# CHAPTER 10

# Liabilities

## ASSIGNMENT CLASSIFICATION TABLE

| Learning Objectives | Questions | Brief Exercises | Do It! | Exercises | A Problems | B Problems |
|---|---|---|---|---|---|---|
| 1. Explain a current liability, and identify the major types of current liabilities. | 1 | 1 | | | 1A | 1B |
| 2. Describe the accounting for notes payable. | 2 | 2 | 1 | 1, 2 | 1A, 2A | 1B |
| 3. Explain the accounting for other current liabilities. | 3, 4, 5 | 3, 4, 12 | 1 | 3, 4, 5, 15 | 1A | 1B |
| 4. Explain why bonds are issued, and identify the types of bonds. | 6, 7, 8, 9, 10, | 5 | 2 | 6, 7 | | |
| 5. Prepare the entries for the issuance of bonds and interest expense. | 11, 12, 13 | 6, 7, 8 | 3 | 8, 9, 10, 11, 18, 19 | 3A, 4A, 6A, 7A, 8A, 9A | 2B, 3B, 5B, 6B, 7B, 8B, 9B |
| 6. Describe the entries when bonds are redeemed. | 14 | 9 | 4 | 11, 12 | 3A, 4A, 10A | 2B, 3B, 9B |
| 7. Describe the accounting for long-term notes payable. | 15 | 10 | 5 | 13 | 5A | 4B |
| 8. Identify the methods for the presentation and analysis of non-current liabilities. | 16 | 11, 12 | 6 | 14, 15 | 3A, 4A, 5A | 2B, 3B, 4B |
| *9. Apply the effective-interest method of amortizing bond discount and bond premium. | 17, 18 | 13 | | 16, 17 | 6A, 7A | 5B, 6B |

## ASSIGNMENT CLASSIFICATION TABLE (Continued)

| Learning Objectives | Questions | Brief Exercises | Do It! | Exercises | A Problems | B Problems |
|---|---|---|---|---|---|---|
| *10. Apply the straight-line method of amortizing bond discount and bond premium. | 19, 20 | 14, 15 | | 18, 19 | 8A, 9A, 10A | 7B, 8B, 9B |
| *11. Identify types of employee-related liabilities. | 21 | 16, 17 | | 20 | | |

***Note:** All **asterisked** Questions, Exercises, and Problems relate to material contained in the appendices to the chapter.

## ASSIGNMENT CHARACTERISTICS TABLE

| Problem Number | Description | Difficulty Level | Time Allotted (min.) |
|---|---|---|---|
| 1A | Prepare current liability entries, adjusting entries, and current liabilities section. | Moderate | 30–40 |
| 2A | Journalize and post note transactions; and show statement of financial position presentation. | Moderate | 30–40 |
| 3A | Prepare entries to record issuance of bonds, interest accrual, and bond redemption. | Moderate | 20–30 |
| 4A | Prepare entries to record issuance of bonds, interest accrual, and bond redemption. | Moderate | 15–20 |
| 5A | Prepare installment payments schedule and journal entries for a mortgage note payable. | Moderate | 20–30 |
| *6A | Prepare journal entries to record issuance of bonds, payment of interest, and amortization of bond discount using effective-interest method. | Moderate | 30–40 |
| *7A | Prepare journal entries to record issuance of bonds, payment of interest, and effective-interest amortization, and statement of financial position presentation. | Moderate | 30–40 |
| *8A | Prepare entries to record issuance of bonds, interest accrual, and straight-line amortization for 2 years. | Simple | 30–40 |
| *9A | Prepare entries to record issuance of bonds, interest, and straight-line amortization of bond premium and discount. | Simple | 30–40 |
| *10A | Prepare entries to record interest payments, straight-line premium amortization, and redemption of bonds. | Moderate | 30–40 |
| 1B | Prepare current liability entries, adjusting entries, and current liabilities section. | Moderate | 30–40 |
| 2B | Prepare entries to record issuance of bonds, interest accrual, and bond redemption. | Moderate | 20–30 |
| 3B | Prepare entries to record issuance of bonds, interest accrual, and bond redemption. | Moderate | 15–20 |
| 4B | Prepare installment payments schedule and journal entries for a mortgage note payable. | Moderate | 20–30 |
| *5B | Prepare entries to record issuance of bonds, payment of interest, and amortization of bond discount using effective-interest method. | Moderate | 30–40 |

## ASSIGNMENT CHARACTERISTICS TABLE (Continued)

| Problem Number | Description | Difficulty Level | Time Allotted (min.) |
|---|---|---|---|
| *6B | Prepare entries to record issuance of bonds, payment of interest, and amortization of premium using effective-interest method. | Moderate | 30–40 |
| *7B | Prepare entries to record issuance of bonds, interest accrual, and straight-line amortization for 2 years. | Simple | 30–40 |
| *8B | Prepare entries to record issuance of bonds, interest, and straight-line amortization of bond premium and discount. | Simple | 30–40 |
| *9B | Prepare entries to record interest payments, straight-line discount amortization, and redemption of bonds. | Moderate | 30–40 |

# WEYGANDT FINANCIAL ACCOUNTING, IFRS EDITION, 3e
# CHAPTER 10
# LIABILITIES

| Number | LO | BT | Difficulty | Time (min.) |
|---|---|---|---|---|
| BE1 | 1 | C | Simple | 3–5 |
| BE2 | 2 | AP | Simple | 2–4 |
| BE3 | 3 | AP | Simple | 2–4 |
| BE4 | 3 | AP | Simple | 2–4 |
| BE5 | 4 | AP | Simple | 6–8 |
| BE6 | 5 | AP | Simple | 4–6 |
| BE7 | 5 | AP | Simple | 3–5 |
| BE8 | 5 | AP | Simple | 4–6 |
| BE9 | 6 | AP | Simple | 3–5 |
| BE10 | 7 | AP | Simple | 6–8 |
| BE11 | 8 | AP | Simple | 3–5 |
| BE12 | 3, 8 | AP | Simple | 3–5 |
| *BE13 | 9 | AP | Simple | 4–6 |
| *BE14 | 10 | AP | Simple | 4–6 |
| *BE15 | 10 | AP | Simple | 4–6 |
| *BE16 | 11 | AP | Simple | 3–5 |
| *BE17 | 11 | AP | Simple | 3–5 |
| DI1 | 2, 3 | C | Simple | 6–8 |
| DI2 | 4 | C | Simple | 2–3 |
| DI3 | 5 | AP | Simple | 4–6 |
| DI4 | 6 | AP | Simple | 3–5 |
| DI5 | 7 | AP | Simple | 4–6 |
| DI6 | 8 | AP | Simple | 3–5 |
| EX1 | 2 | AN | Moderate | 8–10 |
| EX2 | 2 | AN | Simple | 6–8 |
| EX3 | 3 | AP | Simple | 4–6 |
| EX4 | 3 | AN | Simple | 6–8 |
| EX5 | 3 | AP | Simple | 6–8 |
| EX6 | 4 | C | Simple | 4–6 |
| EX7 | 4 | AN | Simple | 4–6 |
| EX8 | 5 | AP | Simple | 4–6 |
| EX9 | 5 | AP | Simple | 4–6 |
| EX10 | 5 | AP | Simple | 6–8 |
| EX11 | 5, 6 | AP | Simple | 6–8 |
| EX12 | 6 | AP | Moderate | 8–10 |
| EX13 | 7 | AP | Simple | 6–8 |
| EX14 | 8 | AP | Simple | 3–5 |

 

## LIABILITIES (Continued)

| Number | LO | BT | Difficulty | Time (min.) |
|---|---|---|---|---|
| EX15 | 3, 8 | AP | Simple | 4–2 |
| *EX16 | 9 | AP | Moderate | 8–10 |
| *EX17 | 9 | AP | Moderate | 8–10 |
| *EX18 | 5, 10 | AP | Simple | 6–8 |
| *EX19 | 5, 10 | AP | Simple | 6–8 |
| *EX20 | 11 | AP | Simple | 6–8 |
| P1A | 1–3 | AN | Moderate | 30–40 |
| P2A | 2 | AN | Moderate | 30–40 |
| P3A | 5, 6, 8 | AP | Moderate | 20–30 |
| P4A | 5, 6, 8 | AP | Moderate | 15–20 |
| P5A | 7, 8 | AP | Moderate | 20–30 |
| *P6A | 5, 9 | AP | Moderate | 30–40 |
| *P7A | 5, 9 | AP | Moderate | 30–40 |
| *P8A | 5, 10 | AP | Simple | 30–40 |
| *P9A | 5, 10 | AP | Simple | 30–40 |
| *P10A | 6, 10 | AP | Moderate | 30–40 |
| P1B | 1–3 | AN | Moderate | 30–40 |
| P2B | 5, 6, 8 | AP | Moderate | 20–30 |
| P3B | 5, 6, 8 | AP | Moderate | 15–20 |
| P4B | 7, 8 | AP | Moderate | 20–30 |
| *P5B | 5, 9 | AP | Moderate | 30–40 |
| *P6B | 5, 9 | AP | Moderate | 30–40 |
| *P7B | 5, 10 | AP | Simple | 30–40 |
| *P8B | 5, 10 | AP | Simple | 30–40 |
| *P9B | 5, 6, 10 | AP | Moderate | 30–40 |
| BYP1 | 1, 8 | AN | Simple | 5–10 |
| BYP2 | 1, 3, 8 | AP | Simple | 10–15 |
| BYP3 | 4 | C | Simple | 10–15 |
| *BYP4 | 5, 6, 10 | AN | Moderate | 15–20 |
| BYP5 | 4 | C | Simple | 10–15 |
| BYP6 | — | E | Simple | 10–15 |

 

## Correlation Chart between Bloom's Taxonomy, Learning Objectives and End-of-Chapter Exercises and Problems

| Learning Objective | Knowledge | Comprehension | Application | Analysis | Synthesis | Evaluation |
|---|---|---|---|---|---|---|
| 1. Explain a current liability, and identify the major types of current liabilities. | | Q10-1<br>BE10-1 | | P10-1A<br>P10-1B | | |
| 2. Describe the accounting for notes payable. | | Q10-2<br>DI10-1 | BE10-2 | E10-1 P10-1A<br>E10-2 P10-2A<br>P10-1B | | |
| 3. Explain the accounting for other current liabilities. | | Q10-3 Q10-5<br>Q10-4<br>DI10-1 | BE10-3 E10-3<br>BE10-4 E10-5<br>BE10-12 E10-15 | E10-4 P10-1B<br>P10-1A | | |
| 4. Explain why bonds are issued, and identify the types of bonds. | Q10-10 | Q10-6 Q10-9<br>Q10-7 DI10-2<br>Q10-8 | BE10-5<br>E10-6 | E10-7 | | |
| 5. Prepare the entries for the issuance of bonds and interest expense. | | Q10-11<br>Q10-13 | Q10-12 E10-11 P10-9A<br>BE10-6 E10-18 P10-2B<br>BE10-7 E10-19 P10-3B<br>BE10-8 P10-3A P10-5B<br>DI10-3 P10-4A P10-6B<br>E10-8 P10-6A P10-7B<br>E10-9 P10-7A P10-8B<br>E10-10 P10-8A P10-9B | | | |
| 6. Describe the entries when bonds are redeemed. | | Q10-14 | BE10-9 P10-3A P10-3B<br>DI10-4 P10-4A P10-9B<br>E10-11 P10-10A<br>E10-12 P10-2B | | | |
| 7. Describe the accounting for long-term notes payable. | | | Q10-15 DI10-5 P10-4B<br>BE10-10 E10-13 P10-5A | | | |
| 8. Identify the methods for the presentation and analysis of non-current liabilities. | Q10-16 | | BE10-11 P10-3A P10-2B<br>BE10-12 P10-4A P10-3B<br>E10-14 P10-5A P10-4B<br>E10-15<br>DI10-6 | | | |
| *9. Apply the effective-interest method of amortizing bond discount and bond premium. | | Q10-17<br>Q10-18 | BE10-13 P10-6A P10-6B<br>E10-16 P10-7A<br>E10-17 P10-5B | | | |
| *10. Apply the straight-line method of amortizing bond discount and bond premium. | Q10-19 | | Q10-20 E10-19 P10-7B<br>BE10-14 P10-8A P10-8B<br>BE10-15 P10-9A P10-9B<br>E10-18 P10-10A | | | |
| *11. Identify types of employee-related liabilities. | Q10-21 | | BE10-16 E10-20<br>BE10-17 | | | |
| Broadening Your Perspective | | Communication<br>Real-World Focus | Comparative Analysis | Financial Reporting<br>Decision-Making Across the Organization | | Ethics Case |

