Business 363  
Sample Mid-term Examination

You have 80 minutes to complete the exam. The points listed represent a guide to the efficient allocation of time. Generally one or two lines is a better answer than a long-winded attempt to tell me everything you know.

Section I:

1. (10%)  
Nabisco spends $200 million per year in trucking expenses, delivering 500 types of cookies to 80,000 buyers. Many of the trucks depart half-empty or return empty. How would you analyze Nabisco’s strategy for delivering cookies? What are the major costs and benefits of owning a delivery business?

2. (20%)  
AT&T has recently announced plans to divest a number of businesses. The motivation for the divestitures is that AT&T’s various operations – long distance, wireless voice, wireless data, internet access and cable television – do not have the synergies previously anticipated. Use a five or six forces analysis to discuss AT&T’s changing circumstances.

3. (20%)  
The Palm operating system competes with Microsoft’s Pocket PC operating system in the handheld computer market. Here are some statistics from devices using the two.

<table>
<thead>
<tr>
<th></th>
<th>Palm OS (Hanspring Visor Deluxe)</th>
<th>Pocket PC Compaq IPAQ 3650</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAM memory</td>
<td>8 MB</td>
<td>32 MB</td>
</tr>
<tr>
<td>Processor Speed</td>
<td>33 MHz</td>
<td>206 MHz</td>
</tr>
<tr>
<td>Color Screen</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Screen size</td>
<td>3.0 inch</td>
<td>3.8 inch</td>
</tr>
<tr>
<td>Battery life</td>
<td>One Month</td>
<td>Eight hours</td>
</tr>
<tr>
<td>Price</td>
<td>$250</td>
<td>$500</td>
</tr>
</tbody>
</table>

How does the Hotelling model fit these products? What customer characteristics characterize the two ends of the line? Which company would you expect to offer the following software and why? (One line per entry maximum on why.)

(i) Zagat restaurant guide, with brief reviews of upper end restaurants
(ii) Scientific calculator with graphing capability
(iii) MP3 player (plays songs which occupy up to 1 MB per minute)
(iv) Global positioning system locator, shows street maps of city with current location

II. Case Questions (50%)

These will look like homework assignments, probably five short answer questions at 10% each.
1. Nabisco is vertically integrated into an industry with approximate competitive supply. A disadvantage of Nabisco’s strategy is that, like Coors, it has difficulty coordinating with others to fill the trucks and does not obtain the advantages of a competitive market for transportation, and thus spends more than necessary for delivery. The only potential advantage is the ability to coordinate trucking with production and orders.

The advantages of vertical integration are coordination, prevention of hold up, elimination of double marginalization, and foreclosure. The last three don’t apply to a competitive market.

For this answer, I was looking for (i) integration into a competitive market, (ii) analogy to Coors, (iii) possible advantages.

2. AT&T provided multiple services on the principle that the services involved complementarities (synergies). In order to coordinate these products, or to foreclose rivals from access, AT&T offered all of them. When complementarities exist, such bundled offering may reduce rivalry, create barriers to entry (of scale if nothing else) and reduce the effectiveness of substitutes. The changing circumstances (learning that synergies don’t exist) suggests that a different organizational form is optimal to deliver the services.

(There is nothing to say about supplier bargaining power, and buyer bargaining power is relatively small and hasn’t changed.)

For this answer, I am mainly looking for a recognition that changing markets suggest a distinct organizational form, one that delivers the good or goods efficiently. That is the bottom line of a five or six forces analysis.

3. With the exception of battery life, the Pocket PC product offers higher quality and more features at a higher price. So the line fits pretty well. There are various ways to characterize the customers on the line – Pocket PC customers value more mobile computing power, and do more with any machine. Alternatively, the Pocket PC people may be using their machine more often as a substitute for a computer, while the Palm users use their product more as a day-timer, keeping schedule and contacts and little else.

I would predict that all four go with the Pocket PC, given this characterization, simply because the Pocket PC offers more features and power. However, there are GPS systems and Zagat guides for the Palm devices; which fits with the day-timer view of the Palm device. In terms of grading, I am looking for a recognition that the features have a fit or complementary aspect to the type of user that is attracted to the machine, so it matters how you characterize the customers.