. |
| ---: | :---: | ---: | :---: | :---: | :---: | :---: | :---: |
| 78. | d | 79. | a | 80. | c | ${ }^{*} 81$. | c |

## MULTIPLE CHOICE—Earnings Per Share—Conceptual

82. With respect to the computation of earnings per share, which of the following would be most indicative of a simple capital structure?
a. Common stock, preferred stock, and convertible securities outstanding in lots of even thousands
b. Earnings derived from one primary line of business
c. Ownership interest consisting solely of common stock
d. None of these
83. In computing earnings per share for a simple capital structure, if the preferred stock is cumulative, the amount that should be deducted as an adjustment to the numerator (earnings) is the
a. preferred dividends in arrears.
b. preferred dividends in arrears times (one minus the income tax rate).
c. annual preferred dividend times (one minus the income tax rate).
d. none of these.
84. In computations of weighted average of shares outstanding, when a stock dividend or stock split occurs, the additional shares are
a. weighted by the number of days outstanding.
b. weighted by the number of months outstanding.
c. considered outstanding at the beginning of the year.
d. considered outstanding at the beginning of the earliest year reported.
85. What effect will the acquisition of treasury stock have on stockholders' equity and earnings per share, respectively?
a. Decrease and no effect
b. Increase and no effect
c. Decrease and increase
d. Increase and decrease
${ }^{\text {S }} 86$. Due to the importance of earnings per share information, it is required to be reported by all Public Companies Nonpublic Companies
a.
b.
c. Yes Yes

## Yes

No
d.

No
No
Yes
${ }^{\text {P }} 87$. A convertible bond issue should be included in the diluted earnings per share computation as if the bonds had been converted into common stock, if the effect of its inclusion is

|  | Dilutive |  | Antidilutive |
| :--- | :--- | :--- | :--- |
|  | Yes | Yes |  |
| b. | Yes | No |  |
| c. | No |  | Yes |
| d. | No |  | No |

88. When computing diluted earnings per share, convertible bonds are
a. ignored.
b. assumed converted whether they are dilutive or antidilutive.
c. assumed converted only if they are antidilutive.
d. assumed converted only if they are dilutive.
89. Dilutive convertible securities must be used in the computation of
a. basic earnings per share only.
b. diluted earnings per share only.
c. diluted and basic earnings per share.
d. none of these.
90. In computing earnings per share, the equivalent number of shares of convertible preferred stock are added as an adjustment to the denominator (number of shares outstanding). If the preferred stock is cumulative, which amount should then be added as an adjustment to the numerator (net earnings)?
a. Annual preferred dividend
b. Annual preferred dividend times (one minus the income tax rate)
c. Annual preferred dividend times the income tax rate
d. Annual preferred dividend divided by the income tax rate

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91. In the diluted earnings per share computation, the treasury stock method is used for options and warrants to reflect assumed reacquisition of common stock at the average market price during the period. If the exercise price of the options or warrants exceeds the average market price, the computation would
a. fairly present diluted earnings per share on a prospective basis.
b. fairly present the maximum potential dilution of diluted earnings per share on a prospective basis.
c. reflect the excess of the number of shares assumed issued over the number of shares assumed reacquired as the potential dilution of earnings per share.
d. be antidilutive.
92. In applying the treasury stock method to determine the dilutive effect of stock options and warrants, the proceeds assumed to be received upon exercise of the options and warrants
a. are used to calculate the number of common shares repurchased at the average market price, when computing diluted earnings per share.
b. are added, net of tax, to the numerator of the calculation for diluted earnings per share.
c. are disregarded in the computation of earnings per share if the exercise price of the options and warrants is less than the ending market price of common stock.
d. none of these.
93. When applying the treasury stock method for diluted earnings per share, the market price of the common stock used for the repurchase is the
a. price at the end of the year.
b. average market price.
c. price at the beginning of the year.
d. none of these.
94. Antidilutive securities
a. should be included in the computation of diluted earnings per share but not basic earnings per share.
b. are those whose inclusion in earnings per share computations would cause basic earnings per share to exceed diluted earnings per share.
c. include stock options and warrants whose exercise price is less than the average market price of common stock.
d. should be ignored in all earnings per share calculations.
*95. Assume there are two dilutive convertible securities. The one that should be used first to recalculate earnings per share is the security with the
a. greater earnings adjustment.
b. greater earnings per share adjustment.
c. smaller earnings adjustment.
d. smaller earnings per share adjustment.

Multiple Choice Answers-Earnings Per Share-Conceptual

| Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 82. | c | 84. | d | 86. | b | 88. | d | 90. | a | 92. | a | 94. | d |
| 83. | d | 85. | c | 87. | b | 89. | b | 91. | d | 93. | b | ${ }^{*} 95$. | d |

Solution to Multiple Choice question for which the answer is "none of these."
83. annual preferred dividend.

## MULTIPLE CHOICE—Earnings Per Share—Computational

96. Hill Corp. had 600,000 shares of common stock outstanding on January 1 , issued 900,000 shares on July 1, and had income applicable to common stock of $\$ 1,680,000$ for the year ending December 31, 2012. Earnings per share of common stock for 2012 would be a. $\$ 2.80$.
b. \$1.33.
c. $\$ 1.60$.
d. \$1.87.
97. At December 31, 2012, Hancock Company had 500,000 shares of common stock issued and outstanding, 400,000 of which had been issued and outstanding throughout the year and 100,000 of which were issued on October 1, 2012. Net income for the year ended December 31, 2012, was $\$ 1,530,000$. What should be Hancock's 2012 earnings per common share, rounded to the nearest penny?
a. $\$ 3.03$
b. $\$ 3.82$
c. $\$ 3.60$
d. $\$ 3.40$
98. Milo Co. had 800,000 shares of common stock outstanding on January 1, issued 126,000 shares on May 1, purchased 63,000 shares of treasury stock on September 1, and issued 54,000 shares on November 1. The weighted average shares outstanding for the year is
a. 851,000 .
b. 872,000 .
c. 893,000 .
d. 914,000.
99. On January 1, 2013, Gridley Corporation had 187,500 shares of its $\$ 2$ par value common stock outstanding. On March 1, Gridley sold an additional 375,000 shares on the open market at $\$ 20$ per share. Gridley issued a $20 \%$ stock dividend on May 1. On August 1, Gridley purchased 210,000 shares and immediately retired the stock. On November 1, 300,000 shares were sold for $\$ 25$ per share. What is the weighted-average number of shares outstanding for 2013?
a. 765,000
b. 562,500
c. 537,500
d. 387,500
100. The following information is available for Barone Corporation:

| January 1, 2013 | Shares outstanding | $1,500,000$ |
| :--- | :--- | ---: |
| April 1, 2013 | Shares issued | 240,000 |
| July 1, 2013 | Treasury shares purchased | 90,000 |
| October 1, 2013 | Shares issued in a 100\% stock dividend | $1,650,000$ |

The number of shares to be used in computing earnings per common share for 2013 is
a. $3,390,600$.
b. $3,285,000$.
c. $3,270,000$.
d. $2,047,500$.