BLOOM'S TAXONOMY TABLE

# ANSWERS TO QUESTIONS

**1.** Brenda is not correct. A current liability is a debt that can reasonably be expected to be paid: (a) from existing current assets or through the creation of other current liabilities and (2) within one year or the operating cycle, whichever is longer.

**2.** In the statement of financial position, Notes Payable of Rs300,000 and Interest Payable of Rs6,750 (Rs300,000 X .09 X 3/12) should be reported as current liabilities. In the income statement, Interest Expense of Rs6,750 should be reported after other income and expense.

**3.** (a) Disagree. The company only serves as a collection agent for the taxing authority. It does not report sales taxes as an expense; it merely forwards the amount paid by the customer to the government.

(b) The entry to record the proceeds is:

| | | |
|---|---|---|
| Cash | 7,400 | |
| Sales Revenue | | 7,000 |
| Sales Taxes Payable | | 400 |

**4.** (a) The entry when the tickets are sold is:

| | | |
|---|---|---|
| Cash | 900,000 | |
| Unearned Ticket Revenue | | 900,000 |

(b) The entry after each game is:

| | | |
|---|---|---|
| Unearned Ticket Revenue | 180,000 | |
| Ticket Revenue | | 180,000 |

**5.** Liquidity refers to the ability of a company to pay its maturing obligations and meet unexpected needs for cash. Two measures of liquidity are working capital (current assets – current liabilities) and the current ratio (current assets ÷ current liabilities).

**6.** (a) Non-current liabilities are obligations that are expected to be paid after one year. Examples include bonds, long-term notes, and lease obligations.

(b) Bonds are a form of interest-bearing notes payable used by corporations, universities, and governmental agencies.

**7.** (a) The major advantages are:

(1) Shareholder control is not affected—bondholders do not have voting rights, so current shareholders retain full control of the company.

(2) Tax savings result—in some countries bond interest is deductible for tax purposes; dividends on stock are not.

(3) Earnings per share may be higher—although bond interest expense will reduce net income, earnings per share on ordinary shares will often be higher under bond financing because no additional shares are issued.

(b) The major disadvantages in using bonds are that interest must be paid on a periodic basis and the principal (face value) of the bonds must be paid at maturity.

**8.** (a) Secured bonds have specific assets of the issuer pledged as collateral. In contrast, unsecured bonds are issued against the general credit of the borrower. These bonds are called debenture bonds.
(b) Convertible bonds may be converted into ordinary shares at the bondholders' option. In contrast, callable bonds are subject to call and retirement at a stated dollar amount prior to maturity at the option of the issuer.

**9.** (a) Face value is the amount of principal due at the maturity date. (Face value is also called par value.)
(b) The contractual interest rate is the rate used to determine the amount of cash interest the borrower pays and the investor receives. This rate is also called the stated interest rate because it is the rate stated on the bonds.
(c) A bond indenture is a legal document that sets forth the terms of the bond issue.
(d) A bond certificate is a legal document that indicates the name of the issuer, the face value of the bonds, and such other data as the contractual interest rate and maturity date of the bonds.

**10.** The two major obligations incurred by a company when bonds are issued are the interest payments due on a periodic basis and the principal which must be paid at maturity.

**11.** Less than. Investors are required to pay more than the face value; therefore, the market interest rate is less than the contractual rate.

**12.** R$48,000. R$800,000 X 6% = R$48,000.

**13.** HK$9,000,000. The balance of the Bonds Payable account plus the unamortized bond discount (or minus the unamortized bond premium) equals the face value of the bonds.

**14.** Debits: Bonds Payable (for the carrying value of the bonds).
Credits: Cash (for 97% of the face value) and Gain on Bond Redemption (for the difference between the cash paid and the bonds' carrying value).

**15.** No, Roy is not right. Each payment by Roy consists of: (1) interest on the unpaid balance of the loan and (2) a reduction of loan principal. The interest decreases each period while the portion applied to the loan principal increases each period.

**16.** The nature and the amount of each non-current liability should be presented in the statement of financial position or in schedules in the accompanying notes to the statements. The notes should also indicate the interest rates, maturity dates, conversion privileges, and assets pledged as collateral.

***17.** Ginny is probably indicating that since the borrower has the use of the bond proceeds over the term of the bonds, the borrowing rate in each period should be the same. The effective-interest method results in a varying amount of interest expense but a constant rate of interest on the balance outstanding. Accordingly, it results in a better matching of expenses with revenues than the straight-line method.

***18.** Decrease. Under the effective-interest method the interest charge per period is determined by multiplying the carrying value of the bonds by the effective-interest rate. When bonds are issued at a premium, the carrying value decreases over the life of the bonds. As a result, the interest expense will also decrease over the life of the bonds because it is determined by multiplying the decreasing carrying value of the bonds at the beginning of the period by the effective-interest rate.

***19.** The straight-line method results in the same amortized amount being assigned to Interest Expense each interest period. This amount is determined by dividing the total bond discount or premium by the number of interest periods the bonds will be outstanding.

***20.** £24,000. Interest expense is the interest to be paid in cash less the premium amortization for the year. Cash to be paid equals 7% X £400,000 or £28,000. Total premium equals 5% of £400,000 or £20,000. Since this is to be amortized over 5 years (the life of the bonds) in equal amounts, the amortization amount is £20,000 ÷ 5 = £4,000. Thus, £28,000 – £4,000 or £24,000 equals interest expense for 2017.

***21.** The two taxes are withholding taxes and social security taxes.

 

# SOLUTIONS TO BRIEF EXERCISES

## BRIEF EXERCISE 10-1

**(a) A note payable due in two years is a non-current liability, not a current liability.**

**(b) €30,000 of the mortgage payable is a current maturity of long-term debt. This amount should be reported as a current liability.**

**(c) Interest payable is a current liability because it will be paid out of current assets in the near future.**

**(d) Accounts payable is a current liability because it will be paid out of current assets in the near future.**

## BRIEF EXERCISE 10-2

| | | | |
|---|---|---|---|
| July 1 | Cash | 60,000 | |
| | Notes Payable | | 60,000 |
| Dec. 31 | Interest Expense | 3,000 | |
| | Interest Payable (£60,000 X 10% X 1/2) | | 3,000 |

## BRIEF EXERCISE 10-3

**Sales tax payable**

**(1) Sales = £12,100 = (£12,826 ÷ 1.06)**

**(2) Sales taxes payable = £726 = (£12,100 X 6%)**

| | | | |
|---|---|---|---|
| Mar. 16 | Cash | 12,826 | |
| | Sales Revenue | | 12,100 |
| | Sales Taxes Payable | | 726 |

**BRIEF EXERCISE 10-4**

| | | |
|---|---|---|
| Cash | 720,000 | |
| Unearned Ticket Revenue | | 720,000 |
| (To record sale of 4,000 season tickets) | | |
| Unearned Ticket Revenue | 72,000 | |
| Ticket Revenue | | 72,000 |
| (To record basketball ticket revenues earned) | | |

**BRIEF EXERCISE 10-5**

| | Issue Shares | Issue Bond |
|---|---|---|
| Income before interest and taxes | €900,000 | €900,000 |
| Interest (€2,000,000 X 6%) | 0 | 120,000 |
| Income before income taxes | 900,000 | 780,000 |
| Income tax expense (30%) | 270,000 | 234,000 |
| Net income (a) | €630,000 | €546,000 |
| Outstanding shares (b) | 700,000 | 500,000 |
| Earnings per share (a) ÷ (b) | €0.90 | €1.09 |

**Net income is higher if shares is used. However, earnings per share is lower than earnings per share if bonds are used because of the additional shares that are outstanding.**

**BRIEF EXERCISE 10-6**

| | | | | | |
|---|---|---|---|---|---|
| | 2017 | | | | |
| (a) | Jan. 1 | Cash | 4,000,000 | | |
| | | Bonds Payable (4,000 X £1,000) | | | 4,000,000 |
| (b) | Dec. 31 | Interest Expense | 320,000 | | |
| | | Interest Payable (£4,000,000 X 8%) | | | 320,000 |
| | 2018 | | | | |
| (c) | Jan. 1 | Interest Payable | 320,000 | | |
| | | Cash | | | 320,000 |

## BRIEF EXERCISE 10-7

| | | | | | |
|---|---|---|---|---|---|
| (a) | Jan. | 1 | Cash (€2,000,000 X .97) ..... | 1,940,000 | |
| | | | Bonds Payable ..... | | 1,940,000 |
| (b) | Jan. | 1 | Cash (€2,000,000 X 1.04) ..... | 2,080,000 | |
| | | | Bonds Payable ..... | | 2,080,000 |

## BRIEF EXERCISE 10-8

| | | | | | |
|---|---|---|---|---|---|
| 1. | Jan. | 1 | Cash (1,000 X €1,000) ..... | 1,000,000 | |
| | | | Bonds Payable ..... | | 1,000,000 |
| 2. | July | 1 | Cash (€900,000 X 1.02) ..... | 918,000 | |
| | | | Bonds Payable ..... | | 918,000 |
| 3. | Sept. | 1 | Cash (€400,000 X .98) ..... | 392,000 | |
| | | | Bonds Payable ..... | | 392,000 |

## BRIEF EXERCISE 10-9

| | | |
|---|---|---|
| Bonds Payable ..... | 940,000 | |
| Loss on Bond Redemption | | |
| (£1,010,000 – £940,000) ..... | 70,000 | |
| Cash (£1,000,000 X 101%) ..... | | 1,010,000 |

**BRIEF EXERCISE 10-10**

| Annual Interest Period | (A) Cash Payment | (B) Interest Expense (D) X 10% | (C) Reduction of Principal (A) – (B) | (D) Principal Balance (D) – (C) |
|---|---|---|---|---|
| Issue Date | | | | £800,000 |
| 1 | £130,196 | £80,000 | £50,196 | 749,804 |

| | | | |
|---|---|---|---|
| Dec. 31, 2017 | Cash ..... | 800,000 | |
| | Mortgage Payable ..... | | 800,000 |
| Dec. 31, 2018 | Interest Expense ..... | 80,000 | |
| | Mortgage Payable ..... | 50,196 | |
| | Cash ..... | | 130,196 |

**BRIEF EXERCISE 10-11**

| | |
|---|---|
| **Non-current liabilities** | |
| Bonds payable, due 2019 ..... | CHF500,000 |
| Notes payable, due 2022 ..... | 80,000 |
| Lease liability ..... | 72,000 |
| Total non-current liabilities ..... | CHF652,000 |

**BRIEF EXERCISE 10-12**

(a) Working capital = €4,485 − €2,836 = €1,649

(b) Current ratio = €4,485 ÷ €2,836 = 1.58:1

(c) Debt to assets = €5,099 ÷ €8,875 = 57%

(d) Times interest earned = (€245 + €113 + €169) ÷ €169 = 3.12 times

Working capital and the current ratio measure a company's ability to pay maturing obligations and meet cash needs. Adidas's current assets are 58% larger than the amount of its current liabilities which indicates a relatively high degree of liquidity.

