Solution:

(1)

To calculate the value of the proceeds from issuing the debentures, we have:

$$Principal\ Value = \$\frac{20}{(1.05)^{10}} = \$12.28\ million$$

The interest that is applicable will be given by:

$$Interest\ Applicable = \$(20 - 12.28) \times \frac{0.06}{0.10} = \$4.63\ million$$

Thus, the total proceeds from the issued debentures will be

$$Proceeds\ from\ debentures = \$16.91\ million$$

(2)

Effect on Balance Sheet Equation			
Transaction	Assets =	Liabilities +	Stockholders' equity
Issuance of bonds	+\$16.91 (Increase in cash)	+\$20 million (Increase in Bond Payable)	-\$3.09 million (Discount on bonds)
First semi-annual payment	-\$0.85 million (Decrease in cash)		-\$0.85 million (Interest Expense)
Payment at maturity	-\$20 million (Decrease in cash)	-\$20 million (Decrease in Bond Payable)	

(3)

The journal entries are as follows (explanations are omitted)

Transaction	Particulars	Debit	Credit
Issuance of bonds	Cash Bond Discounts To Bonds Payable	16.91 3.09	 20.00
First semi-annual payment	Interest Expense To Cash	0.85	 0.85
Payment at maturity	Bonds Payable To Cash	20	 20

(3)

2010, January 1: Balance sheet will have the accounts of bond payable as mentioned above in liabilities section.

2010, July 1: Cash section will decrease only, and stockholders' equity will be effected.