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101. At December 31, 2012 Rice Company had 300,000 shares of common stock and 10,000 shares of $6 \%, \$ 100$ par value cumulative preferred stock outstanding. No dividends were declared on either the preferred or common stock in 2012 or 2013. On January 30, 2014, prior to the issuance of its financial statements for the year ended December 31, 2013, Rice declared a $100 \%$ stock dividend on its common stock. Net income for 2013 was $\$ 1,140,000$. In its 2013 financial statements, Rice's 2013 earnings per common share should be
a. $\$ 1.80$.
b. \$1.89.
c. $\$ 3.60$.
d. $\$ 3.80$.
102. Fultz Company had 300,000 shares of common stock issued and outstanding at December 31, 2012. During 2013, no additional common stock was issued. On January 1, 2013, Fultz issued 400,000 shares of nonconvertible preferred stock. During 2013, Fultz declared and paid $\$ 210,000$ cash dividends on the common stock and $\$ 175,000$ on the nonconvertible preferred stock. Net income for the year ended December 31, 2013, was $\$ 1,120,000$. What should be Fultz's 2013 earnings per common share, rounded to the nearest penny?
a. \$1.35
b. $\$ 2.45$
c. $\$ 3.15$
d. $\$ 3.73$
103. At December 31, 2012 Pine Company had 200,000 shares of common stock and 10,000 shares of $5 \%, \$ 100$ par value cumulative preferred stock outstanding. No dividends were declared on either the preferred or common stock in 2012 or 2013. On February 10, 2014, prior to the issuance of its financial statements for the year ended December 31, 2013, Pine declared a $100 \%$ stock split on its common stock. Net income for 2013 was $\$ 900,000$. In its 2013 financial statements, Pine's 2013 earnings per common share should be
a. $\$ 4.25$.
b. \$4.00.
c. $\$ 2.13$.
d. \$1.25.
104. Stine Inc. had 400,000 shares of common stock issued and outstanding at December 31, 2012. On July 1, 2013 an additional 400,000 shares were issued for cash. Stine also had stock options outstanding at the beginning and end of 2013 which allow the holders to purchase 120,000 shares of common stock at $\$ 28$ per share. The average market price of Stine's common stock was $\$ 35$ during 2013. The number of shares to be used in computing diluted earnings per share for 2013 is
a. 896,000
b. 824,000
c. 696,000
d. 624,000
105. Kasravi Co. had net income for 2013 of $\$ 400,000$. The average number of shares outstanding for the period was 200,000 shares. The average number of shares under outstanding options, at an option price of $\$ 30$ per share is 12,000 shares. The average market price of the common stock during the year was $\$ 36$. What should Kasravi Co. report for diluted earnings per share for the year ended 2013 ?
a. $\$ 2.00$
b. $\$ 1.98$
c. $\$ 1.90$
d. $\$ 1.89$
106. On January 2, 2013, Worth Co. issued at par \$1,000,000 of $7 \%$ convertible bonds. Each $\$ 1,000$ bond is convertible into 20 shares of common stock. No bonds were converted during 2013. Worth had 200,000 shares of common stock outstanding during 2013. Worth's 2013 net income was $\$ 300,000$ and the income tax rate was $30 \%$. Worth's diluted earnings per share for 2013 would be (rounded to the nearest penny):
a. \$1.74.
b. \$1.59.
c. $\$ 1.50$.
d. \$1.68.
107. Beaty Inc. purchased Dunbar Co. and agreed to give stockholders of Dunbar Co. 10,000 additional shares in 2014 if Dunbar Co.'s net income in 2013 is \$500,000; in 2012 Dunbar Co.'s net income is $\$ 520,000$. Beaty Inc. has net income for 2012 of $\$ 300,000$ and has an average number of common shares outstanding for 2012 of 100,000 shares. What should Beaty report as diluted earnings per share for 2012?
a. $\$ 3.33$
b. $\$ 3.00$
c. $\$ 2.73$
d. $\$ 2.51$

Use the following information for questions 108 and 109.
Hanson Co. had 200,000 shares of common stock, 20,000 shares of convertible preferred stock, and $\$ 1,000,000$ of $7.5 \%$ convertible bonds outstanding during 2013. The preferred stock is convertible into 40,000 shares of common stock. During 2013, Hanson paid dividends of $\$ .90$ per share on the common stock and $\$ 3$ per share on the preferred stock. Each $\$ 1,000$ bond is convertible into 45 shares of common stock. The net income for 2013 was $\$ 600,000$ and the income tax rate was $30 \%$.
108. Basic earnings per share for 2013 is (rounded to the nearest penny)
a. $\$ 2.20$.
b. $\$ 2.42$.
c. $\$ 2.51$.
d. $\$ 2.70$.
109. Diluted earnings per share for 2013 is (rounded to the nearest penny)
a. $\$ 2.08$.
b. \$2.11.
c. $\$ 2.29$.
d. $\$ 2.50$.
110. Fugate Company had 750,000 shares of common stock issued and outstanding at December 31, 2012. On July 1, 2013 an additional 750,000 shares were issued for cash. Fugate also had stock options outstanding at the beginning and end of 2013 which allow the holders to purchase 225,000 shares of common stock at $\$ 20$ per share. The average market price of Fugate's common stock was $\$ 25$ during 2013. What is the number of shares that should be used in computing diluted earnings per share for the year ended December 31, 2013?
a. $1,545,000$
b. $1,305,000$
c. $1,181,250$
d. 1,170,000
111. Shipley Corporation had net income for the year of $\$ 600,000$ and a weighted average number of common shares outstanding during the period of 200,000 shares. The company has a convertible bond issue outstanding. The bonds were issued four years ago at par ( $\$ 2,500,000$ ), carry a $7 \%$ interest rate, and are convertible into 40,000 shares of common stock. The company has a $40 \%$ tax rate. Diluted earnings per share are
a. $\$ 2.06$
b. $\$ 2.79$.
c. $\$ 2.94$.
d. $\$ 3.22$.
112. Colt Corporation purchased Massey Inc. and agreed to give stockholders of Massey Inc. 50,000 additional shares in 2014 if Massey Inc.'s net income in 2013 is \$600,000 or more; in 2012 Massey Inc.'s net income is \$615,000. Colt has net income for 2012 of $\$ 1,200,000$ and has an average number of common shares outstanding for 2012 of 500,000 shares. What should Colt report as earnings per share for 2012?

|  | Basic Earnings <br> Per Share | Diluted Earnings <br> Per Share |
| :--- | :---: | :---: |
| a. | $\$ 2.40$ | $\$ 2.40$ |
| b. | $\$ 2.18$ | $\$ 2.40$ |
| c. | $\$ 2.40$ | $\$ 2.18$ |
| d. | $\$ 2.18$ | $\$ 2.18$ |

113. On January 2, 2012, Perez Co. issued at par $\$ 10,000$ of $8 \%$ bonds convertible in total into 1,000 shares of Perez's common stock. No bonds were converted during 2012. Throughout 2012, Perez had 1,000 shares of common stock outstanding. Perez's 2012 net income was $\$ 4,000$, and its income tax rate is $30 \%$. No potentially dilutive securities other than the convertible bonds were outstanding during 2012. Perez's diluted earnings per share for 2012 would be (rounded to the nearest penny)
a. $\$ 2.00$.
b. \$2.28.
c. $\$ 2.40$.
d. $\$ 4.56$.
114. At December 31, 2012, Kifer Company had 600,000 shares of common stock outstanding. On October 1, 2013, an additional 120,000 shares of common stock were issued. In addition, Kifer had $\$ 10,000,000$ of $6 \%$ convertible bonds outstanding at December 31, 2012, which are convertible into 270,000 shares of common stock. No bonds were converted into common stock in 2013. The net income for the year ended December 31, 2013 , was $\$ 3,000,000$. Assuming the income tax rate was $30 \%$, the diluted earnings per share for the year ended December 31, 2013, should be (rounded to the nearest penny)
a. $\$ 5.43$.
b. $\$ 4.00$.
c. $\$ 3.80$.
d. $\$ 3.33$.
115. On January 2, 2013, Mize Co. issued at par $\$ 300,000$ of $9 \%$ convertible bonds. Each $\$ 1,000$ bond is convertible into 60 shares. No bonds were converted during 2013. Mize had 100,000 shares of common stock outstanding during 2013. Mize 's 2013 net income was $\$ 160,000$ and the income tax rate was $30 \%$. Mize's diluted earnings per share for 2013 would be (rounded to the nearest penny)
a. \$1.36.
b. \$1.52.
c. $\$ 1.60$.
d. \$1.79.
116. At December 31, 2012, Sager Co. had 1,200,000 shares of common stock outstanding. In addition, Sager had 450,000 shares of preferred stock which were convertible into 750,000 shares of common stock. During 2013, Sager paid $\$ 750,000$ cash dividends on the common stock and $\$ 500,000$ cash dividends on the preferred stock. Net income for 2013 was $\$ 4,250,000$ and the income tax rate was $40 \%$. The diluted earnings per share for 2013 is (rounded to the nearest penny)
a. $\$ 1.55$.
b. $\$ 2.18$.
c. $\$ 3.14$.
d. $\$ 3.55$.

