**Homework Set 4**

**EGR 310**

1. (Chapter 11) A company has purchased a back hoe for $120,000. The backhoe has a 6 year life and salvage value of $30,000. Compute the depreciation schedule using straight line depreciation. **(15 pts)**:
2. (Chapter 11) An asset was purchased for $100,000. It has a 5 year life. The asset is expected to have a salvage value of $10,000 after the five years. Show the depreciation and remaining book value for this asset for each of the 5 years using Double Declining Balance depreciation. **(15 pts)**
3. (Chapter 11) Use MACRS to compute the depreciation schedule for office furniture purchased for $80,000 (use the 7 yr depreciation schedule). Assume salvage value is $10,000. **(10 pts)**
4. (Chapter 11) What is the book value at the end of year 3 of an asset purchased for $50,000, depreciated over 5 years and a salvage value of $10,000 using: **(20 pts)**
   1. Straight Line Depreciation
   2. MACRS (use 5 year depreciation schedule)
5. (Chapter 12) A company paid $200,000 for a machine to make a new product. The machine has a 5 year life and a salvage value of $20,000. The company makes $49,500 per year on the new product. Assuming a 31% tax rate and straight-line depreciation, what is the before tax and after tax rates of return on the investment over its 5 year life? (Do not interpolate. Round to the closest rate in appendix C of the book). **(20 pts)**
6. (Chapter 13) A $20,000 machine will be purchased by a company with an MARR of 10%. It will cost $5,000 to install and removal costs are insignificant. What is its economic life and minimum EUAC cost given the following O&M costs:**(20 pts)**

|  |  |
| --- | --- |
| **YR, n** | **O&M** |
| **1** | **$5,000** |
| **2** | **$8,000** |
| **3** | **$11,000** |
| **4** | **$14,000** |
| **5** | **$17,000** |