ISM 80C: Starting a New Technology Company (SNCT)

Homework #5: Finance, Financing, Course Closure
Homework # 5 is due Thursday, 2 June 2011

Final Examination: Monday, June 6, 8-11 AM

Final Project Report due on Thursday, June 2. The final project report should be a well written
document, properly cross-referenced to the Appendices, and containing all the items mentioned in
the “Project Phase IV” handout.

Reading: Kaplan, “Start-up” Chapters 10-12; Epilogue; Chronology (of Events).

Problems:

1. Cash Flow Analysis for a Mechanical Monkey Toy (estimated time: 30 minutes)
   • What does Net Present Value (NPV) mean? How is NPV calculated
   • Here are the primary expected cash flows for the 2-year development of a
     Mechanical Monkey (all cash numbers are in thousands of dollars) developed in HW
     #3.

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   • Determine the Net Present Value of the cash flows (Assume a discount factor of 12 % per
     annum.)
   • Should your startup go ahead with the development of the mechanical monkey. Explain
     your answer.

2. Ownership, Dilution, and Shares for the Mechanical Monkey Toy Company (15
   minutes)
Assume that the Mechanical Monkey Toy Company will obtain the cash required for
Year 1 as “Round 1” funding from private investors, in return for which the founders of
the company yield 10% of the ownership.
   a) How much money does the company need in Year 1 for the development of the
      mechanical monkey?
   b) What is the dilution of the founders?
   c) What is the dilution worth in dollars to the start-up?
   d) What is the pre-money worth of the company in dollars?
   e) What is the post-money worth of the company in dollars?
f) The company decides to issue 4 million shares to the founders and the investors. Write down an equation for calculating the price per share, and then use this equation for calculating the price per share (pps).

3. Go Corporation Case Study (estimated time: 60 minutes)
   a) Read Chapters 10-12. Make a list of at least 9 important points (facts) from your reading (at least 3 per chapter). Synthesize these points into 5 key lessons learned (one per chapter).
   b) Assess the Go Corporation as a startup based on what you have learned, in ISM 80C, about creating a start-up.

4. Start-up Process. (estimated time: 30 minutes)
   • Describe in a step-wise manner the process for creating a start-up.
   • What are 3 key lessons you learned in this course.
   • Compare and contrast our (ISM 80C; team project) approach with the approach of the Go Corporation from your reading, and draw three meaningful conclusions.

5. Products, Services, and Society (estimated time: 30 minutes)
   Generate 5-10 criteria that can be used to assess whether a product or service is really beneficial to society, or mostly “for-profit”.
   Then use these criteria to assess the benefits of the following products and services: cell-phone, I-pod, google, e-Bay.
   Present your assessment in the form of a table. For each product/service draw overall conclusions about its benefits to society.