## Use the following information for questions 117 and 118.

Lerner Co. had 200,000 shares of common stock, 20,000 shares of convertible preferred stock, and $\$ 1,500,000$ of $10 \%$ convertible bonds outstanding during 2013. The preferred stock is convertible into 40,000 shares of common stock. During 2013, Lerner paid dividends of $\$ 1.35$ per share on the common stock and $\$ 4.50$ per share on the preferred stock. Each $\$ 1,000$ bond is convertible into 30 shares of common stock. The net income for 2013 was \$900,000 and the income tax rate was $30 \%$.
117. Basic earnings per share for 2013 is (rounded to the nearest penny)
a. $\$ 3.32$.
b. \$3.63.
c. $\$ 3.76$.
d. \$4.05.
118. Diluted earnings per share for 2013 is (rounded to the nearest penny)
a. $\$ 3.21$.
b. $\$ 3.37$.
c. $\$ 3.53$.
d. \$3.69.

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119. Yoder, Incorporated, has $4,200,000$ shares of common stock outstanding on December 31, 2012. An additional 800,000 shares of common stock were issued on April 1, 2013, and 400,000 more on July 1, 2013. On October 1, 2013, Yoder issued $20,000, \$ 1,000$ face value, $8 \%$ convertible bonds. Each bond is convertible into 20 shares of common stock. No bonds were converted into common stock in 2013. What is the number of shares to be used in computing basic earnings per share and diluted earnings per share, respectively?
a. $5,000,000$ and $5,000,000$
b. $5,000,000$ and $5,100,000$
c. $5,000,000$ and $5,400,000$
d. $5,400,000$ and $6,200,000$
120. Nolte Co. has $4,800,000$ shares of common stock outstanding on December 31, 2012. An additional 200,000 shares are issued on April 1, 2013, and 480,000 more on September 1. On October 1, Nolte issued $\$ 6,000,000$ of $9 \%$ convertible bonds. Each $\$ 1,000$ bond is convertible into 40 shares of common stock. No bonds have been converted. The number of shares to be used in computing basic earnings per share and diluted earnings per share on December 31, 2013 is
a. $5,110,000$ and $5,110,000$.
b. $5,110,000$ and $5,170,000$.
c. $5,110,000$ and $5,350,000$.
d. $5,880,000$ and $6,120,000$.
121. At December 31, 2012, Tatum Company had $2,000,000$ shares of common stock outstanding. On January 1, 2013, Tatum issued 500,000 shares of preferred stock which were convertible into $1,000,000$ shares of common stock. During 2013, Tatum declared and paid $\$ 1,800,000$ cash dividends on the common stock and $\$ 600,000$ cash dividends on the preferred stock. Net income for the year ended December 31, 2013, was $\$ 6,000,000$. Assuming an income tax rate of $30 \%$, what should be diluted earnings per share for the year ended December 31, 2013? (Round to the nearest penny.)
a. $\$ 1.80$
b. $\$ 2.00$
c. $\$ 3.00$
d. $\$ 2.50$
122. At December 31, 2012, Emley Company had 1,200,000 shares of common stock outstanding. On September 1, 2013, an additional 400,000 shares of common stock were issued. In addition, Emley had $\$ 8,000,000$ of $6 \%$ convertible bonds outstanding at December 31, 2012, which are convertible into 800,000 shares of common stock. No bonds were converted into common stock in 2013. The net income for the year ended December 31, 2013, was $\$ 3,000,000$. Assuming the income tax rate was $30 \%$, what should be the diluted earnings per share for the year ended December 31, 2013, rounded to the nearest penny?
a. $\$ 1.41$
b. $\$ 2.25$
c. $\$ 1.56$
d. $\$ 1.63$
123. Grimm Company has $2,000,000$ shares of common stock outstanding on December 31, 2012. An additional 150,000 shares of common stock were issued on July 1, 2013, and 300,000 more on October 1, 2013. On April 1, 2013, Grimm issued 6,000, $\$ 1,000$ face value, $8 \%$ convertible bonds. Each bond is convertible into 40 shares of common stock. No bonds were converted into common stock in 2013. What is the number of shares to be used in computing basic earnings per share and diluted earnings per share, respectively, for the year ended December 31, 2013 ?
a. $2,150,000$ and $2,330,000$
b. $2,150,000$ and $2,150,000$
c. $2,150,000$ and $2,390,000$
d. $2,450,000$ and $2,630,000$

Use the following information for questions 124 and 125.
Information concerning the capital structure of Piper Corporation is as follows:

Common stock
Convertible preferred stock
6\% convertible bonds

| December 31, |  |
| ---: | ---: |
| $\frac{2013}{150,000 \text { shares }}$ | $\frac{2012}{150,000 \text { shares }}$ |
| 15,000 shares | 15,000 shares |
| $\$ 2,400,000$ | $\$ 2,400,000$ |

During 2013, Piper paid dividends of $\$ 0.80$ per share on its common stock and $\$ 2.00$ per share on its preferred stock. The preferred stock is convertible into 30,000 shares of common stock. The $6 \%$ convertible bonds are convertible into 75,000 shares of common stock. The net income for the year ended December 31, 2013, was $\$ 400,000$. Assume that the income tax rate was 30\%.
124. What should be the basic earnings per share for the year ended December 31, 2013, rounded to the nearest penny?
a. $\$ 1.77$
b. $\$ 1.95$
c. $\$ 2.47$
d. $\$ 2.67$
125. What should be the diluted earnings per share for the year ended December 31, 2013, rounded to the nearest penny?
a. $\$ 2.13$
b. $\$ 1.96$
c. $\$ 1.89$
d. $\$ 1.57$
126. Warrants exercisable at $\$ 20$ each to obtain 50,000 shares of common stock were outstanding during a period when the average market price of the common stock was $\$ 25$. Application of the treasury stock method for the assumed exercise of these warrants in computing diluted earnings per share will increase the weighted average number of outstanding shares by
a. 50,000 .
b. 40,000 .
c. 10,000 .
d. 12,500 .
127. Terry Corporation had 400,000 shares of common stock outstanding at December 31, 2012. In addition, it had 90,000 stock options outstanding, which had been granted to certain executives, and which gave them the right to purchase shares of Terry's stock at an option price of $\$ 37$ per share. The average market price of Terry's common stock for 2012 was $\$ 50$. What is the number of shares that should be used in computing diluted earnings per share for the year ended December 31, 2012 ?
a. 400,000
b. 431,622
c. 466,600
d. 423,400

Multiple Choice Answers-Earnings Per Share-Computational

| Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 96. | c | 101. | a | 106. | b | 111. | c | 116. | b | 121. | b | 126. | c |
| 97. | c | 102. | c | 107. | c | 112. | c | 117. | d | 122. | c | 127. | d |
| 98. | b | 103. | c | 108. | d | 113. | b | 118. | c | 123. | a |  |  |
| 99. | b | 104. | d | 109. | c | 114. | c | 119. | b | 124. | c |  |  |
| 100. | c | 105. | b | 110. | d | 115. | b | 120. | b | 125. | b |  |  |

