BONDS PAYABLE

I. ISSUING BONDS AT PAR

Business was good, cash was short, and paying off the $40,000 note to Bank B was difficult. The shortage was solved by issuing at Par on Dec. 31, 2002, bonds valued at $60,000 with 15% semiannual interest maturing in 4 years. Below are the first years' entries and the entry to pay off the Bonds.

```
Dec. 31  Cash                                 60,000
 2002      Bonds Payable                                60,000
          Sold 15%, 4-Year Bonds at Par.

June 30  Interest Expense                      4,500
 2003      Cash                                          4,500
          Paid semiannual interest.

Dec. 31  Interest Expense                      4,500
 2003      Cash                                          4,500
          Paid semiannual interest.

Dec. 31  Bonds Payable                        60,000
 2006      Cash                                         60,000
          Paid Bonds at maturity.
```

II. ISSUING BONDS AT A DISCOUNT

During 2006, business continued good, but cash was again in short supply, and $60,000 in bonds soon had to be paid. It was decided to raise $100,000 in cash with a 4-year bond issue. Market conditions and the financial strength of the company indicated 10% interest paid semiannually would have been required to sell the entire issue. Unfortunately, market conditions worsened, business slowed, and the bonds sold on Dec. 31, to yield 12% semiannually. The amount received for the bond issue was the present value of 8 interest payments of $5,000 ($100,000)(.05), and the present value of the $100,000 to be paid in 4 years. Interest was the market rate of 12% compounded semiannually. The amount received was calculated and recorded as follows:

```
Value of Interest                    Value of Bond

 P = A(PVMA)                          P = F(PVMA)
 P = $5,000(6.21)                     P = $100,000(.6274)
 P = $31,050                          P = $62,740

 Amount Received = $31,050 + $62,740 = $93,790
```

```
Dec. 31  Cash                              93,790
         Discount on Bonds Payable          6,210
           Bonds Payable                              100,000
          Sold 10% semiannual bonds at
          a discount on Date of Issue.
```

AMORTIZING BOND DISCOUNTS AND PAYING INTEREST

STRAIGHT LINE METHOD

$$\text{Amortization Period} = \frac{\text{Discount}}{n} = \frac{\$6,210}{8} = \$776.25$$

```
June 30 Bond Interest Expense              5776.25
          Discount on Bonds Payable                     776.25
          Cash ($100,000)(.05)                        5,000.00
         Paid semiannual interest, amortizing discount.
```

EFFECTIVE INTEREST METHOD

Period	(a) Carrying Amount BOP	(b) Interest Expense Recorded (a)(.06)	(c) Interest Paid	(d) Discount Amortized (b-c)	(e) Unamortized Discount EOP (e-d)	(f) Carrying Amount EOP (a+d)
0					$6,210	
1	$93,790	$5,627	$5,000	$627	5,583	$94,417
2	94,417	5,665	5,000	665	4,918	95,082
3	95,082	5,705	5,000	705	4,213	95,787
4	95,787	5,747	5,000	747	3,466	96,534
5	96,534	5,792	5,000	792	2,674	97,326
6	97,326	5,840	5,000	840	1,834	98,166
7	98,166	5,890	5,000	890	944	99,056
8	99,056	5,944	5,000	944	0	100,000

Note Column b was adjusted for decimal loss period 8.

```
June 30  Bond Interest Expense                         5,627
           Discount on Bonds Payable                              627
           Cash                                                 5,000
          Paid semiannual interest, amortized discount.
```

III. ISSUING BONDS AT A PREMIUM

Had Horizons been more fortunate, interest rates would have fallen, and the bonds would have sold at a premium to yield 8% semiannually. The amount received would have been calculated and recorded as follows:

Value of Interest	Value of Principal
P = A(PVMA)	P = A(PVMA)
P = $5,000(6.733)	P = $100,000(.7307)
P = $33,665	P = $73,070

Amount Received = $33,665 + $73,070 = $106,735

Dec. 31	Cash	106,735	
	Premium on Bonds Payable		6,735
	Bonds Payable		100,000
	Paid semiannual interest, amortized premium.		

AMORTIZING BOND PREMIUMS AND PAYING INTEREST

STRAIGHT LINE METHOD

$$\text{Amortization Per Period} = \frac{\text{Premium}}{n} = \frac{\$6,735}{8} = \$841.88$$

June 30	Interest Expense	4,158.12	
	Premium on Bonds Payable	841.88	
	Cash		5,000
	Paid semiannual interest, amortized premium.		

EFFECTIVE INTEREST METHOD

Period	(a) Carrying Amount BOP	(b) Interest Expense Recorded (.04)(a)	(c) Interest Paid	(d) Premium Amortized (c-b)	(e) Unamortized Premium (e-d)	Carrying Amount EOP (a-d)
0					$6,735	
1	$106,735	$4,269	$5,000	$731	6,004	$106,004
2	106,004	4,240	5,000	760	5,244	105,244
3	105,244	4,210	5,000	790	4,454	104,454
4	104,454	4,178	5,000	822	3,632	103,632
5	103,632	4,145	5,000	855	2,777	102,777
6	102,777	4,111	5,000	889	1,888	101,888
7	101,888	4,076	5,000	924	964	100,964
8	100,964	4,036	5,000	964	0	100,000

Note Column b was adjusted for decimal loss period 8.

June 30	Interest Expense	4,269	
	Premium on Bonds Payable	731	
	Cash		5,000

Note: Had the bonds been issued on a date other than Dec. 31, an adjusting entry affecting Interest Expense and the discount or premium accounts would have been necessary.

IV. BOND SINKING FUND

On Dec. 31, 2006, a sinking fund was started to pay off the discounted bonds issued that day. The first of 8 semiannual payments, expected to earn 12% semiannually, was made in 6 months. The equal payment calculation, the entry to start the fund, the entry to record 6 months interest at 6%, and the entry to pay the bondholders $100,000 were as follows:

F = A(FVMA)
$100,000 = A(9.897)
A = $10,104.07

June 30 2007	Bond Sinking Fund	10,104.07	
	Cash		10,104.07
	To record semiannual sinking fund deposit.		
Dec. 31 2007	Bond Sinking Fund ($10,104.07)(.06)	606.24	
	Sinking Fund Earnings		606.24
	To record sinking fund earnings for 6 months.		
Dec. 31 2010	Bonds Payable	100,000.00	
	Bond Sinking Fund		100,000.00
	To retire Bond issue dated Dec. 31, 2006.		