Debt to assets and times interest earned measure a company's ability to survive over a long period of time. Adidas's debt to assets ratio indicates that approximately €.57 of every dollar invested in assets was provided by creditors. Adidas's times interest earned ratio of 3.12 indicates that its earnings are adequate to make interest payments as they come due.

***BRIEF EXERCISE 10-13**

| | | | | |
|---|---|---|---|---|
| **(a)** | **Interest Expense** | | **48,070** | |
| | **Bonds Payable** | | | **3,070** |
| | **Cash** | | | **45,000** |

**(b) Interest expense is greater than interest paid because the bonds sold at a discount which must be amortized over the life of the bonds. The bonds sold at a discount because investors demanded a market interest rate higher than the contractual interest rate.**

**(c) Interest expense increases each period because the bond carrying value increases each period. As the market interest rate is applied to this bond carrying amount, interest expense will increase.**

***BRIEF EXERCISE 10-14**

| | | | | | |
|---|---|---|---|---|---|
| **(a)** | **Jan. 1** | **Cash (.96 X HK$5,000,000)** | | **4,800,000** | |
| | | **Bonds Payable** | | | **4,800,000** |
| **(b)** | **Dec. 31** | **Interest Expense** | | **470,000** | |
| | | **Bonds Payable (HK$200,000 ÷ 10)** | | | **20,000** |
| | | **Cash (HK$5,000,000 X 9%)** | | | **450,000** |

***BRIEF EXERCISE 10-15**

| | | | | |
|---|---|---|---|---|
| **(a)** | **Cash (1.02 X £4,000,000)** | | **4,080,000** | |
| | **Bonds Payable** | | | **4,080,000** |
| **(b)** | **Interest Expense** | | **384,000** | |
| | **Bonds Payable (£80,000 ÷ 5)** | | **16,000** | |
| | **Cash (£4,000,000 X 10%)** | | | **400,000** |

## *BRIEF EXERCISE 10-16

| | | |
|---|---|---|
| Salaries and Wages Expense | 24,000 | |
| Withholding Taxes Payable | | 2,900 |
| Social Security Taxes Payable | | 1,920 |
| Insurance Premiums Payable | | 250 |
| Cash | | 18,930 |

## *BRIEF EXERCISE 10-17

| | | |
|---|---|---|
| **December 31, 2017** | | |
| Salaries and Wages Expense | 350,000 | |
| Salaries and Wages Payable | | 350,000 |
| **February 15, 2018** | | |
| Salaries and Wages Payable | 350,000 | |
| Cash | | 350,000 |

## SOLUTIONS FOR DO IT! REVIEW EXERCISES

**DO IT! 10-1**

1. NT$2,100,000 X 7% X 5/12 = NT$61,250
2. NT$1,260,000/1.05 = NT$1,200,000; NT$1,200,000 X 5% = NT$60,000
3. NT$1,080,000 X 1/6 = NT$180,000

**DO IT! 10-2**

1. False. Mortgage bonds and sinking fund bonds are both examples of secured bonds.
2. False. Convertible bonds can be converted into ordinary shares at the bondholder's option; callable bonds can be retired by the issuer at a set amount prior to maturity.
3. True.
4. True.
5. True.

**DO IT! 10-3**

| | | | |
|---|---|---|---|
| (a) | Cash | 306,000,000 | |
| | Bonds Payable | | 306,000,000 |
| | (To record sale of bonds at a premium) | | |
| (b) | Non-current liabilities | | |
| | Bonds payable | | ₩306,000,000 |

**DO IT! 10-4**

| | | |
|---|---|---|
| Loss on Bond Redemption | 6,000 | |
| Bonds Payable | 390,000 | |
| Cash | | 396,000 |
| (To record redemption of bonds at 99) | | |

**DO IT! 10-5**

| | | |
|---|---|---|
| **Cash** | **700,000** | |
| **Mortgage Payable** | | **700,000** |
| **(To record mortgage loan)** | | |
| **Interest Expense** | **42,000*** | |
| **Mortgage Payable** | **30,074** | |
| **Cash** | | **72,074** |
| **(To record annual payment on mortgage)** | | |

***Interest expense = R$700,000 X 6%**

**DO IT! 10-6**

**(a) Debt to assets ratio $26,000 ÷ $38,000 = .68:1**
**(b) Times interest earned ratio ($16,000 + $3,200 + $1,300) ÷ $1,300 = 15.8**

# SOLUTIONS TO EXERCISES

## EXERCISE 10-1

| | | |
|---|---|---|
| **July 1, 2017** | | |
| **Cash** | **60,000** | |
| **Notes Payable** | | **60,000** |
| **November 1, 2017** | | |
| **Cash** | **42,000** | |
| **Notes Payable** | | **42,000** |
| **December 31, 2017** | | |
| **Interest Expense** | | |
| **(€60,000 X 8% X 6/12)** | **2,400** | |
| **Interest Payable** | | **2,400** |
| **Interest Expense** | | |
| **(€42,000 X 7% X 2/12)** | **490** | |
| **Interest Payable** | | **490** |
| **February 1, 2018** | | |
| **Notes Payable** | **42,000** | |
| **Interest Payable** | **490** | |
| **Interest Expense** | **245** | |
| **Cash** | | **42,735** |
| **April 1, 2018** | | |
| **Notes Payable** | **60,000** | |
| **Interest Payable** | **2,400** | |
| **Interest Expense** | **1,200** | |
| **Cash** | | **63,600** |

## EXERCISE 10-2

| | | | | |
|---|---|---|---|---|
| **(a)** | **June 1** | **Cash** | **70,000** | |
| | | **Notes Payable** | | **70,000** |
| **(b)** | **June 30** | **Interest Expense** | **525** | |
| | | **Interest Payable [(€70,000 X 9%) X 1/12]** | | **525** |
| **(c)** | **Dec. 1** | **Notes Payable** | **70,000** | |
| | | **Interest Payable (€70,000 X 9% X 6/12)** | **3,150** | |
| | | **Cash** | | **73,150** |

**(d) €3,150**

## EXERCISE 10-3

**KEMER A. Ş.**

| | | | | |
|---|---|---|---|---|
| **Apr. 10** | **Cash** | | **31,800** | |
| | **Sales Revenue** | | | **30,000** |
| | **Sales Taxes Payable** | | | **1,800** |

**BODRUM A. Ş.**

| | | | | |
|---|---|---|---|---|
| **15** | **Cash** | | **20,330** | |
| | **Sales Revenue (₺20,330 ÷ 1.07)** | | | **19,000** |
| | **Sales Taxes Payable (₺19,000 X .07)** | | | **1,330** |

**EXERCISE 10-4**

**2017**

| | | | | | |
|---|---|---|---|---|---|
| **(a)** | **Nov. 30** | **Cash** | | **216,000** | |
| | | **Unearned Subscription Revenue (12,000 X £18)** | | | **216,000** |
| **(b)** | **Dec. 31** | **Unearned Subscription Revenue** | | **18,000** | |
| | | **Subscription Revenue (£216,000 X 1/12)** | | | **18,000** |

**2018**

| | | | | | |
|---|---|---|---|---|---|
| **(c)** | **Mar. 31** | **Unearned Subscription Revenue** | | **54,000** | |
| | | **Subscription Revenue (£216,000 X 3/12)** | | | **54,000** |

**EXERCISE 10-5**

**(a) Current ratio**

**2013 $12,733 ÷ $7,498 = 1.70:1**
**2012 $13,630 ÷ $6,200 = 2.20:1**

**Working capital**

**2013 $12,733 – $7,498 = $5,235 million**
**2012 $13,630 – $6,200 = $7,430 million**

**(b) Current ratio**

**$12,533 ÷ $7,298 = 1.72:1**

**Working capital**

**$12,533 – $7,298 = $5,235 million**

**It would make its current ratio increase slightly, but its working capital would remain the same.**

## EXERCISE 10-6

1. True.
2. True.
3. False. When seeking long-term financing, an advantage of issuing *bonds* over issuing *ordinary shares* is that tax savings result.
4. True.
5. False. *Unsecured* bonds are also known as debenture bonds.
6. True.
7. True.
8. True.
9. True.

## EXERCISE 10-7

| | Plan One<br>Issue Shares | Plan Two<br>Issue Bonds |
|---|---|---|
| Income before interest and taxes | ¥800,000 | ¥800,000 |
| Interest (¥2,400,000 X 7%) | — | 168,000 |
| Income before taxes | 800,000 | 632,000 |
| Income tax expense (30%) | 240,000 | 189,600 |
| Net income | ¥560,000 | ¥442,400 |
| Outstanding shares | 150,000 | 90,000 |
| Earnings per share | ¥3.73 | ¥4.92 |

## EXERCISE 10-8

| | | | | |
|---|---|---|---|---|
| | 2017 | | | |
| (a) | Jan. 1 | Cash ..... | 500,000 | |
| | | Bonds Payable ..... | | 500,000 |
| (b) | Dec. 31 | Interest Expense (£500,000 X 10%) ..... | 50,000 | |
| | | Interest payable..... | | 50,000 |
| | 2018 | | | |
| (c) | Jan. 1 | Interest Payable ..... | 50,000 | |
| | | Cash..... | | 50,000 |

## EXERCISE 10-9

| | | | | |
|---|---|---|---|---|
| | 2017 | | | |
| (a) | Jan. 1 | Cash ..... | 400,000 | |
| | | Bonds Payable ..... | | 400,000 |
| (b) | Dec. 31 | Interest Expense (R$400,000 X 8%)..... | 32,000 | |
| | | Interest Payable ..... | | 32,000 |
| | 2018 | | | |
| (c) | Jan. 1 | Interest Payable ..... | 32,000 | |
| | | Cash..... | | 32,000 |

