

## HW10\_Solution

### E10-3 *Required:*

Compute the issue (sales) price on January 1 of this year for each of the following independent cases (show computations):

- a. Case A: Market interest rate (annual): 8 percent.
- b. Case B: Market interest rate (annual): 6 percent.
- c. Case C: Market interest rate (annual): 9 percent.

#### CASE A:

\$100,000 x 0.58349	\$ 58,349
\$8,000* x 5.20637	41,651
Issue price (market and stated rate same)	<u>\$100,000</u>
*\$100,000 x 0.08	

#### CASE B:

\$100,000 x 0.66506	\$ 66,506	
\$8,000* x 5.58238	44,659	
Issue price (market rate less than stated rate)	<u>\$111,165</u>	(at a premium)
*\$100,000 x 0.08		

#### CASE C:

\$100,000 x 0.54703	\$ 54,703	
\$8,000* x 5.03295	40,264	
Issue price (market rate more than stated rate)	<u>\$ 94,967</u>	(at a discount)

E10-8 **Required:**

1. Provide the journal entry to record the issuance of the bonds.
2. Provide the journal entry to record the interest payment on June 30 of this year.
3. What bonds payable amount will Denzel report on its June 30 balance sheet?

Present value:

\$600,000 x 0.71679	=	\$430,074
\$22,500* x 6.66378	=	149,935
Issue price	=	<u>\$580,009</u> **

\*\$600,000 x 0.075 x ½

\*\*Using Excel or a financial calculator results in a present value of \$580,009 (rounded).

Req. 1

January 1:

Cash (+A)	580,009	
Bond discount (-L)	19,991	
Bonds payable (+L)		600,000

Req. 2

June 30:

Interest expense* (+E, -SE)	24,650	
Bond discount (+L)		2,150
Cash (-A)		22,500

\*((\$580,009 x 0.085 x ½)

Req. 3

June 30:

Balance sheet:

Long-term Liabilities

Bonds payable \$582,159\*

\*This is the book value of the bonds payable. It is computed in one of two ways: (1) by subtracting the unamortized discount (\$19,991 - \$2,150) from the face value of the bonds (\$600,000), or (2) by adding the amount of the discount amortized on June 30 (\$2,150) to the book value of the bonds at the beginning of the period (\$580,009).

**E10-11 Required:**

1. What was the bond's issue price?
2. Did the bond sell at a discount or a premium? How much was the premium or discount?
3. What amount(s) should be shown on the balance sheet for bonds payable at 12/31/20×1 and 12/31/20×2.
4. Show how the following amounts were computed for Year 2: (a) \$60, (b) \$77, (c) \$17, and (d) \$981.

**E10-11.**

Req. 1 The bond's issue price was \$948. This is given in the amortization table. It can also be computed by taking the present value of the future cash flows and discounting them by the market interest rate of 8 percent.

Req. 2 The bond sold at a discount. The amount of the discount was \$52 (\$1,000 – \$948)

Req. 3 Balance sheet:

12/31/20x1:	\$ 964	(\$948 + \$16)
12/31/20x2:	\$ 981	(\$964 + \$17)

Req. 4 (a)  $\$1,000 \times 0.06 = \$60$ .

(b)  $\$964 \times 0.08 = \$77$  (rounded).

(c)  $\$77 - \$60 = \$17$ .

(d)  $\$964 + \$17 = \$981$ .

**E10-13 Required:**

1. Provide the journal entry to record the issuance of the bonds.
2. Provide the journal entry to record the interest payment on June 30 of this year.
3. What bonds payable amount will Park report on its June 30 balance sheet?

**E10-13.**

Present value:

\$2,000,000 x 0.43499	= \$	869,980
\$100,000* x 13.29437	=	1,329,437
Issue price	=	<u>\$2,199,417</u> **

\*\$2,000,000 x 0.10 x 1/2

\*\*Using Excel or a financial calculator results in a present value of \$2,199,415 (rounded).

Req. 1

January 1:

Cash (+A)	2,199,417	
Bond premium (+L)		199,417
Bonds payable (+L)		2,000,000

Req. 2

June 30:

Interest expense (+E, -SE) (\$2,199,417 x 0.085 x ½)	93,475	
Bond premium (-L)	6,525	
Cash (-A) (\$2,000,000 x 0.10 x ½)		100,000

Req. 3

Balance sheet:

Long-term Liabilities

Bonds payable	\$2,192,892*
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\*This is the book value of the bonds payable. It is computed in one of two ways: (1) by adding the unamortized premium (\$199,417 - \$6,525) to the face value of the bonds (\$2,000,000), or (2) by subtracting the amount of the premium amortized on June 30 (\$6,525) from the book value of the bonds at the beginning of the period (\$2,199,417).