## MULTIPLE CHOICE—Earnings Per Share—CPA Adapted

128. Didde Co. had 300,000 shares of common stock issued and outstanding at December 31, 2012. No common stock was issued during 2013. On January 1, 2013, Didde issued 200,000 shares of nonconvertible preferred stock. During 2013, Didde declared and paid $\$ 150,000$ cash dividends on the common stock and $\$ 120,000$ on the preferred stock. Net income for the year ended December 31, 2013 was $\$ 930,000$. What should be Didde's 2013 earnings per common share?
a. $\$ 3.10$
b. $\$ 2.70$
c. $\$ 2.60$
d. $\$ 2.20$
129. At December 31, 2013 and 2012, Miley Corp. had 180,000 shares of common stock and 10,000 shares of $6 \%, \$ 100$ par value cumulative preferred stock outstanding. No dividends were declared on either the preferred or common stock in 2013 or 2012. Net income for 2013 was $\$ 480,000$. For 2013, earnings per common share amounted to
a. \$2.67.
b. $\$ 2.33$.
c. $\$ 2.11$.
d. \$2.00.
130. Marsh Co. had $2,400,000$ shares of common stock outstanding on January 1 and December 31, 2013. In connection with the acquisition of a subsidiary company in June 2012, Marsh is required to issue 100,000 additional shares of its common stock on July 1, 2014, to the former owners of the subsidiary. Marsh paid $\$ 300,000$ in preferred stock dividends in 2013, and reported net income of $\$ 5,100,000$ for the year. Marsh's diluted earnings per share for 2013 should be
a. $\$ 2.13$.
b. $\$ 2.04$.
c. $\$ 2.00$.
d. \$1.92.
131. Foyle, Inc., had 610,000 shares of common stock issued and outstanding at December 31, 2012. On July 1, 2013, an additional 40,000 shares of common stock were issued for cash. Foyle also had unexercised stock options to purchase 32,000 shares of common stock at $\$ 15$ per share outstanding at the beginning and end of 2013. The average market price of Foyle's common stock was $\$ 20$ during 2013. What is the number of shares that should be used in computing diluted earnings per share for the year ended December 31, 2013?
a. 630,000
b. 638,000
c. 658,000
d. 662,000
132. When computing diluted earnings per share, convertible securities are
a. ignored.
b. recognized only if they are dilutive.
c. recognized only if they are antidilutive.
d. recognized whether they are dilutive or antidilutive.
133. In determining diluted earnings per share, dividends on nonconvertible cumulative preferred stock should be
a. disregarded.
b. added back to net income whether declared or not.
c. deducted from net income only if declared.
d. deducted from net income whether declared or not.
134. The if-converted method of computing earnings per share data assumes conversion of convertible securities as of the
a. beginning of the earliest period reported (or at time of issuance, if later).
b. beginning of the earliest period reported (regardless of time of issuance).
c. middle of the earliest period reported (regardless of time of issuance).
d. ending of the earliest period reported (regardless of time of issuance).

## Multiple Choice Answers-Earnings Per Share-CPA Adapted

| Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. | Item | Ans. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 128. | b | 129. | b | 130. | d | 131. | b | 132. | b | 133. | d | 134. | a |

## DERIVATIONS — Dilutive Securities, Computational

No. Answer Derivation
43. a $\$ 1,600,000+(\$ 350,000 \times .32)-(1,600 \times 30 \times \$ 30)=\$ 272,000$.
44. b $\quad \$ 80,000-(1,600 \times \$ 45)-\$ 3,200=\$ 4,800$.
45. a $(\$ 3,000,000 \div \$ 1,000) \times 40 \times \$ 20=\$ 2,400,000$ (common stock)
$(\$ 3,000,000 \div \$ 20,000,000) \times \$ 1,250,000=\$ 187,500$ (unamortized discount) \$3,000,000 - \$2,400,000 - \$187,500 = \$412,500.
46. c $\quad(\$ 6,000,000-\$ 5,766,000) \div 117=\$ 2,000 /$ month $(\$ 6,000,000 \times .09 \times 3 / 12)+(\$ 2,000 \times 3)=\$ 141,000$.
47. b $\$ 234,000 \div 117=\$ 2,000 /$ month

$$
\$ 234,000-\left[(\$ 2,000 \times 3)+(\$ 2,000 \times 6] \times \frac{\$ 1,200,000}{\$ 6,000,000}=\$ 43,200\right.
$$

48. b Bonds issued at a discount, market rate > coupon rate.
49. b $\quad \$ 100,000+\$ 2,000-(2,000 \times \$ 25)=\$ 52,000$.
50. d $\$ 8,240,000-(80,000 \times 3 \times \$ 25)=\$ 2,240,000$.
51. b $\quad(\$ 400,000 \times .95)+(400 \times \$ 50)=\$ 400,000 ; \$ 400,000 \times 1.03=\$ 412,000$
\$380,000
$-\quad \times \$ 412,000=\$ 391,400$.
\$400,000
52. c $(\$ 1,000,000 \times .95)+(1,000 \times 25 \times \$ 2)=\$ 1,000,000 ; \$ 1,000,000 \times 1.04=$ \$1,040,000

$$
\frac{\$ 50,000}{\$ 1,000,000} \times \$ 1,040,000=\$ 52,000 .
$$

53. C $(\$ 500,000 \times .96)+(500 \times \$ 40)=\$ 500,000 ; \$ 500,000 \times 1.04=\$ 520,000$

$$
\frac{\$ 20,000}{\$ 500,000} \times \$ 520,000=\$ 20,800 .
$$

54. c $(3,000 \times \$ 1,008)+(6,000 \times \$ 21)=\$ 3,150,000$
\$3,024,000
$\ldots$ _ $\times$ 3,180,000 $=\$ 3,052,800$, bonds: $\$ 3,000,000$
\$3,150,000
Premium: $\$ 52,800 ; \frac{\$ 126,000}{\$ 3,150,000} \times \$ 3,180,000=\$ 127,200$.

## DERIVATIONS — Dilutive Securities, Computational (cont.)

| No. | Answer |
| :---: | :--- | :--- |
| 55. | c |$\quad$| Derivation |
| :--- |
| $(\$ 500,000 \times .96)+(10,000 \times \$ 2)=\$ 500,000 ;$ |
|  |

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## DERIVATIONS — Dilutive Securities, Computational (cont.)

No. Answer Derivation
71. c $\$ 1,500,000-\left(\$ 1,500,000 \times \frac{2}{3}\right)=\$ 500,000$ increase (from the credit to Paid-in Capital—Stock Options). Offset by $\$ 500,000$ decrease (from the debit to Compensation Expense).
72. b $\left(\$ 480,000 \times \frac{12}{30}\right)=\$ 192,000$.
73. a $\quad \$ 700,000 \div 2=\$ 350,000$.
74. C $25,000 \times \$ 11=\$ 275,000$.
*75. b $\quad(\$ 38-\$ 20) \times 80,000 \times .25=\$ 360,000$.
*76. b $(\$ 30-\$ 20) \times 80,000 \times .5=\$ 400,000$
\$400,000 - \$360,000 = \$40,000.
*77. a $\quad(\$ 33-\$ 20) \times 80,000 \times .75=\$ 780,000$ $\$ 780,000-\$ 400,000=\$ 380,000$.

## DERIVATIONS — Dilutive Securities, CPA Adapted

No. Answer Derivation
78. d Conceptual.
79. a Conceptual.
80. c $\$ 210,000 \div 2=\$ 105,000$.
*81. $\quad$ c $\quad(\$ 45-\$ 30) \times 20,000=\$ 300,000$.

## DERIVATIONS — Earnings Per Share, Computational

No. Answer Derivation
\$1,680,000
96. c — $=\$ 1.60$.

$$
600,000+\left(900,000 \times \frac{-}{12}\right)
$$

$\$ 1,530,000$
97.
$-\frac{3}{400,000+\left(100,000 \times \frac{-}{12}\right)}=\$ 3.60$.

## DERIVATIONS — Earnings Per Share, Computational (cont.)

No. Answer Derivation
98. b $800,000+(126,000 \times 8 / 12)-(63,000 \times 4 / 12)+(54,000 \times 2 / 12)=872,000$.
99. b $[(187,500 \times 2 \times 1.20)+(562,500 \times 2 \times 1.20)+(675,000 \times 3)+(465,000 \times 3)$ $+(765,000 \times 2)] \div 12=562,500$.
100. C $[(1,500,000 \times 3 \times 2)+(1,740,000 \times 3 \times 2)+(1,650,000 \times 3 \times 2)$

$$
+(3,300,000 \times 3)] \div 12=3,270,000
$$

101. a $[\$ 1,140,000-(10,000 \times \$ 100 \times .06)] \div(300,000 \times 2)=\$ 1.80$.
\$1,120,000 - \$175,000
102. c $\quad \frac{1,120,000-\$ 175,000}{300,000}=\$ 3.15$.
103. c $[\$ 900,000-(10,000 \times \$ 100 \times .05)] \div(200,000 \times 2)=\$ 2.13$.

