

**Sample Midterm Exam**

**Question 1.a.** Asset *A* generates a cash flow of \$20,000 one year from now, followed by cash flows that grow at a rate of 3% per year for the next 9 years. The OCC is 16%. Calculate the current market value of Asset *A*.

**b.** Asset *B* generates cash flows of \$350,000 per year for the next 12 years, followed by \$700,000 per year for the next 8 years, starting one year from now. The OCC is 7%. Calculate the current market value of Asset *B*.

**c.** Forecast the market value of Asset *B* at year 6.

**Question 2.** Mundane Motors is planning the sale of new Prosaic sedans for the 2015 model year. An initial inventory investment of \$6.5 m. is required. Projections for the next four quarters are as follows.

<u>Quarter</u>	<u>Revenues</u>	<u>COGS</u>	<u>Selling Costs</u>	<u>Receivables</u>	<u>Inventory</u>
1	\$12.2 m.	\$7.3 m.	\$0.6 m.	\$9.3 m.	\$7.2 m.
2	\$8.5 m.	\$5.1 m.	\$0.4 m.	\$14.9 m.	\$4.1 m.
3	\$3.2 m.	\$2.6 m.	\$0.3 m.	\$7.7 m.	\$2.9 m.
4	\$4.6 m.	\$3.7 m.	\$0.7 m.	\$4.1 m.	\$0.8 m.

Ending receivables will be collected in cash at quarter 6. Ending inventory will be sold for cash at half its book value at quarter 5. Assume that Shrinkage and Bad Debt are zero.

The OCC is 14.25% per year and the tax rate is 35%.

- Calculate the stream of tax payments associated with this project.
- Calculate the stream of new goods purchases associated with this project.
- Calculate the stream of cash inflows associated with this project.
- Calculate the net cash flow stream associated with this project.
- Calculate the NPV of this project.