UCLA School of Law -- Corporate Law Curriculum
Law 358 -- Financial Analysis

SELF-ADMINISTERED PLACEMENT TEST

PART I -- MULTIPLE CHOICE

Instructions: For each of the following questions, **circle the best answer**.

1. Convertible bonds are best described as
   - a. debentures that the holder can exchange for common stock
   - b. bonds which are reissued with a changed price
   - c. equity and never a liability
   - d. bonds issued above par

2. Which has the priority claim on the assets of a firm?
   - a. Common stock
   - b. Preferred stock
   - c. Mortgage holder
   - d. Debenture bond holder

3. Which one of the following items would likely increase earnings per share (EPS) of a corporation?
   - a. purchase of treasury stock
   - b. declaration of a stock split
   - c. declaration of a stock dividend
   - d. an increase in the common stock shares authorized to be issued

4. All other factors being equal, a lender will demand a higher interest rate on unsecured debt than on debt secured by assets of the borrower.
   - a. True
   - b. False

5. If a company is considering issuing preferred stock, it would be reasonable to expect that a convertible preferred would need to pay a higher dividend rate than a preferred that is not convertible.
   - a. True
   - b. False

6. A low leverage ratio may indicate that a company is
   - a. well managed
   - b. financed with a relatively large amount of common shareholders' equity
   - c. financed with a relatively large number of shares of common and preferred stock
   - d. financed with a relatively large amount of debt

The following information pertains to the Hamilton Company for the year ended June 30, Year 1 and should be used to answer Questions 7, 8, and 9:

Common Shares outstanding	750,000
Stated value per share	$15.00
market price per share	$45.00
Year 1 dividends paid per share	$4.50
Primary earnings per share	$11.25
Fully diluted earnings per share	$9.00

7. The price-earnings ratio for Hamilton's common stock is
   a. 3.0 times
   b. 4.0 times
   c. 5.0 times
   d. 6.0 times

8. The market capitalization for Hamilton is
   a. $6,750,000
   b. $11,250,000
   c. $33,750,000
   d. Other

9. The dividend yield for Hamilton is
   a. 10.00%
   b. 16.67%
   c. 33.33%
   d. Other

10. A measure of long-term debt paying ability is a company's
   a. length of the operating cycle
   b. return on assets
   c. inventory turnover
   d. interest coverage ratio

11. At the end of its first year of operation, Ernst Co. reported total assets of $960,000 and total liabilities of $510,000. The company earned $210,000 during the first year, and it distributed $90,000 in dividends. What was Ernst's contributed capital?
   a. $510,000
   b. $330,000
   c. $300,000
   d. $210,000

12. Revenues measure
   a. the inflows of assets from selling goods and providing services to customers.
   b. the reduction of liabilities from selling goods and providing goods and services to customers.
   c. All sources of cash received by a firm.
   d. Both a. and b.

13. The objectives of financial reporting do not include
   a. Providing information about financial performance.
   b. Providing information on competitors' performance.
   c. Providing information for investment and credit decisions.
   d. Assessing the amount and timing of cash flows.

14. The notes to the financial statements
    a. May be excluded from the annual report at management's request.
    b. Are not necessary if you study the financial statements closely.
    c. Are an integral part of the financial statements and are included in every set of published GAAP financial statements.
    d. None of the above.

15. A liability arises when a firm
    a. Agrees to a new labor union contract which includes a 6% pay raise.
    b. Agrees to purchase 100,000 units of inventory from a supplier over the next year.
    c. Takes delivery of inventory at a discount.
    d. Both b. and c.

16. Shareholders' equity is
    a. A residual interest.
    b. An amount representing a claim on assets not required to meet the claims of creditors.
    c Equal to Total Assets minus Total Liabilities.
    d. All of the above.

17. In a time of rising prices, use of the FIFO inventory cost flow assumption rather than LIFO results in
    a. A lower of cost of goods sold and a lower ending inventory.
    b. A lower beginning inventory and a lower ending inventory.
    c. A higher cost of goods sold.
    d. A lower cost of goods sold and a higher ending inventory.

18. Which of the following is <u>not</u> a true statement concerning depreciation and amortization?
    a. Depreciation is a process of cost allocation.
    b. Depreciation records the decline in an asset’s value.
    c. Amortization of an intangible asset should be recorded over the shorter of the asset's estimated economic life or 40 years.
    d. Depreciation systematically allocates the cost of assets to the period of their use.

19. When estimating the service life of an asset, which of the following should be considered?
    a. The physical life of the asset.
    b. The functional/technological life of the asset.
    c. The firm's experience with similar assets.
    d. All of the above are true.

20. Which of the following is <u>not</u> capitalized as an intangible asset?
    a. A purchased patent.
    b. An internally developed patent.
    c. Purchased goodwill.

21. The sale of a depreciable asset resulting in a loss indicates that the proceeds from the sale were
    a. Less than current market value.
    b. Greater than cost.
    c. Greater than book value.
    d. Less than book value.

22. Which of the following are Current Liabilities?
    a. Liabilities due within the current operating cycle.
    b. Accounts payable to creditors.
    c. Short-term notes payable.
    d. All of the above are short-term liabilities.

23. At the breakeven point, a firm's variable costs plus fixed costs equal
    a. EBIT.
    b. Sales revenues.
    c. Selling and administrative costs.
    d. Zero.