104 d $(400,000 \times 6 / 12)+(800,000 \times 6 / 12)+[((35-28) \div 35) \times 120,000]=624,000$.
105. b $\quad[(\$ 36-\$ 30) \div \$ 36] \times 12,000=2,000$
$\$ 400,000 \div(200,000+2,000)=\$ 1.98$.
106. b $\quad(\$ 1,000,000 \div \$ 1,000) \times 20=20,000$
$\$ 1,000,000 \times .07 \times(1-.30)=\$ 49,000$
$(\$ 300,000+\$ 49,000) \div(200,000+20,000)=\$ 1.59$.
107. c Since $\$ 520,000>\$ 500,000$ include 10,000 shares in DEPS $\$ 300,000 \div(100,000+10,000)=\$ 2.73$.
108. d $[\$ 600,000-(20,000 \times \$ 3] \div 200,000=\$ 2.70$.
109. c $[\$ 600,000+(\$ 1,000,000 \times .075 \times .7)] \div[200,000+40,000+(1,000 \times 45)]$ $=\$ 2.29$.
110. d $750,000+(750,000 \times 6 / 12)+[(25-20) / 25 \times 225,000]=1,170,000$.
111. c $[\$ 600,000+(\$ 2,500,000 \times .07 \times .60)] \div(200,000+40,000)=\$ 2.94$.
112. C Basic: $\$ 1,200,000 \div 500,000=\$ 2.40$.

Diluted: $\quad \$ 1,200,000 \div(500,000+50,000)=\$ 2.18$
113.

$$
\$ 4,000+(\$ 10,000 \times .08 \times .70)
$$

$$
\text { b }-\frac{1,000+1,000}{}=\$ 2.28
$$

## DERIVATIONS — Earnings Per Share, Computational (cont.)

No. Answer Derivation

$$
\$ 3,000,000+(\$ 10,000,000 \times .06 \times .7)
$$

114. $C$ - $=\$ 3.80$.

$$
600,000+\left(120,000 \times \frac{3}{12}\right)+270,000
$$

12
115. b $\quad \frac{\$ 160,000+(\$ 300,000 \times .09 \times .7)}{100,000+[(\$ 300,000 \div \$ 1,000) \times 60)]}=\$ 1.52$.
116. b $\frac{\$ 4,250,000}{1,200,000+750,000}=\$ 2.18$.
117. d $\frac{\$ 900,000-(20,000 \times \$ 4.50)}{200,000}=\$ 4.05$.
118. c $\frac{\$ 900,000+(\$ 1,500,000 \times .10 \times .7)}{200,000+45,000+40,000}=\$ 3.53$.

$$
200,000+45,000+40,000
$$

119. b $4,200,000+(800,000 \times 9 / 12)+(400,000 \times 6 / 12)=5,000,000$ (BEPS)
$5,000,000+(20,000 \times 20 \times 3 / 12)=5,100,000$ (DEPS).
120. b $4,800,000+(200,000 \times 9 / 12)+(480,000 \times 4 / 12)=5,110,000$.
$5,110,000+[(\$ 6,000,000 \div \$ 1,000) \times 40 \times 3 / 12]=5,170,000$.
121. b $\frac{\$ 6,000,000}{2,000,000+1,000,000}=\$ 2.00$.
122. c $\frac{\$ 3,000,000+(\$ 8,000,000 \times .06 \times .7)}{1,200,000+(400,000 \times 4 / 12)+800,000}=\$ 1.56$.
123. a $2,000,000+(150,000 \times 6 / 12)+(300,000 \times 3 / 12)=2,150,000$
$2,150,000+(6,000 \times 40 \times 9 / 12)=2,330,000$.
124. c $\frac{\$ 400,000-(15,000 \times \$ 2.00)}{150,000}=\$ 2.47$.

## DERIVATIONS — Earnings Per Share, Computational (cont.)

| No. Answer |  | Derivation $\$ 400,000+(\$ 2,400,000 \times .06 \times .7)$ |
| :---: | :---: | :---: |
| 125. | b | $\underline{-}=\$ 1.96$. |
|  |  | 150,000 + 75,000 + 30,000 |
| 126. | C | $\begin{aligned} & 50,000 \times \$ 20 \div \$ 25=40,000 \\ & 50,000-40,000=10,000 \end{aligned}$ |
| 127. | d | $\begin{aligned} & 90,000-(90,000 \times \$ 37 \div \$ 50)=23,400 \\ & 400,000+23,400=423,400 . \end{aligned}$ |
|  | DERIVATIONS - Earnings Per Share, CPA Adapted |  |
| No.Answer 128. b |  | Derivation $\$ 930,000-\$ 120,000$ |
|  |  | 300,000 |
| 129. | b | \$480,000-(10,000 $\times$ \$100 $\times .06)$ ( ${ }^{\text {a }}$ ( 33. |
|  |  | 180,000 |
| 130. | d | \$5,100,000-\$300,000 |
|  |  | 2,400,000 + 100,000 |
| 131. | b | $610,000+(40,000 \times 6 / 12)+[32,000-(32,000 \times \$ 15 \div \$ 20)]=638,000$. |
| 132. | b | Conceptual. |
| 133. | d | Conceptual. |
| 134. | a | Conceptual. |

## EXERCISES

Ex. 16-135—Convertible Bonds.
Garr Co. issued \$3,000,000 of 12\%, 5-year convertible bonds on December 1, 2012 for $\$ 3,013,000$ plus accrued interest. The bonds were dated April 1, 2012 with interest payable April 1 and October 1. Bond premium is amortized each interest period on a straight-line basis. Garr Co. has a fiscal year end of September 30.

On October 1, 2013, $\$ 1,500,000$ of these bonds were converted into 20,000 shares of $\$ 15$ par common stock. Accrued interest was paid in cash at the time of conversion.

## 16-40 Test Bank for Intermediate Accounting, Fourteenth Edition

## Instructions

(a) Prepare the entry to record the interest expense at April 1, 2013. Assume that interest payable was credited when the bonds were issued (round to nearest dollar).
(b) Prepare the entry to record the conversion on October 1, 2013. Assume that the entry to record amortization of the bond premium and interest payment has been made.

## Solution 16-135

(a) Interest Payable.......................................................................... 60,000

Interest Expense......................................................................... 119,000
Premium on Bonds Payable........................................................ 1,000
Cash ................................................................................ 180,000
Calculations:
Issuance price $\quad \$ 3,013,000$
Par value $\quad 3,000,000$
Total premium \$ $\$$
Months remaining 52
Premium per month $\$ 250$
Premium amortized $(4 \times \$ 250) \quad \$ 1,000$
(b) Bonds Payable ............................................................................ 1,500,000

Premium on Bonds Payable
5,250
Common Stock (20,000 $\times \$ 15$ ) $\qquad$ Paid-in Capital in Excess of Par .......................................

Calculations:
Premium related to $1 / 2$ of the bonds
Less premium amortized
Premium remaining
\$6,500 (\$13,000 $\div 2$ )
$1,250 \quad[(\$ 6,500 \div 52) \times 10]$
\$ 5,250

## Ex. 16-136—Convertible Bonds.

Koch Co. sold convertible bonds at a premium. Interest is paid on May 31 and November 30. On May 31, after interest was paid, 100, \$1,000 bonds are tendered for conversion into 3,000 shares of $\$ 10$ par value common stock that had a market price of $\$ 40$ per share. How should Koch Co. account for the conversion of the bonds into common stock under the book value method? Discuss the rationale for this method.

