Chapter 10 Classwork
(Use the Tables from Chapter 9 Classwork)

10-1. The current portion of long-term debt is a balance sheet item for Otiose Products Company. How would it most likely be classified on the balance sheet?
   a. Current liability
   b. Long-term liability
   c. Current asset
   d. Long-term asset

10-2. If a company’s bonds are callable,
   a. the investor or buyer of the bonds has the right to retire the bonds.
   b. the issuing company is likely to retire the bonds before maturity if the bonds are paying 9% interest while the market rate of interest is 6%.
   c. the bonds are never allowed to remain outstanding until the maturity date.
   d. the investor never knows what the redemption price will be until the bonds are actually called.

10-3. On January 2, 2015, Denchfield Roofing, Inc. issued $500,000, 10-year bonds for $574,540. The bonds pay interest on June 30 and December 31. The face rate is 8% and the market rate is 6%. At the maturity date, besides an interest payment, Denchfield Roofing would repay the bondholders
   a. $574,540.
   b. $520,000.
   c. $500,000.
   d. only the last interest payment.

10-4. Which of the following statements about bond accounting under the effective interest method is correct?
   a. The cash interest paid is calculated as the bond face value x the effective rate. ☒
   b. The interest expense is calculated as the carrying value x the effective rate. ☒
   c. The difference between the cash interest paid and the interest expense is added to the carrying value of the bonds if bonds were sold at a premium. ☒
   d. The difference between the interest expense and the interest paid is deducted from the carrying value of the bonds if bonds were sold at a discount. ☒

10-5. Endeavor Company issued 20-year bonds with a coupon rate of 5% when the market rate of interest was 9%. This means that the bonds were issued
   a. at a premium. ☒
   b. at a discount. ☒
   c. at the face value. ☒
   d. with an additional 3 years of interest.

10-6. Clepe Company planned to raise $100,000 by issuing bonds. The bond certificates were printed bearing an interest rate of 8%, which was equal to the market rate of interest. However, before the bonds could be issued, economic conditions forced the market rate up to 9%. If the life of the bonds is 6 years and interest is paid annually on December 31, how much will Clepe receive from the sale of the bonds?
   a. Exactly $100,000 because Clepe Company would still pay interest at the face rate of 8%.
   b. Less than $100,000 because the market rate of interest at 9% was more than the face rate.
   c. Greater than $100,000 because the face rate of interest at 8% was less than the market rate.
   d. The bonds would not be sold at all; Clepe Company would have the certificates reprinted bearing the market rate of 9%.
10-7. Petrorich Corp. issued 10-year, 9%, $100,000 bonds paying interest on an annual basis, at a $5,200 premium. Which one of the following statements is true?
   a. Petrorich's annual interest expense on the bonds will be greater than the amount of interest payments to bondholders each year.
   b. Petrorich's annual interest expense on the bonds will be less than the amount of interest payments to bondholders each year.
   c. Petrorich will receive $94,800 as the issue price.
   d. The cash paid to bondholders will be $520 each interest period.

10-8. On January 1, 2015, Cavil, Inc. issued $400,000, 10-year, 10% bonds for $354,200. The bonds pay interest on June 30 and December 31. The market rate is 12%. The cash payment on June 30, 2015 is
   a. $20,000.
   b. $21,200.
   c. $24,000.
   d. $17,710.

Classwork 10-9 Cash flows and Issue Prices at Various Market Rates. On January 1, 2016, Definiens, Inc. plans to issue $1,000,000 face value bonds with a stated interest rate of 6%. They will mature in ten years. Interest will be paid semiannually. At the date of issuance, assume that the market rate is (a) 4%, (b) 6%, and (c) 8%.

Required
For each market interest rate below, answer the following questions:

<table>
<thead>
<tr>
<th>Market rates</th>
<th>4%</th>
<th>6%</th>
<th>8%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is the amount due at maturity?</td>
<td>1,000,000</td>
<td>1,000,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>2. How much cash interest will be paid every six months?</td>
<td>50,000</td>
<td>30,000</td>
<td>20,000</td>
</tr>
<tr>
<td>3. At what price will the bond be issued?</td>
<td>970,000</td>
<td>935,000</td>
<td>864,100</td>
</tr>
</tbody>
</table>

Classwork 10-11 Issue Prices. The following terms relate to independent bond issues that were issued at an 8% market rate. Calculate the selling price for the entire issue of bonds:

a. 800 bonds; $1,000 face value; 6% stated rate; 5 years; annual interest payments
   800 x 1,000 = 800,000 x 6% x 5 + 435,964 x 1.941,762 = 423,014

b. 800 bonds; $1,000 face value; 6% stated rate; 5 years; semiannual interest payments
   800 x 1,000 = 800,000 x 6% / 2 x 5 + 435,964 x 1.941,762 = 423,014

Classwork 10-12 Redemption of Bonds. Scioto Co. issued $100,000 face value bonds at a discount of $8,000. The bonds contain a call price of 105 (105% of face value). Scioto decides to redeem the bonds early when the unamortized discount is $2,500.

