

*Business Administration*

## Managing IP – Financial Principles IPSI – 2009

### 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. You may use a laptop computer to view the course materials on the CD. 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
<b>Total Points</b>		<b>100</b>

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. Which of the following factors affect the market value of proprietary technology (trade secrets):
  - a. The extent of protection given to maintain secrecy
  - b. The extent to which it is embodied in products or services
  - c. The existence of competing technologies
  - d. The future economic benefits derived from using the technology
  
2. If we are called upon to render an opinion of damages in a trademark infringement case, we would consider how the alleged infringement affected:
  - a. The plaintiff's sales revenue
  - b. The profits received by the defendant's sale of infringing products
  - c. The royalty that the defendant should have paid to the plaintiff
  - d. The market value of the plaintiff's trademarks infringed upon
  
3. What is the market value (in \$ millions) of the FPLC, Inc. monetary assets at December 31, 2008?
  - a. \$6,538
  - b. Unknown, based on financial statements
  - c. \$1,322
  - d. None of the above
  
4. In the "business enterprise equation," which of the following are equivalent to the value of a business enterprise:
  - a. The total assets as 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 equity
  - d. The value of net working capital plus the appraised value of tangible assets
  
5. In estimating the amount of future economic benefit that might result from the exploitation of embryonic technology, we would consider which of the following:
  - a. Its possible effect on product quality
  - b. Its potential for enhancing product prices
  - c. Its potential for reducing labor costs
  - d. The cost of commercializing it

6. When the market price of a company's common stock drops because of market conditions, which class of assets is likely to suffer the largest proportionate reduction in market value?
  - a. Monetary assets
  - b. Intangible assets
  - c. Tangible assets
  - d. All classes suffer equally
  
7. 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. The appraiser's qualifications
  
8. The so-called "Relief from Royalty" calculation:
  - a. Uses a royalty to calculate a surrogate for future economic benefit
  - b. Is useful in licensing negotiations
  - c. Is a form of the income approach
  - d. Is often used to measure damages in infringement litigation
  
9. Generally, it is safe to assume that the amount shown on an audited balance sheet for Current Assets is equivalent to their market value because:
  - a. Auditors tend to be conservative
  - b. Amounts shown on financial statements are rarely inaccurate
  - c. These assets are typically turned over in less than a year
  - d. It is likely that the amount shown will soon be realized in cash
  
10. 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. The present value of the economic benefit of selling 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.

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

1. A trademark only becomes valuable through being associated with a product or service in the marketplace.      T    F
2. FPLC's net working capital at December 31, 2007 was \$5,216 million. T    F
3. The maximum market value of a mainframe computer is the cost that would be incurred to replace it.      T    F
4. The market value of a company's common stock can be determined by observing the balance sheet amount shown for "Shareholder's Equity"      T    F
5. Generally speaking, the risk of an investing in the common stock of a small company is higher than an investment in a large company's common stock  
T    F
6. A commercial bank is a likely source of funds for the development of a new computer software product .      T    F
7. An essential element in the income approach for the valuation of IP is an estimation of its remaining economic life.      T    F
8. The acronym "IFRS" refers to new international accounting standards.  
T    F
9. Some tangible assets are more risky to own than others.      T    F
10. The interest on a certificate of deposit is both a cost of capital to the issuer and a return on investment to the individual purchasing it      T    F



3. Might the new information described in Question 2 cause you to make changes in your DCF calculations? If so, how might those changes affect your conclusion of value?

4. You are advising a client about an appropriate royalty rate she should use to license out an innovative bio-medical technology. Your client suggests that the royalty rate should be 5% because that would yield a good return on the capital she invested to develop the technology. Do you agree with your client on this point? State the reasons for your position.

5. You have been given the task of appraising process technology that is under development by your client. You have completed an income approach analysis and have a preliminary value conclusion. You telephone your client to set up a meeting to discuss your conclusion and learn that the pilot plant that was under construction when you visited the plant has been completed and the operating results were successful. Which of your discounted cash flow inputs might change as a result of this new information?

6. If your answer to Question 5. names some DCF inputs that would change, how would those changes affect your preliminary income approach conclusion?

7. You have been retained by FPLC, Inc to appraise its trademarks. The client tells you that FPLC has been in existence for 85 years and that its products are "number one" in market share. He states that the trademarks have a market value of "at least \$30 billion". Do you agree? Give the reason for your answer.

8. In the FPLC trademark valuation referred to in Question 7, how would you make use of the Goodwill amount of \$4,560 million shown on the FPLC balance sheet for December 31, 2008?

**FPLC, Inc**  
**Income Statement**  
**(\$millions)**

	Years ended December 31,	<u>2008</u>	<u>2007</u>
Net Sales		\$27,300	\$28,450
Cost of Products Sold		<u>18,200</u>	<u>18,700</u>
	Gross Margin	9,100	9,750
Marketing, Research, Admin. Expenses		<u>6,150</u>	<u>6,550</u>
	Operating Income	2,950	3,200
Interest Expense		410	460
Other Income, net		<u>32</u>	<u>40</u>
	Earnings before Income Taxes	2,572	2,780
Income Taxes		<u>1,029</u>	<u>1,112</u>
	Net Income	\$1,543	\$1,668
Average Common Shares Outstanding (mill)		321.3	321.3
December 31 price (\$ per share)		\$ 42.50	\$ 71.00

**FPLC, Inc**  
**Balance Sheets**  
**(\$millions)**

	Years ended December 31,	<u>2008</u>	<u>2007</u>
<b>ASSETS</b>			
<b>Current Assets</b>			
Cash		\$ 1,110	\$ 1,230
Investments		38	56
Accounts Receivable		2,090	2,340
Inventories			
Materials and Supplies		800	900
Work in Process		180	200
Finished Goods		1,560	1,890
Deferred Income Taxes		460	640
Prepaid Expenses		300	800
	Total Current Assets	<u>6,538</u>	<u>8,056</u>
<b>Property, Plant, and Equipment</b>			
Buildings		1,700	1,700
Machinery and Equipment		12,050	11,200
Land		800	800
		<u>14,550</u>	<u>13,700</u>
Less Accumulated Depreciation		4,400	4,100
	Total Property, Plant, and Equipment	<u>10,150</u>	<u>9,600</u>
<b>Goodwill and Other Intangible Assets</b>			
Goodwill		4,560	4,560
Less Accumulated Amortization		875	740
	Total Goodwill and Other Intangible Assets	<u>3,685</u>	<u>3,820</u>
<b>Total Assets</b>		<u><u>\$ 20,373</u></u>	<u><u>\$ 21,476</u></u>
<b>LIABILITIES and SHAREHOLDERS' EQUITY</b>			
<b>Current Liabilities</b>			
Accounts Payable		2,160	2,390
Accrued Liabilities		1,826	1,785
Taxes Payable		780	1,100
Debt due within one year		450	700
	Total Current Liabilities	<u>5,216</u>	<u>5,975</u>
<b>Long-Term Debt</b>		<u>6,700</u>	<u>7,299</u>
	<b>Total Liabilities</b>	<u>11,916</u>	<u>13,274</u>
<b>Shareholders' Equity</b>			
Common Stock		450	450
Paid-in Capital		186	186
Retained Earnings		7,820	7,565
	<b>Total Shareholders' Equity</b>	<u>8,457</u>	<u>8,202</u>
<b>Total Liabilities and Shareholders' Equity</b>		<u><u>\$ 20,373</u></u>	<u><u>\$ 21,476</u></u>