L. Rashid Company, a rapid growing chemical company needs to raise $3 million in external funds to finance the acquisition of a new chemical waste disposal system. After carefully analyzing alternative financing sources, Denise MacMahon, the firm’s vice president of finance reduced the financing alternatives to three choices: (1) debt (2) debt with warrants, and (3) a financial lease. The key terms of each of these choices are below.

**Debt**: The firm can borrow the full $3million from First Shreveport Bank. The bank will charge 12% annual interest and require annual end of year payments of $1,249,050 over the next three years. The disposal system will be depreciated under MACRS using a three year recovery period (Depreciation percentages below). The firm will pay $45,000 at the end of each year for a service contract that covers all maintenance cost; insurance and other costs will be borne by the firm. The firm plans to use the equipment beyond its three year recovery period.

 **Depreciation**

Year 1 33%

Year 2 45%

Year 3 15%

Year 4 7%

**Debt with warrants:** The firm can borrow the full %3 million from Southern National Bank. The bank will charge 10% interest and will, in addition, require a grant of $50,000 warrants, each allowing the purchase of two shares of the firm’s stock for $30 per share at any time during the next 10 years. The stock is currently selling for $28 per share and the warrants are estimated to have a market value of $1 each. The price (market value) of the debt with the warrants attached is estimated to equal the $3 million initial loan principle. The annual end of year payments on this loan will be $1,206,345 over the next three years. Depreciation, maintenance, insurance, and other costs will have the same costs and treatments under this alternative as those described before the straight debt financing alternative

**Financial Lease:** The waste disposal system can be leased from First International Capital. The lease will require annual end of year payments of $1,200,000 over the next three years. All maintenance costs will be paid by the lessor; insurance and other costs will be borne by the lessee. The lessee will exercise the option to purchase the system at the end of the lease for $220,000.

Denise decided first to determine which of the debt alternatives would least burden the firm’s cash flows over the next three years. In this regard, she felt that very few if any, warrants would be exercised during this period. Once the better debt alternative was found, Denise planned to use lease – versus purchase analysis to evaluate it in light of the lease alternative. Assume the firm is in the 40% tax bracket, and its after tax cost of debt is 7% under the debt alternative and 6% under the debt with warrants alternative.

1. Under the debt with warrants, find the following
2. Straight debt value
3. Implied price of all warrants
4. Implied price of each warrant
5. Theoretical value of a warrant
6. On the basis of A, do you think that the price of the debt with warrants is too high or too low? Explain
7. Assuming that the firm can raise the needed funds under the specified terms, which debt financing alternatives - debt or debt with warrants- would recommend in view of your findings above? Explain.
8. For the purchase alternative, financed as recommended is part c, calculate the following
9. The annual interest expense deductible for tax purchases for each of the next three years.
10. The after tax outflow for each for the next three years.
11. The present value of cash outflows using the appropriate discount rate