## EXERCISE 10-10

| | | | | |
|---|---|---|---|---|
| **(a)** | **1.** | **Cash** | **485,000** | |
| | | **Bonds Payable** | | **485,000** |
| | **2.** | **Annual interest payments** | | |
| | | **(€40,000* X 5)** | | **€200,000** |
| | | **Plus: Bond discount** | | **15,000** |
| | | **Total cost of borrowing** | | **€215,000** |

***(€500,000 X .08)**

**OR**

| | |
|---|---|
| **Principal at maturity** | **€500,000** |
| **Annual interest payments** | |
| **(€40,000 X 5)** | **200,000** |
| **Cash to be paid to bondholders** | **700,000** |
| **Cash received from bondholders** | **(485,000)** |
| **Total cost of borrowing** | **€215,000** |

| | | | | |
|---|---|---|---|---|
| **(b)** | **1.** | **Cash** | **525,000** | |
| | | **Bonds Payable** | | **525,000** |
| | **2.** | **Annual interest payments** | | |
| | | **(€40,000 X 5)** | | **€200,000** |
| | | **Less: Bond Premium** | | **25,000** |
| | | **Total cost of borrowing** | | **€175,000** |

**OR**

| | |
|---|---|
| **Principal at maturity** | **€500,000** |
| **Annual interest payments** | |
| **(€40,000 X 5)** | **200,000** |
| **Cash to be paid to bondholders** | **700,000** |
| **Cash received from bondholders** | **(525,000)** |
| **Total cost of borrowing** | **€175,000** |

 

## EXERCISE 10-11

| | | | | |
|---|---|---|---|---|
| (a) | Jan. 1 | Interest Payable | 1,120,000 | |
| | | Cash | | 1,120,000 |
| (b) | Jan. 1 | Bonds Payable | 6,000,000 | |
| | | Loss on Bond Redemption | 180,000 | |
| | | Cash (HK$6,000,000 X 1.03) | | 6,180,000 |
| (c) | Dec. 31 | Interest Expense | 700,000 | |
| | | Interest Payable | | |
| | | (HK$10,000,000 X 7%) | | 700,000 |

## EXERCISE 10-12

| | | | | |
|---|---|---|---|---|
| 1. | June 30 | Bonds Payable | 117,500 | |
| | | Loss on Bond Redemption | | |
| | | (£132,600 – £117,500) | 15,100 | |
| | | Cash (£130,000 X 102%) | | 132,600 |
| 2. | June 30 | Bonds Payable | 151,000 | |
| | | Gain on Bond Redemption | | |
| | | (£151,000 – £147,000) | | 4,000 |
| | | Cash (£150,000 X 98%) | | 147,000 |

## EXERCISE 10-13

**2017**
**Issuance of Note**

| | | | |
|---|---|---|---|
| Dec. 31 | Cash | 240,000 | |
| | Mortgage Payable | | 240,000 |

**2018**
**First Installment Payment**

| | | | |
|---|---|---|---|
| Dec. 31 | Interest Expense (€240,000 X 6% X 6/12) | 14,400 | |
| | Mortgage Payable | 18,864 | |
| | Cash | | 33,264 |

**2019**
**Second Installment Payment**

| | | | |
|---|---|---|---|
| Dec. 31 | Interest Expense [(€240,000 – €18,864) X 6%] | 13,268 | |
| | Mortgage Payable | 19,996 | |
| | Cash | | 33,264 |

## EXERCISE 10-14

| | |
|---|---|
| **Non-current liabilities** | |
| Bonds payable, due 2022 | HK$204,000 |
| Lease liability | 59,500 |
| Total non-current liabilities | HK$263,500 |

 

**EXERCISE 10-15**

**(a)**
1. **Working capital = NT$3,416.3 – NT$2,988.7 = NT$427.6**
2. **Current ratio = NT$3,416.3 ÷ NT$2,988.7 = 1.14:1**
3. **Debt to assets ratio = NT$16,191.0 ÷ NT$30,224.9 = 54%**
4. **Times interest earned = (NT$4,551.0 + NT$1,936.0 + NT$473.2) ÷ NT$473.2 = 14.71 times**

**A current ratio that is less than 1.30 indicates lower liquidity. The debt to assets ratio indicates that NT$.54 of each dollar of assets have been financed by creditors. The times interest earned of over 14 times indicates that Lin Ltd. income is large enough to make required interest payments as they come due.**

**(b) Debt to assets ratio, adjusted for off-balance-sheet lease obligations.**

$$\frac{\$16,191.0 + \$8,800}{\$30,224.9 + \$8,800} = 64\%$$

**By including these off-balance-sheet obligations the debt to assets ratio increases from 54% to 64%, suggesting that Lin Ltd. is not as solvent as it first appears.**

***EXERCISE 10-16**

| | | | | | |
|---|---|---|---|---|---|
| | **2017** | | | | |
| **(a)** | **Jan. 1** | **Cash** | **360,727** | | |
| | | **Bonds Payable** | | | **360,727** |
| **(b)** | **Dec. 31** | **Interest Expense (€360,727 X 8%)** | **28,858** | | |
| | | **Bonds Payable** | | | **858** |
| | | **Interest Payable (€400,000 X 7%)** | | | **28,000** |
| | **2018** | | | | |
| **(c)** | **Jan. 1** | **Interest Payable** | **28,000** | | |
| | | **Cash** | | | **28,000** |

**(b), (c)**

| Annual Interest Periods | (A) Interest to Be Paid (7% X €400,000) | (B) Interest Expense to Be Recorded (8% X Preceding Bond Carrying Value) (D X .08) | (C) Discount Amortization (B) – (A) | (D) Bond Carrying Value |
|---|---|---|---|---|
| Issue date | | | | €360,727 |
| 1 | €28,000 | €28,858 | €858 | 361,585 |

## *EXERCISE 10-17

| | | | | | |
|---|---|---|---|---|---|
| | 2017 | | | | |
| (a) | Jan. 1 | Cash | | 407,968 | |
| | | Bonds Payable | | | 407,968 |
| (b) | Dec. 31 | Interest Expense (£407,968 X 6%) | | 24,478 | |
| | | Bonds Payable | | 2,122 | |
| | | Interest Payable (£380,000 X 7%) | | | 26,600 |
| | 2018 | | | | |
| (c) | Jan. 1 | Interest Payable | | 26,600 | |
| | | Cash | | | 26,600 |

**(b), (c)**

| Annual Interest Periods | (A) Interest to Be Paid (7% X £380,000) | (B) Interest Expense to Be Recorded (6.0% X Preceding Bond Carrying Value) (D X .06) | (C) Premium Amortization (A) – (B) | (D) Bond Carrying Value |
|---|---|---|---|---|
| Issue date | | | | 407,968 |
| 1 | 26,600 | 24,478 | 2,122 | 405,846 |

***EXERCISE 10-18**

| | | | | | |
|---|---|---|---|---|---|
| | | | **2017** | | |
| **(a)** | **Jan.** | **1** | **Cash (€600,000 X 103%)** | **618,000** | |
| | | | **Bonds Payable** | | **618,000** |
| **(b)** | **Dec.** | **31** | **Interest Expense** | **53,100** | |
| | | | **Bonds Payable (€18,000 X 1/20)** | **900** | |
| | | | **Interest Payable (€600,000 X 9%)** | | **54,000** |
| | | | **2018** | | |
| **(c)** | **Jan.** | **1** | **Interest Payable** | **54,000** | |
| | | | **Cash** | | **54,000** |
| | | | **2037** | | |
| **(d)** | **Jan.** | **1** | **Bonds Payable** | **600,000** | |
| | | | **Cash** | | **600,000** |

***EXERCISE 10-19**

| | | | | | |
|---|---|---|---|---|---|
| **(a)** | | | **2016** | | |
| | **Dec.** | **31** | **Cash** | **730,000** | |
| | | | **Bonds Payable** | | **730,000** |
| **(b)** | | | **2017** | | |
| | **Dec.** | **31** | **Interest Expense** | **95,000** | |
| | | | **Bonds Payable (£70,000 ÷ 10)** | | **7,000** |
| | | | **Cash (£800,000 X 11%)** | | **88,000** |
| **(c)** | | | **2026** | | |
| | **Dec.** | **31** | **Bonds Payable** | **800,000** | |
| | | | **Cash** | | **800,000** |

## *EXERCISE 10-20

**(a) Net pay = Gross pay – Social Security taxes – Income tax withholding**
**Net pay = $1,780 – $136 – $303**
**Net pay = $1,341**

| | | | |
|---|---|---|---|
| **(b)** | **Salaries and Wages Expense** | **1,780** | |
| | **Social Security Taxes Payable** | | **136** |
| | **Withholding Taxes Payable** | | **303** |
| | **Salaries and Wages Payable** | | **1,341** |
| **(c)** | **Salaries and Wages Payable** | **1,341** | |
| | **Cash** | | **1,341** |

# SOLUTIONS TO PROBLEMS

## PROBLEM 10-1A

| | | | | | |
|---|---|---|---|---|---|
| (a) | Jan. | 5 | Cash | 22,470 | |
| | | | Sales Revenue (£22,470 ÷ 107%) | | 21,000 |
| | | | Sales Taxes Payable (£22,470 – £21,000) | | 1,470 |
| | | 12 | Unearned Service Revenue | 10,000 | |
| | | | Service Revenue | | 10,000 |
| | | 14 | Sales Taxes Payable | 5,800 | |
| | | | Cash | | 5,800 |
| | | 20 | Accounts Receivable | 38,948 | |
| | | | Sales Revenue | | 36,400 |
| | | | Sales Taxes Payable (700 X £52 X 7%) | | 2,548 |
| | | 21 | Cash | 14,000 | |
| | | | Notes Payable | | 14,000 |
| | | 25 | Cash | 12,947 | |
| | | | Sales Revenue (£12,947 ÷ 107%) | | 12,100 |
| | | | Sales Taxes Payable (£12,947 – £12,100) | | 847 |
| (b) | Jan. | 31 | Interest Expense | 23 | |
| | | | Interest Payable | | 23 |
| | | | (£14,000 X 6% X 10/360) | | |

**PROBLEM 10-1A (Continued)**

**(c) Current liabilities**

| | |
|---|---|
| Notes payable | £14,000 |
| Accounts payable | 52,000 |
| Unearned service revenue (£13,000 – £10,000) | 3,000 |
| Sales taxes payable (£1,470 + £2,548 + £847) | 4,865 |
| Interest payable | 23 |
| Total current liabilities | £73,888 |

## PROBLEM 10-2A

| | | | | | |
|---|---|---|---|---|---|
| (a) | Jan. 2 | Inventory | | 30,000 | |
| | | Accounts Payable | | | 30,000 |
| | Feb. 1 | Accounts Payable | | 30,000 | |
| | | Notes Payable | | | 30,000 |
| | Mar. 31 | Interest Expense | | | |
| | | (€30,000 X 6% X 2/12) | | 300 | |
| | | Interest Payable | | | 300 |
| | Apr. 1 | Notes Payable | | 30,000 | |
| | | Interest Payable | | 300 | |
| | | Cash | | | 30,300 |
| | July 1 | Equipment | | 48,000 | |
| | | Cash | | | 8,000 |
| | | Notes Payable | | | 40,000 |
| | Sept. 30 | Interest Expense | | | |
| | | (€40,000 X 7% X 3/12) | | 700 | |
| | | Interest Payable | | | 700 |
| | Oct. 1 | Notes Payable | | 40,000 | |
| | | Interest Payable | | 700 | |
| | | Cash | | | 40,700 |
| | Dec. 1 | Cash | | 15,000 | |
| | | Notes Payable | | | 15,000 |
| | Dec. 31 | Interest Expense | | | |
| | | (€15,000 X 6% X 1/12) | | 75 | |
| | | Interest Payable | | | 75 |