## Solution 16-136

To account for the conversion of bonds under the book value method, Bonds Payable should be debited for the face value, Premium on Bonds Payable should be debited, and Common Stock should be credited at par for the shares issued. Using the book value method, no gain (loss) on conversion is recorded. The amount to be recorded for the stock is equal to the book (carrying) value (face value plus unamortized premium) of the bonds. Paid-in Capital in Excess of Par would be credited for the difference between the book value of the bonds and the par value of the stock issued. The rationale for the book value method is that the conversion is the completion of the transaction initiated when the bonds were issued. Since this is viewed as a transaction with stockholders, no gain (loss) should be recognized.

## Ex. 16-137—Convertible Debt and Debt with Warrants (Essay).

What accounting treatment is required for convertible debt? Why? What accounting treatment is required for debt issued with stock warrants? Why?

## Solution 16-137

Convertible debt is treated solely as debt. One reason is that the debt and conversion option are inseparable. The holder cannot sell one and retain the other. The two choices are mutually exclusive. Another reason is that the valuation of the conversion option or the debt security without the conversion option is subjective because these values are not established separately in the marketplace.

When debt is issued with stock warrants, the warrants are given separate recognition. After issue, the debt and the detachable warrants trade separately. The proceeds may be allocated to the two elements based on the relative fair values of the debt security without the warrants and the warrants at the time of issuance. The proceeds allocated to the warrants should be accounted for as paid-in capital.

## Ex. 16-138—Stock options.

Prepare the necessary entries from 1/1/12-2/1/14 for the following events using the fair value method. If no entry is needed, write "No Entry Necessary."

1. On $1 / 1 / 12$, the stockholders adopted a stock option plan for top executives whereby each might receive rights to purchase up to 15,000 shares of common stock at $\$ 40$ per share. The par value is $\$ 10$ per share.
2. On $2 / 1 / 12$, options were granted to each of five executives to purchase 15,000 shares. The options were non-transferable and the executive had to remain an employee of the company to exercise the option. The options expire on $2 / 1 / 14$. It is assumed that the options were for services performed equally in 2012 and 2013. The Black-Scholes option pricing model determines total compensation expense to be $\$ 1,600,000$.
3. At $2 / 1 / 14$, four executives exercised their options. The fifth executive chose not to exercise his options, which therefore were forfeited.

## 16-42 Test Bank for Intermediate Accounting, Fourteenth Edition

## Solution 16-138

1. 

No entry necessary.
2.

No entry necessary.

| 12/31/12 |  |  |
| :---: | :---: | :---: |
| Compensation Expense | 800,000 |  |
| Paid-in Capital-Stock Options ............................... $12 / 31 / 13$ 800,000 |  |  |
|  |  |  |
| Compensation Expense | 800,000 |  |
| Paid-in Capital-Stock Options . |  | 800,000 |

Paid-in Capital—Stock Options

## 2/1/14

Cash ( $4 \times 15,000 \times \$ 40$ ) ............................................................ 2,400,000
Paid-in Capital—Stock Options (\$1,600,000 $\times 4 / 5$ ) ..................... 1,280,000
Common Stock
Paid-in Capital in Excess of Par $\qquad$
Paid-in Capital—Stock Options ................................................... 320,000
Paid-in Capital—Expired Stock Options
320,000

Ex. 16-139—Weighted average shares outstanding.
On January 1, 2013, Warren Corporation had 1,000,000 shares of common stock outstanding. On March 1, the corporation issued 150,000 new shares to raise additional capital. On July 1, the corporation declared and issued a 2 -for-1 stock split. On October 1, the corporation purchased on the market 400,000 of its own outstanding shares and retired them.

## Instructions

Compute the weighted average number of shares to be used in computing earnings per share for 2013.

## Solution 16-139

|  | Increase (Decrease) | Outstanding | Months Outstanding |  | Share Months |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Jan. 1 | - | 1,000,000 | 2 | 2/1 | 4,000,000 |
| March 1 | 150,000 | 1,150,000 | 4 | 2/1 | 9,200,000 |
| July 1 | 1,150,000 | 2,300,000 | 3 |  | 6,900,000 |
| Oct. 1 | $(400,000)$ | 1,900,000 | 3 |  | 5,700,000 |
|  |  |  | $\underline{\underline{12}}$ |  | $\underline{\underline{25,800,000}}$ |
|  |  | $(25,800,000 \div 12)$ |  | $\underline{2,150,000}$ |  |

## Ex. 16-140—Earnings Per Share. (Essay)

Define the following:
(a) The computation of earnings per common share
(b) Complex capital structure
(c) Basic earnings per share
(d) Diluted earnings per share

## Solution 16-140

(a) Earnings per common share is computed by dividing net income less preferred dividends by the weighted average of common shares outstanding.
(b) A complex capital structure exists when a corporation has convertible securities, options, warrants, or other rights that upon conversion or exercise could dilute earnings per share.
(c) Basic earnings per share is earnings per share computed based on the common shares outstanding during the period.
(d) Diluted earnings per share is earnings per share computed based on common stock and all potentially dilutive common shares that were outstanding during the period.

## Ex. 16-141—Earnings per share.

Santana Corporation has 400,000 shares of common stock outstanding throughout 2013. In addition, the corporation has 5,000, 20-year, $9 \%$ bonds issued at par in 2011. Each $\$ 1,000$ bond is convertible into 20 shares of common stock after $9 / 23 / 14$. During the year 2013, the corporation earned $\$ 900,000$ after deducting all expenses. The tax rate was $30 \%$.

## Instructions

Compute the proper earnings per share for 2013.

## Solution 16-141

Earnings per share: $\frac{\text { Net income }}{\text { Outstanding shares }}=\frac{\$ 900,000}{400,000}=\$ 2.25$
Net income + Interest after taxes
Earnings per share assuming bond conversion:
Assumed outstanding shares

$$
(\$ 450,000 \times .7=\$ 315,000) ; \frac{\$ 900,000+\$ 315,000}{400,000+100,000}=\$ 2.43
$$

Therefore the bonds are antidilutive, and earnings per common share outstanding of \$2.25 should be reported.

## Solution 16-141 (Cont.)

Note that the convertible security is antidilutive:
$\frac{\text { Bond interest after taxes }}{\text { Assumed incremental shares }}=\frac{\$ 315,000}{100,000}=\$ 3.15$

Ex. 16-142—Diluted earnings per share.
Dunbar Company had 400,000 shares of common stock outstanding during the year 2013. In addition, at December 31, 2013, 60,000 shares were issuable upon exercise of executive stock options which require a $\$ 40$ cash payment upon exercise (options granted in 2011). The average market price during 2013 was $\$ 50$.

## Instructions

Compute the number of shares to be used in determining diluted earnings per share for 2013.

## Solution 16-142

Shares outstanding 400,000
Add: Assumed issuance
60,000
460,000
Deduct: Proceeds/Average market price (\$2,400,000 $\div \$ 50$ )
Number of shares
$(48,000)$
412,000

## *Ex. 16-143-Stock appreciation rights.

On January 1, 2011, Orr Co. established a stock appreciation rights plan for its executives. They could receive cash at any time during the next four years equal to the difference between the market price of the common stock and a pre-established price of $\$ 16$ on 600,000 SARs. The market price is as follows: 12/31/11-\$21; 12/31/12-\$18; 12/31/13-\$19; 12/31/14-\$20. On December 31, 2013, 100,000 SARs are exercised, and the remaining SARs are exercised on December 31, 2014.

## Instructions

(a) Prepare a schedule that shows the amount of compensation expense for each of the four years starting with 2011.
(b) Prepare the journal entry at 12/31/12 to record compensation expense.
(c) Prepare the journal entry at $12 / 31 / 14$ to record the exercise of the remaining SARs.

