Valuation of Intellectual Property
IPSI – 2004

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
15 true / false questions	(2 points each)	30 points
3 short answer questions	(10 points each)	30 points
Total Points		100

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

Note the financial statements attached.

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. In the income approach to valuation one must consider the following:

   a. Physical deterioration
   b. A discount rate reflecting appropriate risk
   c. The amount of income
   d. Comparability with other properties

2. The "business enterprise equation," tells us that three expressions of business enterprise value are equivalent. They are:

   a. The value of the business enterprise
   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. An appraisal has been called a "virtual transaction" because:

   a. It describes a transaction that has not been made
   b. It involves forecasting
   c. Economic benefits must be estimated
   d. It is very imprecise

4. There are many reasons why a valuation of intellectual property may be required. 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 IP
   d. Quantifying business damages

5. If we are engaged to value computer software developed by a business for its own use, we are most likely to base our appraisal on:

   a. An analysis of the selling price of similar 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 original cost to develop the software.

6. If we are called upon to render an opinion of damages in a patent infringement case, we would consider:

   a. Changes in the level of the plaintiff's sales
   b. Changes in the number of product units sold by the plaintiff
   c. Changes in the price per unit of the plaintiff's products
   d. Changes in the plaintiff's SG&A expenses

7. You are valuing proprietary technology using an income approach and you have calculated the present value of what you believe are the future economic benefits of ownership. You then become aware of information that causes you to conclude that competition in the technology's market will be more intense than you originally thought. How will this new information change your appraisal?

   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. The value of a business enterprise can be estimated by:

   a. Observing the dollars of total assets on the balance sheet
   b. Adding together the values of monetary, tangible, and intangible assets
   c. Multiplying the number of common shares by the common stock price
   d. Adding the book value of stockholders' equity to the amount of current assets

9. What is the market value (in $ millions) of the FPLC, Inc. monetary assets at December 31, 2003?

   a. $5,029
   b. $1,805
   c. $1,166
   d. None of the above

10. In estimating the amount of future economic benefit that technology IP might provide, we would consider which of the following:

    a. Its effect on product quality
    b. Its potential for enhancing product prices
    c. Its potential for reducing labor costs
    d. The cost of commercializing it

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

1. An IP appraisal should consider the use of all valuation methodologies. **T F**

2. A "horizontal" 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 value of the tangible assets of FPLC, Inc. at December 31, 2003 was $7,895 million. **T F**

6. The balance sheet can sometimes provide the value of a company's intangible assets. **T F**

7. In a trademark infringement case, the court is unlikely to accept evidence of a reasonable royalty as a measure of damages. **T F**

8. In the "relief from royalty" technique, we use a royalty rate to estimate the income allocable to the subject IP. **T F**

9. The market value of the FPLC, Inc. business enterprise at December 31, 2003 was $17,425.7 million **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**

11. The common stock of a large corporation is a good investment because its owner will be first in line to receive money if the corporation becomes insolvent **T F**

12. The "time-value of money" principle tells us that (all else equal) money to be received in the near future has a higher present value than money to be received far into the future. **T F**

13. All valuations of IP require estimates and forecasts. **T F**

14. A typical royalty base is the operating income of the licensee. **T F**

15. A license controls the allocation of economic benefit between licensor and licensee. **T F**

Short Answer Questions. Write your answer in the space provided. Since space is limited, plan your answer before you write.

1. You and a colleague have the assignment to provide an opinion of the market value of the trademarks of FPLC, Inc. Your colleague asserts that the value of FPLC's trademarks could not exceed the amount of $1,922 million shown on its balance sheet for "Goodwill and Other Intangible Assets" in 2003. Do you agree or not? Explain the reasons for your position.

2. Your client, FPLC, Inc., has patented processing technology that it cannot use in its business. FPLC has decided to license it to another company. You have an assignment to appraise the technology and have decided that you will calculate the present value of the potential future royalty income to FPLC. A royalty rate of 7.5% of the licensee's net sales has been agreed upon, but your client tells you that the other license terms may take several months to complete. Your client, however, wants your opinion by the end of July. Can you provide it? Give the reasons for your answer.

3. You have been retained to provide an opinion of the market value of a "package" of technology comprised of two patents and some know-how. The client is urging you to base your opinion on the costs they incurred to develop the technology over the past two years. Would you accede to your client's wishes? Explain the reasons for your position.

FPLC, Inc.
Income Statement
($millions)

Years ended December 31,	2003	2002
Net Sales	$18,603	$16,468
Cost of Products Sold	11,920	10,532
Gross Margin	6,683	5,936
Marketing, Research, Admin. Expenses	4,188	3,678
Operating Income	2,495	2,258
Interest Expense	365	490
Other Income, net	20	51
Earnings before Income Taxes	2,150	1,819
Income Taxes	860	728
Net Earnings	$1,290	$1,091
Average Common Shares Outstanding (mill)	322.7	322.7
December 31 price ($ per share)	$ 41.00	$ 47.50

FPLC, Inc.
Consolidated Balance Sheets
($millions)

Years ended December 31,	2003	2002
ASSETS		
Current Assets		
Cash	$ 544	$ 453
Investments	11	49
Accounts Receivable	1,805	1,943
Inventories		
Materials and Supplies	788	560
Work in Process	92	87
Finished Goods	1,100	890
Deferred Income Taxes	234	221
Prepaid Expenses	455	580
Total Current Assets	5,029	4,783
Property, Plant, and Equipment		
Buildings	1,356	1,356
Machinery and Equipment	7,444	6,112
Land	378	378
	9,178	7,846
Less Accumulated Depreciation	2,567	2,416
Total Property, Plant, and Equipment	6,611	5,430
Goodwill and Other Intangible Assets		
Goodwill	2,382	2,382
Less Accumulated Amortization	460	350
Total Goodwill and Other Intangible Assets	1,922	2,032
Total Assets	$ 13,562	$ 12,244
LIABILITIES and SHAREHOLDERS' EQUITY		
Current Liabilities		
Accounts Payable	1,355	894
Accrued Liabilities	1,459	1,780
Taxes Payable	623	315
Debt due within one year	426	557
Total Current Liabilities	3,863	3,546
Long-Term Debt	4,195	4,485
Total Liabilities	8,058	8,031
Shareholders' Equity		
Common Stock	450	450
Paid-in Capital	186	186
Retained Earnings	4,867	3,577
Total Shareholders' Equity	5,504	4,213
Total Liabilities and Shareholders' Equity	$ 13,562	$ 12,244