**PROBLEM 10-2A (Continued)**

**(b)**

**Notes Payable**

| | | | |
|---|---|---|---|
| 4/1 | 30,000 | 2/1 | 30,000 |
| 10/1 | 40,000 | 7/1 | 40,000 |
| | | 12/1 | 15,000 |
| | | 12/31 Bal. | 15,000 |

**Interest Payable**

| | | | |
|---|---|---|---|
| 4/1 | 300 | 3/31 | 300 |
| 10/1 | 700 | 9/30 | 700 |
| | | 12/31 | 75 |
| | | 12/31 Bal. | 75 |

**Interest Expense**

| | | | |
|---|---|---|---|
| 3/31 | 300 | | |
| 9/30 | 700 | | |
| 12/31 | 75 | | |
| 12/31 Bal. | 1,075 | | |

**(c) Current liabilities**

| | | |
|---|---|---|
| Notes payable | €15,000 | |
| Interest payable | 75 | €15,075 |

**(d) Total interest is €1,075**

## PROBLEM 10-3A

| | | | | |
|---|---|---|---|---|
| **(a)** | | **2017** | | |
| | **May 1** | **Cash** | **600,000** | |
| | | **Bonds Payable** | | **600,000** |
| **(b)** | **Dec. 31** | **Interest Expense** | **36,000** | |
| | | **Interest Payable (CHF600,000 X 9% X 8/12)** | | **36,000** |
| **(c)** | **Non-current Liabilities** | | | |
| | | **Bonds Payable, due 2022** | | **CHF600,000** |
| | **Current Liabilities** | | | |
| | | **Interest Payable** | | **CHF36,000** |
| **(d)** | | **2018** | | |
| | **May 1** | **Interest Payable** | **36,000** | |
| | | **Interest Expense (CHF600,000 X 9% X 4/12)** | **18,000** | |
| | | **Cash** | | **54,000** |
| **(e)** | **Dec. 31** | **Interest Expense** | **36,000** | |
| | | **Interest Payable (CHF600,000 X 9% X 8/12)** | | **36,000** |
| **(f)** | | **2019** | | |
| | **Jan. 1** | **Interest Payable** | **36,000** | |
| | | **Cash** | | **36,000** |
| | | **Bonds Payable** | **600,000** | |
| | | **Loss on Bond Redemption** | **12,000** | |
| | | **Cash (CHF600,000 X 1.02)** | | **612,000** |

## PROBLEM 10-4A

**(a)**

| | | | 2017 | | |
|---|---|---|---|---|---|
| Jan. | 1 | Cash (£6,000,000 X .98) ..... | | 5,880,000 | |
| | | Bonds Payable ..... | | | 5,880,000 |

**(b)** Non-current Liabilities

Bonds payable, due 2027..... €5,888,000

**(c)**

| | | | 2019 | | |
|---|---|---|---|---|---|
| Jan. | 1 | Bonds Payable..... | | 5,896,000 | |
| | | Loss on Bond Redemption ..... | | 224,000* | |
| | | Cash (£6,000,000 X 1.02)..... | | | 6,120,000 |

*(£6,120,000 – £5,896,000)

## PROBLEM 10-5A

**(a)**

| Annual Interest Period | Cash Payment | Interest Expense | Reduction of Principal | Principal Balance |
|---|---|---|---|---|
| Issue Date | | | | R$400,000 |
| 1 | R$59,612 | R$32,000 | R$27,612 | 372,388 |
| 2 | 59,612 | 29,791 | 29,821 | 342,567 |
| 3 | 59,612 | 27,405 | 32,207 | 310,360 |
| 4 | 59,612 | 24,829 | 34,783 | 275,577 |

**(b)**

| | | | | |
|---|---|---|---|---|
| | | 2016 | | |
| Dec. 31 | Cash | | 400,000 | |
| | Mortgage Payable | | | 400,000 |
| | | 2017 | | |
| Dec. 31 | Interest Expense | | 32,000 | |
| | Mortgage Payable | | 27,612 | |
| | Cash | | | 59,612 |

**(c)**

| | 12/31/17 |
|---|---|
| Current Liabilities | |
| Current portion of mortgage payable | R$29,821 |
| Non-Current Liabilities | |
| Mortgage payable, due 2026 | R$342,567 |

## *PROBLEM 10-6A

**(a)**

| | | | | |
|---|---|---|---|---|
| 2017 | | | | |
| Jan. 1 | Cash | | 1,667,518 | |
| | Bonds Payable | | | 1,667,518 |

**(b)**

**LOCK INDUSTRIES LTD.**
**Bond Discount Amortization**
**Effective-Interest Method—Annual Interest Payments**
**5% Bonds Issued at 6%**

| Annual Interest Periods | (A) Interest to Be Paid | (B) Interest Expense to Be Recorded | (C) Discount Amor-tization (B) – (A) | (D) Bond Carrying Value |
|---|---|---|---|---|
| Issue date | | | | £1,667,518 |
| 1 | £90,000 | £100,051 | £10,051 | 1,677,569 |
| 2 | 90,000 | 100,654 | 10,654 | 1,688,223 |
| 3 | 90,000 | 101,293 | 11,293 | 1,699,516 |

**(c)**

| | | | |
|---|---|---|---|
| Dec. 31 | Interest Expense (£1,667,518 X 6%) | 100,051 | |
| | Interest Payable (£1,800,000 X 5%) | | 90,000 |
| | Bonds Payable | | 10,051 |

**(d)**

| | | | |
|---|---|---|---|
| 2018 | | | |
| Jan. 1 | Interest Payable | 90,000 | |
| | Cash | | 90,000 |

**(e)**

| | | | |
|---|---|---|---|
| Dec. 31 | Interest Expense [(£1,667,518 + £10,051) X 6%] | 100,654 | |
| | Interest Payable | | 90,000 |
| | Bonds Payable | | 10,654 |

## *PROBLEM 10-7A

| | | | | | |
|---|---|---|---|---|---|
| | | | **2017** | | |
| **(a)** | **(1)** | **Jan. 1** | **Cash** | **2,147,202** | |
| | | | **Bonds Payable** | | **2,147,202** |
| | **(2)** | **Dec. 31** | **Interest Expense (€2,147,202 X 6%)** | **128,832** | |
| | | | **Bonds Payable** | **11,168** | |
| | | | **Interest Payable (€2,000,000 X 7%)** | | **140,000** |
| | | | **2018** | | |
| | **(3)** | **Jan. 1** | **Interest Payable** | **140,000** | |
| | | | **Cash** | | **140,000** |
| | **(4)** | **Dec. 31** | **Interest Expense [(€2,147,202 – €11,168) X 6%]** | **128,162** | |
| | | | **Bonds Payable** | **11,838** | |
| | | | **Interest Payable** | | **140,000** |

**(b) Bonds payable ..... 2,124,196***

***(€2,147,202 – €11,168 – €11,838)**

**(c) (1) Total bond interest expense—2018, €128,162.**

**(2) The effective-interest method will result in more interest expense reported than the straight-line method in 2018 when the bonds are sold at a premium. Straight-line interest expense for 2018 is €125,280 [€140,000 – (€147,202 ÷ 10)].**

## *PROBLEM 10-8A

**(a)**

| | | | | |
|---|---|---|---|---|
| | | 2017 | | |
| Jan. | 1 | Cash (€3,000,000 X 1.04) ..... | 3,120,000 | |
| | | Bonds Payable ..... | | 3,120,000 |

**(b)** See page 10-44.

**(c)**

| | | | | |
|---|---|---|---|---|
| | | 2017 | | |
| Dec. | 31 | Interest Expense ..... | 288,000 | |
| | | Bonds Payable (€120,000 ÷ 10) ..... | 12,000 | |
| | | Interest Payable ..... | | 300,000 |
| | | 2018 | | |
| Jan. | 1 | Interest Payable ..... | 300,000 | |
| | | Cash ..... | | 300,000 |
| Dec. | 31 | Interest Expense ..... | 288,000 | |
| | | Bonds Payable ..... | 12,000 | |
| | | Interest Payable ..... | | 300,000 |

**(d)**

| | |
|---|---|
| Non-current Liabilities | |
| Bonds payable, due 2027 ..... | €3,096,000 |
| Current Liabilities | |
| Interest payable ..... | € 300,000 |

**(b)**

| Annual Interest Periods | (A) Interest to Be Paid (10% X €3,000,000) | (B) Interest Expense to Be Recorded (A) – (C) | (C) Premium Amortization (€120,000 ÷ 10) | (D) Bond Carrying Value |
|---|---|---|---|---|
| Issue date | | | | €3,120,000 |
| 1 | €300,000 | €288,000 | €12,000 | 3,108,000 |
| 2 | 300,000 | 288,000 | 12,000 | 3,096,000 |
| 3 | 300,000 | 288,000 | 12,000 | 3,084,000 |
| 4 | 300,000 | 288,000 | 12,000 | 3,072,000 |

## *PROBLEM 10-9A

**(a)**

| | | | | |
|---|---|---|---|---|
| | | 2017 | | |
| Jan. | 1 | Cash (Rs3,500,000 X 104%) | 3,640,000 | |
| | | Bonds Payable | | 3,640,000 |
| Dec. | 31 | Interest Expense | 266,000 | |
| | | Bonds Payable (Rs140,000 ÷ 10) | 14,000 | |
| | | Interest Payable (Rs3,500,000 X 8%) | | 280,000 |

**(b)**

| | | | | |
|---|---|---|---|---|
| | | 2017 | | |
| Jan. | 1 | Cash (Rs3,500,000 X 98%) | 3,430,000 | |
| | | Bonds Payable | | 3,430,000 |
| Dec. | 31 | Interest Expense | 287,000 | |
| | | Bonds Payable (Rs70,000 ÷ 10) | | 7,000 |
| | | Interest Payable (Rs3,500,000 X 8%) | | 280,000 |

**(c)** **Premium**

| | |
|---|---|
| Non-current Liabilities | |
| Bonds payable, due 2027 | Rs3,626,000 |
| Current Liabilities | |
| Interest Payable | 280,000 |

**Discount**

| | |
|---|---|
| Non-current Liabilities | |
| Bonds payable, due 2027 | Rs3,437,000 |
| Current Liabilities | |
| Interest Payable | 280,000 |

 

## *PROBLEM 10-10A

| | | | | |
|---|---|---|---|---|
| **(a)** | **2018** | | | |
| | **Jan. 1** | **Interest Payable** | **210,000** | |
| | | **Cash** | | **210,000** |
| **(b)** | **Dec. 31** | **Interest Expense** | **190,000** | |
| | | **Bonds Payable (€200,000 ÷ 10)** | **20,000** | |
| | | **Interest Payable** | | **210,000** |
| **(c)** | **2019** | | | |
| | **Jan 1** | **Bonds Payable** | **1,200,000** | |
| | | **Bonds Payable** | **72,000*** | |
| | | **Gain on Bond Redemption (€1,272,000 – €1,212,000).** | | **60,000** |
| | | **Cash (€1,200,000 X 101%)** | | **1,212,000** |

