Liabilities and Equity Exercises I

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Problem 1

Best Electronics operates a retail electronics company. Examine the following items and prepare the current liability section of the company's December 31, 20X8, balance sheet.

The beginning of year accounts payable was $150,000. Purchases on trade accounts during the year were $975,000, and payments on account were $915,000.

The company incurs substantial costs for electricity to run its stores and air conditioning systems. As of December 31, 20X8, it is estimated that $82,500 of electricity has been used, although the monthly billing for December has not yet been received.

Best Electronics sells service plans for as low as $25 per month. However, it requires its customers to prepay in 6-month increments. As of the end of the year, $562,500 had been collected for 20X9 web hosting plans.

Best Electronic's service plans are subject to sales taxes, and Best collected $97,500 during the year. All of these amounts have been remitted to taxing authorities, with the exception of $7,500 that is due to be paid in January, 20X9.

The company has total bank loans of $2,250,000. This debt bears interest at 6%, payable monthly. As of December 31, 20X8, all interest had been paid, with the exception of accrued interest for the last half of December.

The company's bank loans ($2,250,000) are all due on June 30, 20X9. However, Best Electronics has a firm lending agreement with the bank to renew and extend $1,500,000 of this amount on a 5-year basis. The company intends to exercise this renewal option, but is not yet sure about the final disposition of the remainder.

Worksheet 1

Liabilities		
Current liabilities		
	$ -	
	-	
	-	
	-	
	-	
	-	$ -

Supporting calculations:

Solution 1

Liabilities				
Current liabilities				
Accounts payable	$	210,000		
Utilities payable		82,500		
Unearned revenue		562,500		
Sales tax payable		7,500		
Interest payable		5,625		
Current portion of loan payable		750,000	$	1,618,125

Supporting calculations:

Accounts payable ($150,000 + $975,000 - $915,000 = $210,000)

Interest payable ($2,250,000 X 6% X 15/360 = $5,625)

Problem 2

On April 1, 20X1, Geo Farming Services purchased a new GPS surveying instrument. Farmer paid $2,500 down and executed the following promissory note:

FOR VALUE RECEIVED, the undersigned promises to pay to the order of **GPS Surveying Company** the sum of:

*********FIFTEEN-THOUSAND AND NO/100 Dollars******* ($15,000)**

with annual interest of **8%** on any unpaid balance. This note shall mature and be payable, along with accrued interest, on **March 31, 20X2**.

April 1, 20X1	**T.W. Farmer Geo Farming Services**
Issue Date	Signature

a) Prepare the appropriate journal entry to record the purchase on April 1, 20X1.

b) Prepare the appropriate journal entry to record the year-end interest accrual on December 31, 20X1.

c) Prepare the appropriate journal entry to record the payment of the note and accrued interest on March 31, 20X2.

Worksheet 2

a), b), c)

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**

Solution 2

a), b), c)

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
1-Apr	Equipment	17,500	
	Cash		2,500
	Note Payable		15,000
	To record purchase of equipment for cash and 8% note payable		
31-Dec	Interest Expense	900	
	Interest Payable		900
	To record accrued interest for 9 months ($15,000 X 8% X 9/12)		
31-Mar	Interest Expense	300	
	Interest payable	900	
	Note Payable	15,000	
	Cash		16,200
	To record repayment of note and interest ($15,000 X 8%)		

Problem 3

On August 1, 20X7, Desert Water Company purchased a water hauling truck. The sole consideration was a $150,000 note due in one year. Interest of $18,000 was included the face amount of the note. If Miller had purchased the truck for cash, the purchase price would have been only $132,000.

a) Prepare the appropriate journal entry to record the purchase on August 1, 20X7.

b) Prepare the appropriate journal entry to record the year-end discount amortization on December 31, 20X7.

c) Prepare the appropriate journal entry to record the payment of the note on July 31, 20X8.

d) What was the actual rate of interest on this loan?

Worksheet 3

a), b), c)

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
1-Apr			
31-Dec			
31-Mar			

d)

Solution 3

a), b), c)

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
1-Apr	Equipment	132,000	
	Discount on Note Payable	18,000	
	Note Payable		150,000
	To record note payable, issued at a discount		
31-Dec	Interest Expense	7,500	
	Discount on Note Payable		7,500
	To record discount amortization for 5 months		
31-Mar	Interest Expense	10,500	
	Note Payable	150,000	
	Discount on Note Payable		10,500
	Cash		150,000
	To record discount amortization and repayment of note		

d) The actual interest rate is about 13.6% ($18,000/$132,000).

Problem 4

Northern Freeze Corporation manufactures and sells snow removal machines. These machines include a complex heater module, and about 10% of all units sold require subsequent repair under the warranty. The average repair cost is $75 per unit.

Northern Freeze began the year with an accrued warranty liability of $150,000. During the year, 65,000 machines were sold. $340,000 was expended on warranty services performed during the year.

Prepare Northern's journal entries to accrue additional warranty costs relating to current year sales and account for monies expended on actual warranty work performed during the year. How much will appear as warranty expense in the current year income statement, and how much will appear as the warranty liability on the closing balance sheet?