## *Solution 16-143

| (a) |  | Sched | of Compens 600,000 SA | Expense |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Date | Market Price | Set Price | Value <br> of SARs | Percent Accrued | Accrued to Date | Expense |
| $\overline{12 / 31 / 11}$ | \$21 | \$16 | \$3,000,000 | 25\% | $\begin{array}{r} \hline \$ 750,000 \\ (150,000) \\ \hline \end{array}$ | \$750,000 |
| 12/31/12 | 18 | 16 | 1,200,000 | 50\% | $\begin{aligned} & 600,000 \\ & 750,000 \end{aligned}$ | $(150,000)$ |
| 12/31/13 | 19 | 16 | 1,800,000 | 75\% | $\begin{array}{r} 1,350,000 \\ 650,000 \\ \hline \end{array}$ | 750,000 |
| 12/31/14 | 20 | 16 | $\begin{gathered} 2,000,000 \\ \times 500,000) \end{gathered}$ | 100\% | 2,000,000 | 650,000 |
| (b) L | y Under Stock Appreciatio Compensation Expense |  |  |  | 150,000 |  |
|  |  |  |  |  |  | 150,000 |
| (c) Liability Under Stock Appreciation Plan . |  |  |  |  | 2,000,000 |  |
|  |  |  |  |  |  | 2,000,000 |

## PROBLEMS

Pr. 16-144-Convertible bonds and stock warrants.
For each of the unrelated transactions described below, present the entry(ies) required to record the bond transactions.

1. On August 1, 2013, Lane Corporation called its $10 \%$ convertible bonds for conversion. The $\$ 6,000,000$ par bonds were converted into 240,000 shares of $\$ 20$ par common stock. On August 1, there was $\$ 700,000$ of unamortized premium applicable to the bonds. The fair value of the common stock was $\$ 20$ per share. Ignore all interest payments.
2. Packard, Inc. decides to issue convertible bonds instead of common stock. The company issues $10 \%$ convertible bonds, par $\$ 3,000,000$, at 97 . The investment banker indicates that if the bonds had not been convertible they would have sold at 94.
3. Gomez Company issues $\$ 10,000,000$ of bonds with a coupon rate of $8 \%$. To help the sale, detachable stock warrants are issued at the rate of ten warrants for each $\$ 1,000$ bond sold. It is estimated that the value of the bonds without the warrants is $\$ 9,870,000$ and the value of the warrants is $\$ 630,000$. The bonds with the warrants sold at 101.

## Solution 16-144


Common Stock
4,800,000
Paid-in Capital in Excess of Par
1,900,000

## Solution 16-144 (Cont.)

. Cash 2,910,000
Discount on Bonds Payable 90,000
Bonds Payable $\qquad$
10,100,000
Discount on Bonds Payable 506,000
Bonds Payable
10,000,000
Paid-in Capital—Stock Warrants 606,000 $(\$ 630,000 \div \$ 10,500,000 \times \$ 10,100,000=\$ 606,000)$

Pr. 16-145-Earnings per share.
Colson Corp. had $\$ 600,000$ net income in 2013. On January 1, 2013 there were 200,000 shares of common stock outstanding. On April 1, 20,000 shares were issued and on September 1, Colson bought 30,000 shares of treasury stock. There are 30,000 options to buy common stock at $\$ 40$ a share outstanding. The market price of the common stock averaged $\$ 50$ during 2013. The tax rate is $40 \%$.

During 2013, there were 40,000 shares of convertible preferred stock outstanding. The preferred is $\$ 100$ par, pays $\$ 3.50$ a year dividend, and is convertible into three shares of common stock.

Colson issued $\$ 2,000,000$ of $8 \%$ convertible bonds at face value during 2012. Each $\$ 1,000$ bond is convertible into 30 shares of common stock.

## Instructions

Compute diluted earnings per share for 2013. Complete the schedule and show all computations.

Security \begin{tabular}{c}
Net <br>
Income

 

Adjust- <br>
ment

$\quad$

Adjusted <br>
Net Income

 Shares 

Adjust- <br>
ment

 

Adjusted <br>
Shares
\end{tabular}$\quad$ EPS

## Solution 16-145

| Security | Net Income | Adjustment | Adjusted Net Income | Shares | Adjustment | Adjusted Shares | EPS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Com. Stock | \$600,000 | \$(140,000) | \$460,000 | 200,000 | $5,000^{\text {a }}$ | 205,000 | \$2.24 |
| Options |  |  | 460,000 | 205,000 | $6,000^{\text {b }}$ | 211,000 | 2.18 |
| Bonds | 460,000 | 96,000 ${ }^{\text {c }}$ | 556,000 | 211,000 | 60,000 | 271,000 | 2.05 |
| Preferred | 556,000 | 140,000 | 696,000 | 271,000 | 120,000 | 391,000 | 1.78 |
| $\begin{array}{r} { }^{\mathrm{a}} 20, \mathrm{C} \\ 30, \mathrm{C} \end{array}$ | $\begin{aligned} & 0 \times 3 / 4= \\ & 10 \times 1 / 3= \end{aligned}$ | $\begin{gathered} 15,000 \\ (10,000) \\ \underline{\underline{(5,000}} \end{gathered}$ |  |  |  |  |  |

## Solution 16-145 (Cont.)

$$
\begin{array}{ll}
\mathrm{b} & \begin{array}{l}
30,000 \\
\$ 1,200,000 \div \$ 50 \\
=\left(\frac{24,000}{6,000}\right.
\end{array} \mathrm{SA} \\
& \text { (or) }[(50-40) \div 50] \times 30,000=\underline{\underline{6,000}} \mathrm{SA} \\
{ }^{\mathrm{c}} \$ 2,000,000 \times .08 \times .6=\underline{\$ 96,000} & \frac{\$ 96,000}{60,000}=\$ 1.60 \quad \frac{\$ 140,000}{120,000}=\$ 1.17
\end{array}
$$

Pr. 16-146-Basic and diluted EPS.
Assume that the following data relative to Kane Company for 2013 is available:

| Net Income |  | \$2,100,000 |
| :---: | :---: | :---: |
| Transactions in Common Shares | Change | Cumulative |
| Jan. 1, 2013, Beginning number |  | 700,000 |
| Mar. 1, 2013, Purchase of treasury shares | $(60,000)$ | 640,000 |
| June 1, 2013, Stock split 2-1 | 640,000 | 1,280,000 |
| Nov. 1, 2013, Issuance of shares | 180,000 | 1,460,000 |
| 8\% Cumulative Convertible Preferred Stock |  |  |
| Sold at par, convertible into 200,000 shares of common (adjusted for stock split). |  | \$1,000,000 |
| Stock Options |  |  |
| Exercisable at the option price of $\$ 25$ per share. Average market price in 2013, $\$ 30$ (market price and option price adjusted for split). |  | ,000 shares |

## Instructions

(a) Compute the basic earnings per share for 2013. (Round to the nearest penny.)
(b) Compute the diluted earnings per share for 2013. (Round to the nearest penny.)

## Solution 16-146

Computation of weighted-average shares outstanding during the year:

| January 1 | Outstanding | 700,000 |
| :--- | :--- | ---: |
| March 1 | Repurchase $(5 / 6 \times 60,000)$ | $\underline{(50,000)}$ |
|  |  | $\underline{\underline{650,000}}$ |
| June 1 | 2-for-1 split | $1,300,000$ |
| November 1 | Issued $(1 / 6 \times 180,000)$ | $\underline{30,000}$ |
|  |  | $\underline{1,330,000}$ |

## Solution 16-146 (Cont.)

Additional shares for purposes of diluted earnings per share:
Potentially dilutive securities
8\% convertible preferred stock
Stock options
Proceeds from exercise of 90,000 options (90,000 $\times \$ 25$ ) \$2,250,000
Shares issued upon exercise of options 90,000
Less: treasury stock purchasable with proceeds
$(\$ 2,250,000 \div \$ 30)$
75,000
15,000
Dilutive securities-additional shares
$\underline{\underline{215,000}}$
(a) Basic earnings per share: $\frac{\$ 2,100,000-\$ 80,000}{1,330,000}=\$ 1.52$
(b) Diluted earnings per share: $\frac{\$ 2,100,000}{1,330,000+215,000}=\$ 1.36$

Pr. 16-147—Basic and diluted EPS.
Presented below is information related to Starr Company.