***(€200,000 – €20,000) X .40 = €72,000**

| | | | | |
|---|---|---|---|---|
| **(d)** | **Dec. 31** | **Interest Expense** | **114,000** | |
| | | **Bonds Payable** | **12,000**** | |
| | | **Interest Payable (€1,800,000 X 7%)** | | **126,000** |

****€200,000 – €20,000 – €72,000 = €108,000; €108,000/ 9 = €12,000 or €20,000 X .60.**

## PROBLEM 10-1B

| | | | | | |
|---|---|---|---|---|---|
| (a) | Jan. | 1 | Cash | 15,000 | |
| | | | Notes Payable | | 15,000 |
| | | 5 | Cash | 9,828 | |
| | | | Sales Revenue (¥9,828 ÷ 108%) | | 9,100 |
| | | | Sales Taxes Payable (¥9,828 – ¥9,100) | | 728 |
| | | 12 | Unearned Service Revenue | 9,400 | |
| | | | Service Revenue | | 9,400 |
| | | 14 | Sales Taxes Payable | 5,800 | |
| | | | Cash | | 5,800 |
| | | 20 | Accounts Receivable | 33,264 | |
| | | | Sales Revenue | | 30,800 |
| | | | Sales Taxes Payable (700 X ¥44 X 8%) | | 2,464 |
| | | 25 | Cash | 16,308 | |
| | | | Sales Revenue (¥16,308 ÷ 108%) | | 15,100 |
| | | | Sales Taxes Payable (¥16,308 – ¥15,100) | | 1,208 |
| (b) | Jan. | 31 | Interest Expense | 75 | |
| | | | Interest Payable (¥15,000 X 6% X 1/12) | | 75 |

**PROBLEM 10-1B (Continued)**

**(c) Current liabilities**

| | |
|---|---|
| Notes payable | ¥15,000 |
| Accounts payable | 42,500 |
| Unearned service revenue (¥15,000 – ¥9,400) | 5,600 |
| Sales taxes payable (¥728 + ¥2,464 + ¥1,208) | 4,400 |
| Interest payable | 75 |
| Total current liabilities | ¥67,575 |

## PROBLEM 10-2B

| | | | | |
|---|---|---|---|---|
| **(a)** | | **2017** | | |
| | **June 1** | **Cash** | **1,200,000** | |
| | | **Bonds Payable** | | **1,200,000** |
| **(b)** | **Dec. 31** | **Interest Expense** | **56,000** | |
| | | **Interest Payable (€1,200,000 X 8% X 7/12)** | | **56,000** |
| **(c)** | **Non-current Liabilities** | | | |
| | | **Bonds Payable** | | **€ 1,200,000** |
| | **Current Liabilities** | | | |
| | | **Interest Payable** | | **€ 56,000** |
| **(d)** | | **2018** | | |
| | **June 1** | **Interest Payable** | **56,000** | |
| | | **Interest Expense (€1,200,000 X 8% X 5/12)** | **40,000** | |
| | | **Cash** | | **96,000** |
| **(e)** | **Dec. 31** | **Interest Expense** | **56,000** | |
| | | **Interest Payable (€1,200,000 X 8% X 7/12)** | | **56,000** |
| **(f)** | | **2019** | | |
| | **Jan. 1** | **Interest Payable** | **56,000** | |
| | | **Cash** | | **56,000** |
| | | **Bonds Payable** | **1,200,000** | |
| | | **Loss on Bond Redemption** | **24,000** | |
| | | **Cash (€1,200,000 X 1.02)** | | **1,224,000** |

 

## PROBLEM 10-3B

**(a)**

| | | | | | |
|---|---|---|---|---|---|
| | | | **2017** | | |
| **Jan.** | **1** | **Cash (R$800,000 X 1.05).....** | | **840,000** | |
| | | **Bonds Payable .....** | | | **840,000** |

**(b) Non-current Liabilities**

**Bond payable, due 2027 ..... R$836,000**

**(c)**

| | | | | | |
|---|---|---|---|---|---|
| | | | **2019** | | |
| **Jan.** | **1** | **Bonds Payable.....** | | **832,000** | |
| | | **Loss on Bond Redemption .....** | | **16,000*** | |
| | | **Cash (R$800,000 X 1.06) .....** | | | **848,000** |

***(R$848,000 – R$832,000)**

## PROBLEM 10-4B

**(a)**

| Annual Interest Period | Cash Payment | Interest Expense | Reduction of Principal | Principal Balance |
|---|---|---|---|---|
| Issue Date | | | | £800,000 |
| 1 | £119,224 | £64,000 | £55,224 | 744,776 |
| 2 | 119,224 | 59,582 | 59,642 | 685,134 |
| 3 | 119,224 | 54,811 | 64,413 | 620,721 |
| 4 | 119,224 | 49,658 | 69,566 | 551,155 |

**(b)**

| | | 2016 | | |
|---|---|---|---|---|
| Dec. 31 | Cash | | 800,000 | |
| | Mortgage Payable | | | 800,000 |

| | | 2017 | | |
|---|---|---|---|---|
| Dec. 31 | Interest Expense | | 64,000 | |
| | Mortgage Payable | | 55,224 | |
| | Cash | | | 119,224 |

**(c)**

| | 12/31/17 |
|---|---|
| **Non-current Liabilities** | |
| Mortgage payable | £685,134* |
| **Current Liabilities** | |
| Current portion of mortgage payable | £ 59,642 |

*£744,776 – £59,642

 

## *PROBLEM 10-5B

**(a)**

| | | | | | |
|---|---|---|---|---|---|
| | | | 2017 | | |
| Jan. | 1 | Cash | | 4,219,600 | |
| | | Bonds Payable | | | 4,219,600 |

**(b)**

**WITHERSPOON SATELLITES**
**Bond Discount Amortization**
**Effective-Interest Method—Annual Interest Payments**
**9% Bonds Issued at 10%**

| Annual Interest Periods | (A) Interest to Be Paid | (B) Interest Expense to Be Recorded | (C) Discount Amor-tization (B) – (A) | (D) Bond Carrying Value |
|---|---|---|---|---|
| Issue date | | | | £4,219,600 |
| 1 | £405,000 | £421,960 | £16,960 | 4,236,560 |
| 2 | 405,000 | 423,656 | 18,656 | 4,255,216 |

**(c)**

| | | | | | |
|---|---|---|---|---|---|
| Dec. | 31 | Interest Expense | | | |
| | | (£4,219,600 X 10%) | | 421,960 | |
| | | Bonds Payable | | | 16,960 |
| | | Interest Payable | | | |
| | | (£4,500,000 X 9%) | | | 405,000 |

**(d)**

| | | | | | |
|---|---|---|---|---|---|
| | | | 2018 | | |
| Jan. | 1 | Interest Payable | | 405,000 | |
| | | Cash | | | 405,000 |

**(e)**

| | | | | | |
|---|---|---|---|---|---|
| Dec. | 31 | Interest Expense | | | |
| | | [£4,236,560 X 10%] | | 423,656 | |
| | | Bonds Payable | | | 18,656 |
| | | Interest Payable | | | 405,000 |

 

## *PROBLEM 10-6B

**(a) 1.**

| | | | | |
|---|---|---|---|---|
| | | 2017 | | |
| Jan. 1 | Cash | 4,543,627 | | |
| | Bonds Payable | | | 4,543,627 |

**2.**

| | | | |
|---|---|---|---|
| Dec. 31 | Interest Expense (€4,543,627 X 8%) | 363,490 | |
| | Bonds Payable | 36,510 | |
| | Interest Payable (€4,000,000 X 10%) | | 400,000 |

**3.**

| | | | |
|---|---|---|---|
| | 2018 | | |
| Jan. 1 | Interest Payable | 400,000 | |
| | Cash | | 400,000 |

**4.**

| | | | |
|---|---|---|---|
| Dec. 31 | Interest Expense [(€4,543,627 – €36,510) X 8%] | 360,569 | |
| | Bonds Payable | 39,431 | |
| | Interest Payable | | 400,000 |

**(b)** Bonds payable ..... €4,467,686*

*(€4,543,627 – €36,510 – €39,431)

**(c) 1.** The amount of interest expense reported for 2018 related to these bonds is €360,569.

**2.** When the bonds are sold at a premium, the effective-interest method will result in more interest expense reported than the straight-line method in 2018. Straight-line interest expense for 2018 is €345,637 (€400,000 –€54,363).

 

## *PROBLEM 10-7B

**(a)**

| | | | | |
|---|---|---|---|---|
| | | **2017** | | |
| **Jan.** | **1** | **Cash (¥6,000,000 X 96%)** | **5,760,000** | |
| | | **Bonds Payable** | | **5,760,000** |

**(b)** **See page 10-57.**

**(c)**

| | | | | |
|---|---|---|---|---|
| | | **2017** | | |
| **Dec.** | **31** | **Interest Expense** | **492,000** | |
| | | **Bonds Payable** | | **12,000** |
| | | **Interest Payable** | | **480,000** |
| | | **2018** | | |
| **Jan.** | **1** | **Interest Payable** | **480,000** | |
| | | **Cash** | | **480,000** |
| **Dec.** | **31** | **Interest Expense** | **492,000** | |
| | | **Bonds Payable** | | **12,000** |
| | | **Interest Payable** | | **480,000** |

**(d)**

| | |
|---|---|
| **Non-current Liabilities** | |
| **Bonds payable** | **¥5,784,000** |
| **Current Liabilities** | |
| **Interest payable** | **¥ 480,000** |

**(b)**

| Annual Interest Periods | (A) Interest to Be Paid (8% X ¥6,000,000) | (B) Interest Expense to Be Recorded (A) + (C) | (C) Discount Amortization (¥240,000 ÷ 20) | (D) Bond Carrying Value |
|---|---|---|---|---|
| Issue date | | | | ¥5,760,000 |
| 1 | ¥480,000 | ¥492,000 | ¥12,000 | 5,772,000 |
| 2 | 480,000 | 492,000 | 12,000 | 5,784,000 |
| 3 | 480,000 | 492,000 | 12,000 | 5,796,000 |
| 4 | 480,000 | 492,000 | 12,000 | 5,808,000 |

## *PROBLEM 10-8B

| | | | | |
|---|---|---|---|---|
| **(a)** | **Jan. 1** | **Cash (£4,000,000 X 103%)** | **4,120,000** | |
| | | **Bonds Payable** | | **4,120,000** |
| | **Dec. 31** | **Interest Expense** | **268,000** | |
| | | **Bonds Payable (£120,000 ÷ 10)** | **12,000** | |
| | | **Interest Payable (£4,000,000 X 7%)** | | **280,000** |
| **(b)** | **Jan. 1** | **Cash (£4,000,000 X 96%)** | **3,840,000** | |
| | | **Bonds Payable** | | **3,840,000** |
| | **Dec. 31** | **Interest Expense** | **296,000** | |
| | | **Bonds Payable (£160,000 ÷ 10)** | | **16,000** |
| | | **Interest Payable** | | **280,000** |

