Session 10a: Post Class tests

1. Cyrus Inc. is a company that operates in the entertainment software business and you are trying to estimate a beta for being just in the entertainment software business. The average regression beta across 49 entertainment software companies is 1.38, the average debt to equity ratio for these firms is 25% and cash as a percent of firm value is 20% for the firms. What is the unlevered beta of being in the entertainment software business? (You can assume a 40% marginal tax rate for all firms.)
   a. 1.20
   b. 1.50
   c. 1.44
   d. 1.00
   e. None of the above

2. Gecko Enterprises operates in two businesses: it gets $100 million in revenues from food processing and $50 million in revenues from chemicals. You have the following information on the two businesses:

<table>
<thead>
<tr>
<th></th>
<th>Unlevered Beta</th>
<th>EV/Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>0.80</td>
<td>1.25</td>
</tr>
<tr>
<td>Chemicals</td>
<td>1.20</td>
<td>1.5</td>
</tr>
</tbody>
</table>

   If Gecko Enterprises has a debt to equity ratio of 66.67%, estimate the levered beta for Gecko. (Marginal tax rate is 40%)
   a. 1.40
   b. 1.31
   c. 1.33
   d. 1.20
   e. None of the above

3. Nova Inc. is an entertainment company that derives two thirds of its value from the movie business and one third from operating movie theaters. The company has no debt, no cash and a beta of 0.90. It is considering divesting itself of the movie theater business and returning the cash to stockholders. If the beta of the movie theater business is 1.00, estimate the beta for Nova after the divestiture.
   a. 0.75
   b. 0.80
   c. 0.85
   d. 0.90
   e. 1.00

4. Lavazza Coffee is a publicly traded company that sells coffee beans. It has 10 million shares outstanding, trading at $5/share, no debt or cash and has a beta of 0.75. It is considering borrowing $25 million and investing in coffee shops. If the beta of coffee shops/restaurants is 1.20, estimate the beta for Lavazza's equity after the expansion. (The marginal tax rate is 40%).
   a. 1.08
   b. 0.90
c. 1.21  
d. 1.56  
e. None of the above

5. LoMax Systems produces car alarms and has a market capitalization of $100 million, debt of $50 million and a cash balance of $25 million. It currently has a beta of 1.17. It is considering using the cash to buy back stock. Estimate the beta after the transaction.
   a. 1.080  
   b. 1.404  
   c. 1.242  
   d. 1.512  
   e. None of the above