**SOLUTIONS TO P10-5, AP10-4, P11-2, AND AP11-2**

**P10–5.**

1. **Using PV Tables**

Computation of the amount of the bond liability when issued:

|  |  |  |
| --- | --- | --- |
| $200,000 x .4632 | = | $92,640 |
| $ 12,000 x 6.7101 | = | 80,521 |
|  Issue Price |  | $173,161 |

**Using PV Calculator (or Excel)**

N=10; I = 8; Payment = 200,000 x 6% = 12,000; FV = 200,000; PV = ??? = 173,160

2. Computation of interest expense recorded on December 31, 2014:

 $173,161 x 8% = $13,853

3. Not Required

4.

|  |  |  |
| --- | --- | --- |
| **Date** | **Debt-to-Equity** | **Times Interest Earned** |
| Issue date (January 1) \* | Increase | No effect |
| Interest payment date (December 31) | Increase | Decrease |

* Not graded, but provided to understand both effects during the year

**AP10–4.**

**Req. 1**

**Computations: PV Tables**

 Interest:

|  |  |  |
| --- | --- | --- |
| $2,000,000 x 6%  | = | $ 120,000 |

 Present value

|  |  |  |
| --- | --- | --- |
| $ 2,000,000 x 0.7130 | = | 1,426,000 |
| $ 120,000 x 4.1002 | = | 492,024 |
| Issue Price |  | $1,918,024 |

**Financial Calculator (or Excel)**

N=5; I = .07; PMT = 2,000,000 x 6% = 120,000; FV = 2,000,000; PV = ??? = 1,917,996

Note: Rounding Difference from Using Tables and PV Calculator.

**Req. 2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Using PV Tables** | **2014** |  |  **2015** |  |
| Interest expense  | $134,262 | \* | $135,260 | \*\* |

$1,918,024 x 7% = $134,262

\*\*[$1,918,024 + ($134,262- $120,000)] x 7% = $135,260

**Using PV Calculator (or Excel)** 134,260 135,258

[1,917,996 + (134,260 – 120,000)] x 7% =

**Req. 3**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **2014** |  |  **2015** |  |
| Cash paid  | $120,000 |  | $120,000 |  |

**Req. 4**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Using PV Tables** | **2014** |  | **2015** |  |
| Bonds payable  | $1,932,286\* |  | $1,947,546\* | \* |

\*$1,918,024 + $14,262 = $1,932,286

\*\*$1,932,286 + $15,260 = $1,947,546

**Using PV Calculator (or Excel)** 1,932,256 1,947,514

[1,917,996 + (134,260 – 120,000)] = 1,932,256

[1,932,256 + 9135,258 – 120,000) = 1,947,514

**P11–2.**

|  |
| --- |
| Stockholders’ Equity |
| **Contributed capital**: |  |
|  Preferred stock authorized 21,000 shares; issued and outstanding, 6,500 shares  | $ 65,000 |
|  Common stock authorized 50,000 shares; issued and outstanding, 43,000 shares  | 344,000 |
|  Capital in excess of par, preferred  | 49,000 |
|  Capital in excess of par, common  | 181,000 |
|   Total contributed capital  | 639,000 |
| Retained earnings  | 96,000 |
|  Total stockholders’ equity  | $735,000 |

**P11–3.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| (a) | Cash (66,000 shares x $9)(+A)  | 594,000 |  |  |
|  |  Common stock (66,000 shares x $5) (+SE)  |  |  | 330,000 |
|  |  Contributed capital in excess of par, common (66,000 x $4) (+SE)  |  |  | 264,000 |
|  | . |
| (b) | Cash (9,000 shares x $20) (+A)  | 180,000 |  |  |
|  |  Preferred stock (9,000 shares x $10) (+SE)  |  |  | 90,000 |
|  |  Contributed capital in excess of par, preferred (+SE)  |  |  | 90,000 |
|  | . |
|  (c) |  Cash (1,000 shares x $20) + (2,500 shares x $10) (+A)  | 45,000 |  |  |
|  |  Preferred stock (1,000 shares x $10) (+SE)  |  |  | 10,000 |
|  |  Common stock (2,500 shares x $5) (+SE)  |  |  | 12,500 |
|  |  Contributed capital in excess of par, preferred (+SE)  |  |  | 10,000 |
|  |  Contributed capital in excess of par, common (+SE)  |  |  | 12,500 |
|  |  |