***PROBLEM 10-8B (Continued)**

**(c) Premium**

| | |
|---|---|
| **Non-current Liabilities** | |
| **Bonds payable, due 2027** | **£4,108,000** |
| **Current Liabilities** | |
| **Interest payable** | **£ 280,000** |

**Discount**

| | |
|---|---|
| **Non-current Liabilities** | |
| **Bonds payable, due 2027** | **£3,856,000** |
| **Current Liabilities** | |
| **Interest payable** | **£ 280,000** |

## *PROBLEM 10-9B

| | | | | |
|---|---|---|---|---|
| **(a)** | | **2017** | | |
| | **Jan. 1** | **Interest Payable** | **216,000** | |
| | | **Cash** | | **216,000** |
| **(b)** | **Dec. 31** | **Interest Expense** | **225,000** | |
| | | **Bonds Payable (€90,000 ÷ 10)** | | **9,000** |
| | | **Interest Payable (€2,400,000 X .09)** | | **216,000** |
| **(c)** | | **2018** | | |
| | **Jan. 1** | **Bonds Payable** | **773,000*** | |
| | | **Loss on Bond Redemption** | **43,000** | |
| | | **Cash (€800,000 X 102%)** | | **816,000** |
| | | ***(€2,310,000 + €9,000) X 1/3** | | |
| **(d)** | **Dec. 31** | **Interest Expense** | **150,000** | |
| | | **Bonds Payable** | | **6,000*** |
| | | **Interest Payable** | | **144,000**** |
| | | ***(€90,000 ÷ 10) X 2/3** | | |
| | | ****(€2,400,000 X 2/3) X 9%** | | |

## COMPREHENSIVE PROBLEM SOLUTION 10–1

| | | | | |
|---|---|---|---|---|
| (a) | 1. | Interest Payable | 2,500 | |
| | | Cash | | 2,500 |
| | 2. | Inventory | 241,100 | |
| | | Accounts Payable | | 241,100 |
| | 3. | Cash | 481,500 | |
| | | Sales Revenue | | 450,000 |
| | | Sales Taxes Payable | | 31,500 |
| | | Cost of Goods Sold | 250,000 | |
| | | Inventory | | 250,000 |
| | 4. | Account Payable | 230,000 | |
| | | Cash | | 230,000 |
| | 5. | Interest Expense | 2,500 | |
| | | Cash | | 2,500 |
| | 6. | Insurance Expense | 5,600 | |
| | | Prepaid Insurance | | 5,600 |
| | 7. | Prepaid Insurance | 12,000 | |
| | | Cash | | 12,000 |
| | 8. | Sales Taxes Payable | 24,000 | |
| | | Cash | | 24,000 |
| | 9. | Other Operating Expenses | 91,000 | |
| | | Cash | | 91,000 |
| | 10. | Interest Expense | 2,500 | |
| | | Cash | | 2,500 |
| | | Bonds Payable | 50,000 | |
| | | Cash | | 47,000 |
| | | Gain on Bond Redemption | | 3,000 |

| | | | |
|---|---|---|---|
| 11. | Cash (£90,000 X 104%) ..... | 93,600 | |
| | Bonds Payable ..... | | 93,600 |

**Adjusting Entries**

| | | | |
|---|---|---|---|
| 1. | Insurance Expense (£12,000 X 5/12)..... | 5,000 | |
| | Prepaid Insurance ..... | | 5,000 |
| 2. | Depreciation Expense (£43,000 – £3,000) ÷ 5 .... | 8,000 | |
| | Accumulated Depreciation–Equipment . | | 8,000 |
| 3. | Income Tax Expense ..... | 26,520 | |
| | Income Taxes Payable ..... | | 26,520 |

**(b)**

**JAMES LTD.**
**Adjusted Trial Balance**
**12/31/2017**

| Account | Debit | Credit |
|---|---|---|
| Cash ..... | £194,100 | |
| Inventory..... | 16,850 | |
| Prepaid Insurance ..... | 7,000 | |
| Equipment ..... | 43,000 | |
| Accumulated Depreciation–Equipment.... | | £ 8,000 |
| Accounts Payable ..... | | 24,850 |
| Sales Taxes Payable ..... | | 7,500 |
| Income Taxes Payable ..... | | 26,520 |
| Bonds Payable ..... | | 93,600 |
| Share Capital–Ordinary ..... | | 20,000 |
| Retained Earnings..... | | 18,600 |
| Sales Revenue..... | | 450,000 |
| Cost of Goods Sold..... | 250,000 | |
| Depreciation Expense..... | 8,000 | |
| Insurance Expense ..... | 10,600 | |
| Other Operating Expenses ..... | 91,000 | |
| Interest Expense ..... | 5,000 | |
| Gain on Bond Redemption ..... | | 3,000 |
| Income Tax Expense..... | 26,520 | |
| | £652,070 | £652,070 |

 

## COMPREHENSIVE PROBLEM SOLUTION (Continued)

### (a) and (b) Optional T accounts

**Cash**

| | | |
|---|---|---|
| Bal. | 30,500 | 2,500 |
| | 481,500 | 230,000 |
| | 93,600 | 2,500 |
| | | 12,000 |
| | | 24,000 |
| | | 91,000 |
| | | 2,500 |
| | | 47,000 |
| Bal. | 194,100 | |

**Inventory**

| | | |
|---|---|---|
| Bal. | 25,750 | 250,000 |
| | 241,100 | |
| Bal. | 16,850 | |

**Prepaid Insurance**

| | | |
|---|---|---|
| Bal. | 5,600 | 5,600 |
| | 12,000 | 5,000 |
| Bal. | 7,000 | |

**Equipment**

| | | |
|---|---|---|
| Bal. | 43,000 | |

**Accumulated Depreciation – Equipment**

| | |
|---|---|
| | 8,000 |

**Accounts Payable**

| | | |
|---|---|---|
| | 230,000 | Bal. 13,750 |
| | | 241,100 |
| | | Bal. 24,850 |

**Interest Payable**

| | | |
|---|---|---|
| 2,500 | Bal. | 2,500 |
| | Bal. | 0 |

**Sales Taxes Payable**

| | | |
|---|---|---|
| 24,000 | | 31,500 |
| | Bal. | 7,500 |

**Income Taxes Payable**

| | |
|---|---|
| | 26,520 |

**Bonds Payable**

| | | |
|---|---|---|
| 50,000 | Bal. | 50,000 |
| | | 93,600 |
| | Bal. | 93,600 |

**Share Capital–Ordinary**

| | | |
|---|---|---|
| | Bal. | 20,000 |

**Retained Earnings**

| | | |
|---|---|---|
| | Bal. | 18,600 |

**Sales Revenue**

| | |
|---|---|
| | 450,000 |

## COMPREHENSIVE PROBLEM SOLUTION (Continued)

### (a) and (b) (Continued)

| Cost of Goods Sold | |
|---|---|
| 250,000 | |

| Interest Expense | |
|---|---|
| 2,500 | |
| 2,500 | |
| Bal. 5,000 | |

| Depreciation Expense | |
|---|---|
| 8,000 | |

| Gain on Bond Redemption | |
|---|---|
| | 3,000 |

| Insurance Expense | |
|---|---|
| 5,600 | |
| 5,000 | |
| Bal. 10,600 | |

| Income Tax Expense | |
|---|---|
| 26,520 | |

| Other Operating Expenses | |
|---|---|
| 91,000 | |

### (c)

**JAMES LTD.**
**Income Statement**
**For the Year Ending 12/31/17**

| | | |
|---|---|---|
| Sales revenue | | £450,000 |
| Cost of goods sold | | 250,000 |
| Gross profit | | 200,000 |
| Operating expenses | | |
| Insurance expense | £10,600 | |
| Depreciation expense | 8,000 | |
| Other operating expenses | 91,000 | |
| Total operating expenses | | 109,600 |
| Income from operations | | 90,400 |
| Other income and expense | | |
| Gain on bond redemption | | 3,000 |
| Interest expense | | 5,000 |
| Income before taxes | | 88,400 |
| Income tax expense | | 26,520 |
| Net income | | £ 61,880 |

## COMPREHENSIVE PROBLEM SOLUTION (Continued)

**JAMES LTD.**
**Retained Earnings Statement**
**For the Year Ending 12/31/17**

| | |
|---|---|
| Retained earnings, 1/1/17 | £18,600 |
| Add: Net income | 61,880 |
| Retained earnings, 12/31/17 | £80,480 |

**JAMES LTD.**
**Statement of Financial Position**
**12/31/2017**

**Assets**

| | | | |
|---|---|---|---|
| Property, Plant, and Equipment | | | |
| Equipment | | £43,000 | |
| Less: Accumulated depreciation | | 8,000 | £ 35,000 |
| Current Assets | | | |
| Prepaid insurance | | 7,000 | |
| Inventory | | 16,850 | |
| Cash | | 194,100 | |
| Total current assets | | | 217,950 |
| Total assets | | | £252,950 |

**Equity and Liabilities**

| | | | |
|---|---|---|---|
| Equity | | | |
| Share capital–ordinary | | £20,000 | |
| Retained earnings | | 80,480 | |
| Total equity | | | £100,480 |
| Non-current liabilities | | | |
| Bonds payable | | 93,600 | |
| Current Liabilities | | | |
| Accounts payable | £24,850 | | |
| Income taxes payable | 26,520 | | |
| Sales taxes payable | 7,500 | | |
| Total current liabilities | | 58,870 | |
| Total liabilities | | | 152,470 |
| Total equity and liabilities | | | £252,950 |

## COMPREHENSIVE PROBLEM SOLUTION 10–2

**(a)**

| | Eastland AG | Westside AG |
|---|---|---|
| Plant and Equipment | CHF255,300 | CHF257,300 |
| Accumulated Depreciation (2.) | (188,375) | (189,850) |
| Inventory | 463,900 | 515,200 |
| Accounts Receivable | 304,700 | 302,500 |
| Allowance for Doubtful Accounts (1.) | (13,600) | (18,000) |
| Cash | 63,300 | 48,400 |
| Total Assets | CHF885,225 | CHF915,550 |
| | | |
| Equity | CHF367,025* | CHF402,050** |
| Non-current Liabilities | 78,000 | 66,000 |
| Current Liabilities (3.) | 440,200 | 447,500 |
| Total Equity and Liabilities | CHF885,225 | CHF915,550 |

***CHF442,750 – CHF75,725 (CHF188,375 – CHF112,650) change in accumulated depreciation.**

****CHF420,050 – CHF18,000 allowance for doubtful accounts.**

**(b) Based on a review of the companies and revision of financial statements for purposes of comparability, it can be seen that Westside is in a better financial position. However, this claim to the better position is a tenuous one. The amounts within each category in the statement of financial position of each company are very similar.**

**In terms of short-term liquidity, Westside is in a little stronger financial position. Total current assets for Eastland are CHF818,300 versus CHF848,100 for Westside. Comparing these to the current liabilities, Westside has a current ratio of 1.90 (CHF 848,100 ÷ CHF447,500) versus 1.86 (CHF818,300 ÷ CHF440,200) for Eastland.**

 

