Intermediate Accounting 2

Chapter 15 - Complex Debt and Equity

Answer Key

1. When the bond is convertible at the issuer's option, the proceeds from the issuance are divided between liability and equity elements.

   \[ FV = 700,000 \times 1%, \quad PMT = 700,000 \times 6% \times \frac{1}{2} = 21,000 \]
   \[ N = 3 \times 2 = 6, \quad IY = 2, \quad PV = 681,350 \]

   Jan 1st
   
   b) Cash
   Discount on Bonds
   Bonds Payable
   Contributed Capital: Common Share conversion rights

   \[
   \frac{710,000}{18,650} \quad 700,000
   \]
   \[
   28,650
   \]

   ** [Discount: 700,000 - 681,350]
   ** [Contributed Cap: 710,000 - 681,350]

   c) Jan 11th
     Bond Interest expense 23,047
     June 30th
     Discount on Bonds
     Cash
     \[
     \frac{681,350 \times 0.07 \times 9/12}{21,000}
     \]
     Dec 31st
     Bond Interest expense 23,947
     Discount on Bonds
     Cash
     \[
     \frac{681,350 + 2,847 \times 0.07 \times 9/12}{21,000}
     \]

Prepared by: Chavangujit Singh
2014: Dec 31st

- Bonds Payable: 700,000
- Contributed Capital: Conversion rights: 28,650
  Common Shares: 728,650

2013: Dec 31st

- Bonds Payable: 700,000
- Contributed Capital: Conversion rights: 28,650
- Loss on Retirement of Bonds: 11,649
- Discount on Bonds: 6,649
- Contributed Capital: Retirement: 18,650
- Cash: 715,000

\[
\text{Discount} = 700,000 - 693,351
\]
\[
\text{Loss} = 705,000 - 693,351
\]
\[
\text{Contributed Capital: Retirement} = 28,650 - 10,000
\]

Cash Paid: $715,000

Liability Portion: $705,000
Equity Portion: $10,000

* PV of the bond after 2 years:
  
  \[
  PV = \frac{700,000}{(1 + 7\%)^2} = 693,351
  \]
2. When bonds are convertible at the
issuers option: This is a compound financial
instrument where the obligation to pay
Cash interest is a liability and the
entire principal portion is equity

- Issue Price = 10,000,000 x 1.04 = 10,400,000
- PV of the payment [Interest liability]
Pmt = 10,000,000 x 8% x 6/12 = 400,000, FV = 0
Nly = 8, N = 20 x 2 = 40, P/Y = 2, FV = 7,917,110
Share equity = 10,400,000 - 7,917,110
= 2,482,890

2011
Jan 1st Cash 10,400,000
Interest Liability 7,917,110
Share Equity 2,482,890

June 30th - Interest Expense 316,684
Interest Liability 316,684
[7,917,110 x 8% x 6/12] - Interest liability 400,000
Cash 400,000

Dec 31st - Interest Expense 313,352
Interest liability 313,352
[7,917,110 + 316,684 - 400,000 x 8% x 6/12] - Interest liability 400,000
Cash 400,000

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b) Statement of Financial Position

Long-term liabilities:
Investment liability $7,747,146

[7,917,110 - 800,000 + 316,684 + 313,352]

Equity:
Share Equity 2,482,890

Dec 31st, 2011

Compensation expense 9,600
Contributed Surplus - Stock options 9,600
48,000 / 5 yrs]

b) Cash: [5,000 x 20] 100,000
Contributed Surplus - Stock options 48,000
Common Shares 148,000

c) Contributed Surplus - Stock options 48,000
Contributed Surplus - Stock options expired 48,000

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