Required
1. Calculate Scioto Co.'s gain or loss on the early redemption of the bonds.
   Face = 100,000
   Discount = 8,000
   105% x 100,000 = 105,000
   @1,000 x 8,000 x 1.05 = 8,475
   8,475 - 8,000 = 475

2. Prepare a journal entry for the redemption of the bond issue.
   Bonds Payable   Loss on Bond Redemption   Discount on Bonds   Cash
   100,000         475                       8,475            107,500
Classwork 10-13 Impact of a Discount. Shivaree, Inc. sold 10-year bonds on January 1, 2015. The face value of the bonds was $500,000, and they carry a 6% stated rate of interest, which is paid on December 31 of every year. Shivaree received $432,900 in return for the issuance of the bonds when the market rate was 8%. Any premium or discount is amortized using the straight-line method.

Required
1. Prepare the journal entry to record the sale of the bonds on January 1, 2015, and the proper balance sheet presentation on this date.

   \[
   \begin{align*}
   \text{Cash} & \quad \$432,900 \\
   \text{Discount on Bonds} & \quad 67/100 \\
   \text{Bonds Payable} & \quad \$500,000 \\
   \text{Bonds Payable, net of} & \quad \$432,900 \\
   \text{discount} & \quad 67/100 \\
   \end{align*}
   \]

2. Prepare the journal entry to record interest expense and interest payment on December 31, 2015, and the proper balance sheet presentation on this date.

   \[
   \begin{align*}
   \text{Dec 31, 2015: Interest Expense} & \quad 36/710 \\
   \text{Discount on Bonds} & \quad 67/100 \\
   \text{Cash} & \quad 500,000 \times 6\% \times 1 \\
   \text{Bonds Payable, net of} & \quad \$439,610 \\
   \text{discount} & \quad 67/100 \\
   \end{align*}
   \]

Classwork 10-14 Impact of a Premium. Assume the same set of facts for Shivaree, Inc. as in Classwork 10-13 except that it received $538,250 in return for the issuance of the bonds when the market rate was 5%. Any premium or discount is amortized using the straight-line method.

Required
1. Prepare the journal entry to record the sale of the bonds on January 1, 2015, and the proper balance sheet presentation on this date.

   \[
   \begin{align*}
   \text{Cash} & \quad \$538,250 \\
   \text{Bonds Payable} & \quad \$500,000 \\
   \text{Premium on Bonds} & \quad \$38,250 \\
   \text{Bonds Payable, inclusive of} & \quad \$538,250 \text{ premium} \\
   \text{Premium on Bonds} & \quad \$38,250 \\
   \end{align*}
   \]

2. Prepare the journal entry to record interest expense on December 31, 2015, and the proper balance sheet presentation on this date.

   \[
   \begin{align*}
   \text{Interest Expense} & \quad 38,250 / 10 = \$3,825 \text{ Amortization} \\
   \text{Premium on Bonds} & \quad 26,125 \\
   \text{Cash} & \quad \$3,825 \text{ premium} \quad \$534,425 \\
   \text{Bonds Payable, inclusive of} & \quad \$534,425 \text{ premium} \\
   \text{Premium on Bonds} & \quad \$3,825 \\
   \end{align*}
   \]
Classwork 10-15 Bond Issued at a Discount. Oxter Company issued $10,000,000 face value, five-year, 8% bonds on July 1, 2015, when the market rate of interest was 10%. Interest payments are due every July 1 and January 1. Oxter uses a calendar year-end and the straight-line method of amortizing any bond discount or premium.

Required
1. Calculate the bond issue price. (Use the present value tables, 5% column for 10 periods).

   Principal  $10,000,000 * 0.61391 = $6,139,100
   Interest payments  ½ * 8% * $10,000,000 * 7.72173 = 3,088,652
   Total  $9,227,792

2. Prepare the journal entry to record the issuance of the bonds on July 1, 2015.

   Cash  9,227,792
   Discount on Bonds payable  772,208
   Bonds Payable  10,000,000

3. Prepare the adjusting journal entry on December 31, 2015, to accrue interest expense.

   a. Assuming that Oxter uses the straight-line method:
      Interest Expense  477,122.1
      Discount on Bonds (772,208/10)  77,221
      Interest Payable  400,000

   b. Assuming that Oxter uses the effective-interest rate method (not on examinations):
      Interest Expense (5% * 9,227,792)  461,390
      Discount on Bonds  64,390
      Interest Payable  400,000

4. Assume that Oxter uses the straight-line method of amortization. On January 1, 2016, prepare the journal entry given that Oxter purchases all of the bonds on the market at:

   a. A price of 90 (90% of face value):
      Bonds payable  10,000,000
      Discount on Bonds  772,208
      Cash  9,000,000
      Gain on Bond Redemption  694,987

   b. At a price of 96 (96% of face value):
      Bonds payable  10,000,000
      Loss on Bond Redemption  234,987
      Discount on Bonds  694,987
      Cash  9,600,000