

Valuation of Intellectual Property IPSI – 2005

Final Examination – 1 hour

This is an open-book examination. You may use the course materials, your lecture notes, a calculator and scratch sheets when necessary. Students for whom English is a second language may also use a language dictionary.

The examination comprises:

10 multiple choice questions	(4 points each)	40 points
10 true/false questions	(2 points each)	20 points
8 short answer questions	(5 points each)	<u>40</u> points
Total Points		100

Mark your answers on these pages. Only these pages will be graded.

Note the attached financial statements for FPLC, Inc.

10 Multiple Choice Questions – There may be more than one correct answer to each question. Circle the letter associated with the correct answers. Be sure you mark **all** of the correct answers.

1. The income approach to valuation requires which of the following inputs:
 - a. An estimate of physical deterioration
 - b. A discount rate reflecting appropriate risk
 - c. The amount of income
 - d. An analysis of comparability with other properties

2. Guided by the “business enterprise equation,” which of the following are equivalent to the value of a of business enterprise:
 - a. The total assets shown on the balance sheet
 - b. The book value of common equity plus net working capital
 - c. The value of long-term debt plus the value of common stock
 - d. The value of monetary plus tangible plus intangible assets

3. There are many reasons why a valuation of intellectual property may be undertaken. Among them are:
 - a. International transfer pricing issues
 - b. Allocation of purchase price to conform to FASB 141 & 142
 - c. Assistance in deciding how best to exploit the IP
 - d. To assist in bankruptcy proceedings

4. If we are engaged to value computer software developed by a business for sale as a product, we are most likely to base our appraisal on:
 - a. The trended original cost of the software
 - b. A capitalization of the economic benefit of the software
 - c. The software’s cost of replacement less physical, functional and economic obsolescence
 - d. The current cost that would be incurred to develop the software.

5. If we are called upon to render an opinion of damages in a patent infringement case, we would consider how the alleged infringement affected:
 - a. The level of the plaintiff’s sales
 - b. The number of product units sold by the plaintiff
 - c. The price per unit of the plaintiff’s products
 - d. The market value of the plaintiff’s business enterprise

6. What is the market value (in \$ millions) of the FPLC, Inc. monetary assets at December 31, 2004?
 - a. \$5,461
 - b. \$1,511
 - c. \$1,291
 - d. None of the above

7. You have calculated the present value of the future economic benefit associated with the exploitation of some copyrighted software. You then receive information indicating that competition in the market niche of this software will be much stronger than you originally thought. How will this change your present value calculation?
 - a. You will reduce the discount rate and the value will be lower
 - b. You will increase the discount rate and the value will be lower
 - c. You will increase the discount rate and the value will be higher
 - d. You will reduce the discount rate and the value will be higher

8. An appraisal must include which of the following:
 - a. The "as of date" of the value opinion
 - b. The purpose of the appraisal
 - c. The premise of value
 - d. A description of your client's business

9. Which of the following sources of capital would be available to a start-up company for the development of newly patented biotechnology:
 - a. Sale of bonds
 - b. Loan from a money-center bank
 - c. Equity investments from individuals
 - d. Venture capital firms

10. In estimating the amount of future economic benefit that technology IP might provide, we would consider which of the following:
 - a. Potential for licensing in addition to self-exploitation
 - b. Its potential for enhancing product prices
 - c. Its potential for reducing labor costs
 - d. The cost of commercializing it

