Q-1.

Solution: B.

Sunk costs should be excluded in the cash flow calculation.

Externality and opportunity cost should be included when calculating cash flow, and the cash flow should be after tax cash flow.

Q-2.

Solution: C.

$$\text{PI} = \frac{PV\ of\ future\ cash\ flow}{|CF_0|} = 1 + \frac{NPV}{|CF_0|} = 1 + \frac{423.11}{16253} = 1.026$$

Q-3.

Solution: B.

The NPV of the new machine is $30 million - $10 million = $20 million. The value of this machine is added to Printing's current market value. The addition is worth $20 million / 180 million shares on per share, for a net addition to the share price of $0.11. So, the stock price would be $12.00 + $0.11 = $12.11.

Q-4.

Solution: B.

B is correct. An external analyst does not know a company's actual target capital structure. Consequently, the analyst should rely on market value (not book value) weights for the components of the company's current capital structure.

Q-5.

Solution: B

B is correct. The annual after-tax cost of debt is the after tax annual yield to maturity (YTM). Find the YTM by using a financial calculator as follows:

PV = –1,030.34, FV = 1,000, N = 40 (20 × 2), PMT = 31 (0.062 × 1,000 × 0.5), compute i.

i = 2.97 semiannually

Annually, YTM = 2.97 × 2 = 5.94

Therefore, the associated after-tax value = 0.0428 = 0.0594 × (1 – 0.28).