**(a) NT$2,000 X 6% X 8.5/12 = NT$85**

| | | | | | |
|---|---|---|---|---|---|
| **(b)** | **Aug. 31** | **Interest Expense (NT$2,000 X 6% X 1/12)..** | **10** | |
| | | **Interest Payable.....** | | **10** |
| **(c)** | **Sept. 15** | **Notes Payable .....** | **2,000** | |
| | | **Interest Payable (NT$25 + $70).....** | **95** | |
| | | **Interest Expense (NT$2,000 X 6% X 0.5/12)** | **5** | |
| | | **Cash (NT$2,000 + (NT$2,000 X 6% X 10/12))** | | **2,100** |

 

## BYP 10-1 FINANCIAL REPORTING PROBLEM

**(a) Total current liabilities at December 31, 2013, NT$189,778 million. TSMC's total current liabilities increased by NT$41,304 (NT$189,778 – NT$148,474) million over the prior year.**

**(b) The components of current liabilities for December 31, 2013 are:**

| | |
|---|---|
| Short term loans | NT$15,645.0 million |
| Financial liabilities at fair value through profit or loss | 33.7 |
| Accounts payable | 14,670.3 |
| Payables to related parties | 1,688.4 |
| Salary and bonus payable | 8,330.9 |
| Accrued profit sharing to employees and bonus to directors and supervisors | 12,738.8 |
| Payable to contractors and equipment suppliers | 89,810.2 |
| Income tax payable | 22,563.3 |
| Provisions | 7,603.8 |
| Accrued expenses and other current liabilities | 16,693.5 |

**(c) At December 31, 2013, TSMC's non-current liabilities was NT$225,502 million. There was a NT$135,715 million increase (NT$225,502 – NT$89,787) in non-current liabilities during the year.**

**The components of non-current liabilities for December 31, 2013 are:**

| | |
|---|---|
| Hedging derivative financial liabilities | NT$ 5,481.6 million |
| Bonds payable | 210,767.6 |
| Long-term bank loans | 40.0 |
| Provisions | 10.5 |
| Other long-term payables | 36.0 |
| Obligations under finance leases | 776.2 |
| Accrued pension cost | 7,589.9 |
| Guarantee deposits | 151.7 |
| Others | 648.4 |

 

## BYP 10-2 COMPARATIVE ANALYSIS PROBLEM

**(a)** **Nestlé's largest current liability was "Trade and other payables" at CHF16,072 million. Its total current liabilities were CHF32,917 million. Petra Foods' largest current liability was "Other payables" at US$77,508 thousand. Its total current liabilities were US$161,678 thousand.**

**(b)**

| | Nestlé (in millions) | Petra Foods (in thousands) |
|---|---|---|
| (1) Working capital | CHF30,066 – CHF32,917 = (CHF2,851) | US$373,037 – US$161,678 = US$211,359 |
| (1) Current ratio | $\frac{\text{CHF30,066}}{\text{CHF32,917}}$ = 0.91:1 | $\frac{\text{US\$373,037}}{\text{US\$161,678}}$ = 2.31:1 |

**(c)** **Based on this information, it appears that Nestlé is not liquid. Additional analysis should be done to assess the reason for the negative working capital and a current ratio less than 1.00.**

**(d)**

| | Nestlé | Petra Foods |
|---|---|---|
| 1. Debt to total assets | $\frac{\text{CHF56,303}}{\text{CHF120,442}}$ = 46.8% | $\frac{\text{US\$175,510}}{\text{US\$465,896}}$ = 37.7% |
| 2. Times interest earned | $\frac{\text{CHF10,445 + CHF3,256 + CHF850}}{\text{CHF850}}$ = 17.1 times | $\frac{\text{US\$20,555 + US\$23,514 + US\$1,651}}{\text{US\$1,651}}$ = 27.7 times |

**(e)** **The higher the percentage of debt to total assets, the greater the risk that a company may be unable to meet its maturing obligations. Nestlé's debt to total assets ratio was 24% higher than Petra Foods'. The times interest earned ratio provides an indication of a company's ability to meet interest payments. Nestlé's times interest earned ratio is good but Petra Foods' is 62% higher. However, neither company should have difficulty meeting its interest payments.**

## BYP 10-3 REAL-WORLD FOCUS

**(a) In 1924, the Fitch Publishing Company introduced the now familiar "AAA" to "D" ratings scale to meet the growing demand for independent analysis of financial securities.**

**(b) The terms "investment grade" and "speculative grade" have established themselves over time as shorthand to describe the categories 'AAA' to 'BBB' (investment grade) and 'BB' to 'D' (speculative grade).**

**(c) Moody's and Standard and Poor's are two other major credit rating agencies.**

## BYP 10-4 DECISION-MAKING ACROSS THE ORGANIZATION

| | | | |
|---|---|---|---|
| *(a) | Face value of bonds | | £2,400,000 |
| | Proceeds from sale of bonds (£2,400,000 X .95) | | 2,280,000 |
| | Discount on bonds payable | | £ 120,000 |

Bond discount amortization per year:
£120,000 ÷ 5 = £24,000

| | | |
|---|---|---|
| Face value of bonds | | £2,400,000 |
| Amount of original discount | £120,000 | |
| Less: Amortization through January 1, 2017 (2-year) | 48,000 | 72,000 |
| Carrying value of bonds, January 1, 2017 | | £2,328,000 |

| | | | |
|---|---|---|---|
| (b) | 1. Bonds Payable | 2,328,000 | |
| | Gain on Bond Redemption | | 328,000* |
| | Cash | | 2,000,000 |
| | (To record redemption of 8% bonds) | | |

*£2,328,000 – £2,000,000

| | | | |
|---|---|---|---|
| | 2. Cash | 2,000,000 | |
| | Bonds Payable | | 2,000,000 |
| | (To record sale of 10-year, 11% bonds at par) | | |

**BYP 10-4 (Continued)**

**(c) Dear President Fleming:**

**The early redemption of the 8%, 5-year bonds results in recognizing a gain of £328,000 that increases current year net income by the after-tax effect of the gain. The amount of the liabilities on the statement of financial position will be lowered by the issuance of the new bonds and retirement of the 5-year bonds.**

**1. The cash flow of the company as it relates to bonds payable will be adversely affected as follows:**

| | |
|---|---|
| Annual interest payments on the new issue (£2,000,000 X .11) | £220,000 |
| Annual interest payments on the 5-year bonds (£2,400,000 X .08) | (192,000) |
| Additional cash outflows per year | £ 28,000 |

**2. The amount of interest expense shown on the income statement will be higher as a result of the decision to issue new bonds:**

| | | |
|---|---|---|
| Annual interest expense on new bonds | | £220,000 |
| Annual interest expense on 8% bonds: | | |
| Interest payment | £192,000 | |
| Discount amortization | 24,000 | 216,000 |
| Additional interest expense per year | | £ 4,000 |

**These comparisons hold for only the 3-year remaining life of the 8%, 5-year bonds. The company must acknowledge either redemption of the 8% bonds at maturity, January 1, 2020, or refinancing of that issue at that time and consider what interest rates will be in 2020 in evaluating a redemption and issuance in 2017.**

**Sincerely,**

 

## BYP 10-5 COMMUNICATION ACTIVITY

**To:** Ron Seiser

**From:** I. M. Student

**Subject:** Bond Financing

**(1) The advantages of bond financing over equity stock financing include:**

1. **Shareholder control is not affected.**
2. **Tax savings result.**
3. **Earnings per share of ordinary shares may be higher.**

**(2) The types of bonds that may be issued are:**

1. **Secured or unsecured bonds. Secured bonds have specific assets of the issuer pledged as collateral. Unsecured bonds are issued against the general credit of the borrower.**
2. **Convertible bonds, which can be converted by the bondholder into ordinary shares.**
3. **Callable bonds, which are subject to early retirement by the issuer at a stated amount.**

**(3) State laws grant corporations the power to issue bonds after formal approval by the board of directors and shareholders. The terms of the bond issue are set forth in a legal document called a bond indenture. After the bond indenture is prepared, bond certificates are printed.**

| BYP 10-6 | ETHICS CASE |
|---|---|

**(a) The stakeholders in the Wesley case are:**

- **Dylan Horn, president, founder, and majority shareholder.**
- **Mary Sommers, minority shareholder.**
- **Other minority shareholders.**
- **Existing creditors (debt holders).**
- **Future bondholders.**
- **Employees, suppliers, and customers.**

**(b) The ethical issues:**

**The desires of the majority shareholder (Dylan Horn) versus the desires of the minority shareholders (Mary Sommers and others).**

**Doing what is right for the company and others versus doing what is best for oneself.**

**Questions:**

**Is what Dylan wants to do legal? Is it unethical? Is Dylan's action brash and irresponsible? Who may benefit/suffer if Dylan arranges a high-risk bond issue? Who may benefit/suffer if Mary Sommers gains control of Wesley?**

**(c) The rationale provided by the student will be more important than the specific position because this is a borderline case with no *right* answer.**

 

## GAAP EXERCISES

### GAAP 10-1

**The similarities between GAAP and IFRS include: (1) the basic definition of a liability, (2) both classify liabilities as current or non-current on the face of the statement of financial position, and (3) both use the same basic calculation for bond valuation.**

**Differences between GAAP and IFRS include: (1) GAAP allows straight line amortization of bond discounts and premiums, but IFRS requires the effective-interest method in all cases, (2) IFRS does not isolate unamortized bond discount or premium in a separate account, (3) IFRS splits the proceeds from convertible bonds into debt and equity components, and (4) GAAP uses a "rules-based" approach to account for liabilities while IFRS is more conceptual in its approach.**

### GAAP 10-2

| | | | | | |
|---|---|---|---|---|---|
| **(a)** | **Jan.** | **1** | **Cash ($2,000,000 X .97)** | **1,940,000** | |
| | | | **Discount on Bonds Payable** | **60,000** | |
| | | | **Bonds Payable** | | **2,000,000** |
| **(b)** | **Jan.** | **1** | **Cash ($2,000,000 X 1.04)** | **2,080,000** | |
| | | | **Bonds Payable** | | **2,000,000** |
| | | | **Premium on Bonds Payable** | | **80,000** |

### GAAP 10-3

| | | | |
|---|---|---|---|
| **(a)** | **Cash (£4,000,000 X .99)** | **3,960,000** | |
| | **Discount on Bonds Payable** | **40,000** | |
| | **Bonds Payable** | | **4,000,000** |
| **(b)** | **Cash (£4,000,000 X .99)** | **3,960,000** | |
| | **Bonds Payable** | | **3,800,000** |
| | **Share Premium—Conversion Equity** | | **160,000** |

## GAAP10-4 INTERNATIONAL FINANCIAL REPORTING PROBLEM

**(a) Total current liabilities at September 28, 2013, $43,658 million. Apple's total current liabilities increased by $5,116 ($43,658 – $38,542) million over the prior year.**

**(b) Accounts payable at September 28, 2013 were $22,367 million.**

**(c) The components of current liabilities are:**

| | (in millions) |
|---|---|
| Accounts payable | $22,367 |
| Accrued expenses | 13,856 |
| Deferred revenue | 7,435 |
| Total current liabilities | $43,658 |