Worksheet 4

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**

Solution 4

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
	Warranty Expense	487,500	
	Warranty Liability		487,500
	To accrue additional warranty costs (65,000 units X 10% X $75)		
	Warranty Liability	340,000	
	Cash		340,000
	To record actual warranty expenditures		

The warranty expense in the income statement is $487,500, and the closing warranty liability balance is $297,500 ($150,000 beginning balance + $487,500 additional accrual - $340,000 work performed).

Problem 5

Following are selected transactions or events of Alpine Company relating to its first month of operation.

01-Jun Alpine borrowed $75,000 via a note payable bearing interest at 1% per month. This note and all accrued interest is due at the end of July.

10-Jun Purchased $15,000 of inventory, terms 2/10,n/30. The purchase was initially recorded at the net amount. The obligation was not paid during June.

15-Jun The company adopted an employee health insurance plan. The total estimated cost is $75 per day. None of this cost was funded during June.

20-Jun Sold goods for $65,000 cash. Alpine offers a warranty on the goods, and anticipates that total warranty cost will be 2% of sales.

25-Jun One of Alpine's vehicles was involved in an accident. Alpine expects to be held responsible for an estimated $7,500 in damages.

30-Jun At month end, it was estimated that employees are owed for $11,500 in accrued wages. In addition, $275 was spent on warranty service work.

a) Prepare any initial journal entries necessary to record the above transactions or events.

b) Prepare month-end adjusting journal entries that are deemed appropriate related to the above transactions or events.

c) Prepare the current liability section of the company's balance sheet as of the end of the month. The only obligations are those related to the above transactions or events.

Worksheet 5

a)

GENERAL JOURNAL			
Date	Accounts	Debit	Credit

b)

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**

c)

Liabilities		
Current liabilities		
Notes payable	$ -	
Accounts payable	-	
Interest payable	-	
Wages payable	-	
Employee health insurance liabilty	-	
Warranty obligation	-	
Estimated liability for accident	-	$ -

Solution 5

a)

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
1-Jun	Cash	75,000	
	Note Payable		75,000
	Record note payable		
10-Jun	Purchases (or Inventory)	14,700	
	Accounts Payable		14,700
	Record purchase, net of discount		
20-Jun	Cash	65,000	
	Warranty Expense	1,300	
	Sales		65,000
	Warranty Obligation		1,300
	Record sale and warranty cost		
25-Jun	Loss	7,500	
	Estimated Liability for Accident		7,500
	Record estimated cost of accident		

b)

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
30-Jun	Wages Expense	11,500	
	Wages Payable		11,500
	Record accrued wages		
30-Jun	Warranty Obligation	275	
	Cash		275
	Record warranty work performed		
30-Jun	Interest Expense	750	
	Interest Payable		750
	Accrue 1% interest on note		
30-Jun	Discount Lost (or Inventory)	300	
	Accounts Payable		300
	Lapse of available discount		
30-Jun	Employee Insurance Expense	1,125	
	Insurance Liability		1,125
	Accrue 15 days of insurance cost		

c)

Liabilities		
Current liabilities		
Notes payable	$ 75,000	
Accounts payable	15,000	
Interest payable	750	
Wages payable	11,500	
Employee health insurance liabilty	1,125	
Warranty obligation	1,025	
Estimated liability for accident	7,500	$ 111,900

Problem 6

Following are selected borrowing transactions by University Life Housing Corporation.

01-Jun University Life Housing purchased new furniture in exchange for a $250,000 promissory note. The note was due in 6 months and bears interest at 10% per annum.

01-Jul Borrowed cash of $45,000, giving a $50,000 one-year note. The interest is implicit in the difference between the cash borrowed and the note's $50,000 maturity value.

01-Okt University Life Housing was experiencing a temporary cash flow crunch. The company issued a $20,000 one-year note in settlement of an outstanding account payable. The note bears interest at 6% per annum. The agreement with the creditor was that University Life Housing would repay the note as soon as possible, and the total interest would be allocated to each month based on the "rule of 78."

31-Okt University Life Housing paid the note and accrued interest resulting from the October 1 transaction.

01-Nov Borrowed $50,000 cash from a local bank by issuing a 2-year, 8% promissory note. The interest is to be calculated based on actual days, using a 365-day year assumption.

01-Dec University Life Housing paid the note and accrued interest resulting from the June 1 transaction.

a) Prepare journal entries necessary to record the above transactions.

b) Prepare year-end adjusting journal entries pertinent to the above borrowing transactions.