1. Net Income [including an extraordinary gain (net of tax) of $\$ 70,000$ ]
2. Capital Structure
a. Cumulative $8 \%$ preferred stock, $\$ 100$ par, 6,000 shares issued and outstanding
b. $\$ 10$ par common stock, 74,000 shares outstanding on January 1.

On April 1, 40,000 shares were issued for cash. On October 1,
16,000 shares were purchased and retired.
\$1,000,000
c. On January 2 of the current year, Starr purchased Oslo Corporation. One of the terms of the purchase was that if Starr's net income for the following year is $\$ 2,400,000$ or more, 50,000 additional shares would be issued to Oslo stockholders next year.
3. Other Information

| a. Average market price per share of common stock during entire year | $\$ 30$ |
| :--- | ---: |
| b. Income tax rate | $30 \%$ |

## Instructions

Compute earnings per share for the current year.

## Solution 16-147

Income before extraordinary item
Less preferred dividends
Available to common before extraordinary item
Add extraordinary gain (net of tax)
Income available to common
Weighted-average shares outstanding:
January 1
74,000
$3 / 4 \times 40,000$
$1 / 4 \times 16,000$
Basic earnings per share:
Income before extraordinary item
Extraordinary item (net of tax)
Net income
\$210,000
$(48,000)$
162,000
70,000
\$232,000

30,000
$(4,000)$
100,000
$\$ 1.62$ (a)
.70 (b)
$\$ \mathbf{\$ 2 . 3 2}$ (c)

Calculations:
\$162,000
(b) $\frac{\$ 70,000}{100,000}$
\$ 1.08 (a)
.47 (b)
$\$ 1.55$ (c)

Calculations:
(a) $\frac{\$ 162,000}{100,000+50,000}$
(b) $\overline{150,000}$
(c) $\frac{\$ 232,000}{100,000+50,000}$

Pr. 16-148-Basic and diluted EPS.
The following information was taken from the books and records of Ludwick, Inc.:

1. Net income

$$
\$ 350,000
$$

2. Capital structure:
a. Convertible $6 \%$ bonds. Each of the 300, $\$ 1,000$ bonds is convertible into 50 shares of common stock at the present date and for the next 10 years.
b. $\$ 10$ par common stock, 200,000 shares issued and outstanding during the entire year.
c. Stock warrants outstanding to buy 16,000 shares of common stock at $\$ 20$ per share.

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Pr. 16-148 (Cont.)
3. Other information:
a. Bonds converted during the year

None
b. Income tax rate
c. Convertible debt was outstanding the entire year
d. Average market price per share of common stock during the year
e. Warrants were outstanding the entire year
f. Warrants exercised during the year

## Instructions

Compute basic and diluted earnings per share.

## Solution 16-148

Basic EPS $=\$ 350,000 \div 200,000$ sh. $=\$ 1.75$

| Security | Net Income | Adjustment | Adjusted Net Income | Shares | Adjustment | Adjusted Shares | $\begin{aligned} & \text { Diluted } \\ & \text { EPS } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Com. Stock | \$350,000 |  | \$350,000 | 200,000 | - | 200,000 | \$1.75 |
| Warrants | 350,000 |  | 350,000 | 200,000 | 6,000 ${ }^{1}$ | 206,000 | 1.70 |
| Conv. Bonds | 350,000 | \$12,600 ${ }^{2}$ | 362,600 | 206,000 | 15,000 | 221,000 | 1.6 |

```
            16,000
1 320,000
    - = (10,000)
        32
            6,000 SA
```

${ }^{2} \$ 300,000 \times .06 \times .7=\$ 12,600 \quad \frac{\$ 12,600}{15,000}=\$ .84$

## IFRS QUESTIONS

## True/False

1. IFRS and U.S. GAAP have significant differences in the reporting of securities with characteristics of debt and equity, such as convertible debt.
2. Under IFRS, all of the proceeds of convertible debt are recorded as long-term debt.
3. Under IFRS, convertible bonds are "bifurcated" -separated into the equity component (the value of the conversion option) of the bond issue and the debt component.
4. Under both U.S. GAAP and IFRS, the calculation of basic and diluted earnings per share is identical.
5. Under IFRS recording for the issuance of Convertible debt, the Discount on Bonds Payable and the Paid-in Capital-Convertible Bonds accounts could be utilized.

## Answers to True/False:

1. True
2. False
3. True
4. False
5. False

## Multiple Choice:

1. With regard to recognizing stock-based compensation
a. IFRS and U.S. GAAP follow the same model.
b. IFRS and U.S. GAAP standards are undergoing major reform on valuation issues.
c. it has been agreed that these standards will not be merged due to the differences in currencies.
d. the reform of U.S. GAAP standards will not be addressed until IFRS standards have been finalized.
2. The primary IFRS reporting standards related to financial instruments, including dilutive securities, is
a. IAS 33.
b. IAS 39 .
c. IFRS 2.
d. IAS 2.
3. When $\$ 5,000,000$ in convertible bonds are issued at par with $\$ 800,000$ in value of the equity option embedded in the bond, the IFRS journal entry will include a debit of
a. $\$ 800,000$ to Paid-in Capital - Convertible Bonds and a credit to Bonds Payable.
b. $\$ 800,000$ to Premium on Bonds Payable and a credit to Paid-in Capital - Convertible Bonds.
c. $\$ 800,000$ to Bonds Payable and a credit to Paid-in Capital - Convertible Bonds.
d. $\$ 4,200,000$ to Cash along with a debit of $\$ 800,000$ to Discount on Bonds Payable and a credit to Bonds Payable and a credit to Paid-in Capital - Convertible Bonds.
4. With regard to contracts that can be settled in either cash or shares
a. IFRS requires that share settlement must be used.
b. IFRS gives companies a choice of either cash or shares.
c. U.S. GAAP requires that share settlement must be used.
d. the FASB project proposes that the IASB adopt the U.S. GAAP approach, requiring that share settlement must be used.
5. With regard to recognizing stock-based compensation under IFRS the fair value of shares and options awarded to employees is recognized
a. in the first fiscal period of the employees' service.
b. over the fiscal periods to which the employees' services relate.
c. in the last fiscal period of the employees' service when the total value can be calculated.
d. after last fiscal period of the employees' service when the total value can be calculated.

## Answers to Multiple Choice:

1. a
2. b
3. c
4. a
5. b

## Short Answer

1. Briefly describe some of the similarities and differences between U.S. GAAP and IFRS with respect to the accounting for dilutive securities, stock-based compensation, and earnings per share.
2. IFRS and U.S. GAAP are substantially the same in the accounting for dilutive securities, stock-based compensation, and earnings per share. For example, both IFRS and U.S. GAAP follow the same model for recognizing stock-based compensation. That is, the fair value of shares and options awarded to employees is recognized over the period to which the employees' services relate.

The main differences concern (1) the accounting for convertible debt. Under U.S. GAAP all of the proceeds of convertible debt are recorded as long term debt. Under IFRS, convertible bonds are "bifurcated", or separated into the equity component - the value of the conversion option - of the bond issue and the debt component; (2) a minor difference in EPS reporting - the FASB allows companies to rebut the presumption that contracts that can be settled in either cash or shares will be settled in shares. IFRS requires that share settlement must be used in this situation; (3) other EPS differences relate to the treasury stock method and how the proceeds from extinguishment of a liability should be accounted for and how to make the computation for the weighted-average of contingently issuable shares.
2. Briefly discuss the convergence efforts that are under way by the IASB and FASB in the area of dilutive securities and earnings per share.
2. The FASB has been working on a standard that will likely converge to iGAAP in the accounting for convertible debt. Similar to the FASB, the IASB is examining the classification of hybrid securities; the IASB is seeking comment on a discussion document similar to the FASB Preliminary Views document: "Financial Instruments with Characteristics of Equity ". It is hoped that the boards will develop a converged standard in this area. While U.S. GAAP and IFRS are similar as to the presentation of EPS, the Boards have been working together to resolve remaining differences related to earnings per share computations.