10 True / False Questions. Circle the "T" or "F" after each question.

1. In using the income approach we must consider both the duration of the future economic benefit and its pattern.
T F
2. A "vertical" financial analysis reveals changes over time. **T F**
3. A licensor can reasonably expect a royalty that will capture all of the economic benefits from the licensee's exploitation. **T F**
4. The term "following the dollars" refers to analyzing the source of a company's revenues and the destinations of a company's expenses. **T F**
5. The balance sheet can sometimes provide the value of a company's intangible assets. **T F**
6. In a trademark infringement case, the court is likely to accept evidence of a reasonable royalty as a measure of damages. **T F**
7. In the "relief from royalty" technique, we use a royalty rate to estimate the income allocable to the subject IP. **T F**
8. The market value of the FPLC, Inc. business enterprise at December 31, 2004 was \$17,488 million **T F**
9. A Monte Carlo simulation presents the results of many discounted cash flow calculations. **T F**
10. A royalty that will provide an adequate return on the cost of developing the licensed IP is the most appropriate **T F**

7. Your client is the licensor in a transaction involving a cost-saving technology. Your client has drafted a license agreement including a royalty in the amount of 7.5% of the net sales of products made using the technology. The licensee asserts that, since this is a cost-saving technology, a royalty based on a percentage of the cost savings would be more appropriate. How do you advise your client?

8. Your client, FPLC, Inc., was so pleased with your valuation of the two trademarks referred to in Question 5. that she has asked you to appraise all 16 of the FPLC trademarks. You do a careful income approach for these marks, using individual product line financials and check the answers against some trademark arm's length sales that you know about. Your calculations indicate that the market value of these trademarks is \$9.5 million. Is this a reasonable conclusion?

FPLC, Inc.
Income Statement
(\$millions)

	<u>2004</u>	<u>2003</u>
Years ended December 31,		
Net Sales	\$21,465	\$20,871
Cost of Products Sold	<u>13,320</u>	<u>12,768</u>
Gross Margin	8,145	8,103
Marketing, Research, Admin. Expenses	<u>4,655</u>	<u>4,119</u>
Operating Income	3,490	3,984
Interest Expense	365	490
Other Income, net	<u>20</u>	<u>51</u>
Earnings before Income Taxes	3,145	3,545
Income Taxes	<u>1,258</u>	<u>1,418</u>
Net Earnings	\$1,887	\$2,127
Average Common Shares Outstanding (mill)	322.7	322.7
December 31 price (\$ per share)	\$ 41.25	\$ 44.75

FPLC, Inc.
Consolidated Balance Sheets
(\$millions)

	<u>2004</u>	<u>2003</u>
Years ended December 31,		
ASSETS		
Current Assets		
Cash	\$ 614	\$ 717
Investments	23	134
Accounts Receivable	1,705	1,608
Inventories		
Materials and Supplies	833	666
Work in Process	105	98
Finished Goods	1,260	1,101
Deferred Income Taxes	321	351
Prepaid Expenses	600	778
Total Current Assets	<u>5,461</u>	<u>5,453</u>
Property, Plant, and Equipment		
Buildings	1,356	1,356
Machinery and Equipment	8,567	6,254
Land	378	378
	<u>10,301</u>	<u>7,988</u>
Less Accumulated Depreciation	3,240	2,416
Total Property, Plant, and Equipment	<u>7,061</u>	<u>5,572</u>
Goodwill and Other Intangible Assets		
Goodwill	2,143	2,560
Less Accumulated Amortization	556	350
Total Goodwill and Other Intangible Assets	<u>1,587</u>	<u>2,210</u>
Total Assets	<u>\$ 14,109</u>	<u>\$ 13,234</u>
LIABILITIES and SHAREHOLDERS' EQUITY		
Current Liabilities		
Accounts Payable	1,477	1,310
Accrued Liabilities	1,587	1,453
Taxes Payable	766	577
Debt due within one year	340	602
Total Current Liabilities	<u>4,170</u>	<u>3,942</u>
Long-Term Debt	4,177	3,999
Total Liabilities	<u>8,347</u>	<u>7,941</u>
Shareholders' Equity		
Common Stock	450	450
Paid-in Capital	186	186
Retained Earnings	5,125	4,656
Total Shareholders' Equity	<u>5,762</u>	<u>5,293</u>
Total Liabilities and Shareholders' Equity	<u>\$ 14,109</u>	<u>\$ 13,234</u>