Worksheet 6

a)

GENERAL JOURNAL			
Date	Accounts	Debit	Credit

b)

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**

Solution 6

a)

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
1-Jun	Furniture	250,000	
	Note Payable		250,000
	Record note payable, 10%		
1-Jul	Cash	45,000	
	Discount on Note Payable	5,000	
	Note Payable		50,000
	Record one-year note payable		
1-Oct	Accounts Payable	20,000	
	Note Payable		20,000
	Record note payable, 6%		
31-Oct	Note Payable	20,000	
	Interest Expense	185	
	Cash		20,185
	Record note payoff ($20,000 X 6% X 12/78 = $185)		
1-Nov	Cash	50,000	
	Note Payable		50,000
	Record 8% note payable		
1-Dec	Note Payable	250,000	
	Interest Expense	12,500	
	Cash		262,500
	Record note payoff ($250,000 X 10% X 6/12 = $20,000)		

b)

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
31-Dec	Interest Expense	2,500	
	Discount on Note Payable		2,500
	To amortize discount on note		
31-Dec	Interest Expense	668	
	Interest Payable		668
	To accrue interest ($50,000 X 8% X 61/365 = $668)		

Problem 7

ABC Corporation has 8 employees. Information about the October payroll follows:

Name	Hours Worked	Pay Rate	Federal Income Tax Withheld
Ahn, M.	190	$12 per hour	$450
Bhushan, F.	n/a	$2,500 per month	$638
Child, G.	60	$13 per hour	$167
Edwards, J.	n/a	$6,700 per month	$1,200
Hall, J.	n/a	$10,200 per month	$2,681
Wong, I.	150	$11 per hour	$360
Wu, C.	148	$12 per hour	$400
ZoBell, D.	n/a	$12,200 per month	$3,000

Additional information is as follows:

ABC is in a state without an income tax. Employees' federal income tax withholdings depend on various factors, and the amounts are as indicated in the above table.

No employees worked overtime, with the exception of Meeyeon Wong, who worked 30 hours of overtime. Overtime is paid at 150% of the normal hourly rate.

Assume that gross pay is subject to social security taxes at a 6.5% rate, on an annual base of $100,000. Assume that Medicare/ Medicaid taxes are 1.5% of gross earnings. These taxes are matched by the employer. Only James Hall had earned more than $90,000 during the months leading up to October. He had earned $91,800 during that time period.

ABC has 100% participation in a $15 per month employee charitable contribution program. These contributions are withheld from monthly pay.

ABC pays for workers' compensation insurance at a 2% of gross pay rate. None of this cost is paid by the employee.

ABC provides employees with a group health care plan, however the cost is fully paid by employees. The rate is $300 per month, per employee.

ABC's payroll is subject to federal (0.5%) and state (1.5%) unemployment taxes on each employee's gross pay, up to $8,000 per year. All employees had earned in excess of $8,000 in the months leading up to October, with the exception of Francis Bhushan. Francis was first employed during the month of October.

ABC contributes 5% of gross pay to an employee retirement program. Employees do not contribute to this plan.

a) Complete the payroll schedule on the accompanying blank worksheet.

b) Prepare journal entries for ABC's payroll and the related payroll expenses.

Worksheet 7

a)

		Deductions					
Name	Gross Earnings	Federal Income Tax	Social Security Tax	Medicare/ Medicaid	Charitable	Health Insurance	Net Earnings
Ahn, M.							
Bhushan, F.							
Child, G.							
Edwards, J.							
Hall, J.							
Wong, I.							
Wu, C.							
ZoBell, D.							
Totals	$ -	$ -	$ -	$ -	$ -	$ -	$ -

b)

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
31-Oct			
	To record payroll		
31-Oct			
	To record employer portion of payroll taxes and benefits		

Solution 7

a)

Name	Gross Earnings	Deductions: Federal Income Tax	Social Security Tax	Medicare/ Medicaid	Charitable	Health Insurance	Net Earnings
Ahn, M.	$ 2,280.00	$ 450.00	$ 148.20	$ 34.20	$ 15.00	$ 300.00	$ 1,332.60
Bhushan, F.	2,500.00	638.00	162.50	37.50	15.00	300.00	1,347.00
Child, G.	780.00	167.00	50.70	11.70	15.00	300.00	235.60
Edwards, J.	6,700.00	1,200.00	435.50	100.50	15.00	300.00	4,649.00
Hall, J.	10,200.00	2,681.00	598.00	153.00	15.00	300.00	6,453.00
Wong, I.	1,650.00	360.00	107.25	24.75	15.00	300.00	843.00
Wu, C.	1,776.00	400.00	115.44	26.64	15.00	300.00	918.92
ZoBell, D.	12,200.00	3,000.00	793.00	183.00	15.00	300.00	7,909.00
Totals	$ 38,086.00	$ 8,896.00	$ 2,410.59	$ 571.29	$ 120.00	$ 2,400.00	$ 23,688.12

b)

GENERAL JOURNAL

Date	Accounts	Debit	Credit
31-Oct	Wages Expense	38,086.00	
	Federal Income Tax Payable		8,896.00
	Social Security Payable		2,410.59
	Medicare/Medicaid Payable		571.29
	Charity payable		120.00
	Insurance Payable		2,400.00
	Cash		23,688.12
	To record payroll		
31-Oct	Payroll Tax Expense	3,004.68	
	Employee Benefits Expense	2,666.02	
	Social Security Payable		2,410.59
	Medicare/Medicaid Payable		571.29
	Workers' Comp Payable (2%)		761.72
	FUTA Payable (0.5% X $1,140)		5.70
	SUTA Payable (1.5% X $1,140)		17.10
	Retirement Plan Payable (5%)		1,904.30
	To record employer portion of payroll taxes and benefits		