24. C Corp. has current assets of $90,000 and current liabilities of $180,000. Which of the following transactions would improve C's current ratio?
    a. Refinancing a $30,000 long-term mortgage with a short-term note.
    b. Purchasing $50,000 of merchandise inventory with a short-term account payable.
    c. Paying $20,000 of short-term accounts payable.
    d. Collecting $10,000 of short-term accounts receivable.

25. For each of the following independent situations, indicate in the space provided below whether a liability is recorded on the balance sheet.
    a. A manufacturer signs an agreement to become the sole purchaser of parts from its main supplier.
    b. AAA Corporation signs a 5-year lease for office space.
    c. At year end, employees have earned wages the wages are not payable until one week after yearend.
    d. At year end, utilities of $3,000 have been used but the payment is not due for 3 weeks.
    e. An elderly customer slips in the entrance to a building owned by the Company. The Company's attorneys feel that there is an adequate defense to the ensuing lawsuit.

Answers:

Should a liability be recorded? **(Circle the correct answer)**

a. Yes No

b. Yes No

c. Yes No

d. Yes No

e. Yes No

26. Who is responsible for the proper preparation and presentation of the financial statements?
    a. Board of Directors
    b. Management
    c. External auditor
    d. Audit Committee

27. What is the purpose of private meetings between the audit committee and the auditors, both external and internal?
    a. Facilitate private evaluation of the CFO
    b. Allow the auditors to express concerns to the committee without management present
    c. Allow the audit committee to press the external auditors for lower fees
    d. Reinforce the independence of the committee to the management team

28. Illegitimate earnings management practices include:
    a. Overaccruing restructuring costs in one period and reversing those charges into income in future periods
    b. Building up various liability accounts (by accruing more expenses) in good quarters and decreasing them in bad quarters
    c. Recording revenue before the products or services have been delivered
    d. Postponing the recognition of revenue into future quarters even though the firm has completed its earnings cycle
    e. All of the above

29. Who is responsible for hiring and firing the external auditor?
    a. Chief Financial Officer
    b. Audit Committee
    c. Chairman of the Board, with the advice of the CEO
    d. The Board, having usually delegated the task to the audit committee

30. What are the three sections of the cash flow statement?
    a. Cash from operations, investing activities and financing activities
    b. Cash from operations, working capital and capital expenditures
    c. Cash from operations, asset sales and stock activity
    d. None of the above

31. There are two measures of EPS required on the income statement. What are they, and what's the difference between them?
    a. Primary EPS and Fully Diluted EPS – treasury stock being one component of the difference
    b. Primary and Basic EPS – convertible debt being the difference
    c. Basic EPS and Diluted EPS – with dilutive stock options being one component of the difference
    d. None of the above is correct

32. Cash flow per share is defined by GAAP as:
    a. Net income plus depreciation divided by shares outstanding
    b. Cash flow from operations on the cash flow statement divided by shares outstanding
    c. The change in cash in the balance sheet divided by the shares outstanding
    d. There is no GAAP definition. Analysts/companies devise one to suit their own purposes

33. The leading cause of financial reporting RESTATEMENTS is:
    a. The SEC changing the rules requiring retroactive adoption
    b. The FASB/EITF issuing a new rule
    c. Improper revenue accounting
    d. Improper inventory accounting

34. Gross margin is generally defined as:
    a. Revenue less allowances for returns and bad debts
    b. Revenues less direct operating costs, usually costs of goods sold
    c. Revenues less costs of good sold plus depreciation and amortization
    d. None of the above

35. A new CEO is hired by the Board of Directors. The new CEO is given a $250,000 relocation allowance that is repayable to the company if she leaves the company within one year of her start date.
    a. The company should record a prepaid for the amount and expense it after one year
    b. The company should amortize the expense over the first year of employment
    c. The company should expense it when paid
    d. None of the above

36. A “Statement of Management Responsibility” is:
    a. A statement in the annual report, signed by the CEO and CFO, that management is responsible for the financial statements
    b. Not required by the SEC
    c. Generally found in large company annual reports, but not as often in small company reports
    d. Strongly recommended for all companies by Financial Executives International
    e. All of the above

37. Which of the following is NOT an example of an intangible asset?
    a. Patent on unused technology/business know-how
    b. A product formula
    c. Recent improvements to major facility
    d. Goodwill

38. The audit committee of a public company is required to:
    a. Give a report that, in its opinion, the financial statements are in compliance with GAAP
    b. Meet at least four times a year
    c. Oversee all company litigation
    d. Disclose whether it considered the impact of consulting work on the auditor’s independence

PART II -- CALCULATIONS, ETC.

Instructions: For each of the following questions that require a calculation, **show the calculation**. Partial credit may be given if calculation shows some evidence of understanding of the concepts being tested.

39. Z Co. is investing in a machine with a 3-year life. The machine is expected to reduce Z's annual cash operating costs by $30,000 in each of the first 2 years and by $20,000 in year 3. Present values of an annuity of $1 at 14% and present value of $1 at 14% are:

		PV of Annuity of $1	Present Value of $1
Period	1	0.88	0.88
	2	1.65	0.77
	3	2.32	0.67

Using a 14% cost of capital, what is the present value of these future savings?

Calculation:

40. If the beginning inventory is $10,000, ending inventory is $14,000, and cost of goods sold is $89,000, what is the total amount of net purchases for the year?

41. Compute the missing balance sheet amounts in each of the three independent cases that follow:

	Case A	Case B	Case C
Noncurrent assets	$350,000	$650,000	$420,000
Shareholders' equity	(a)	300,000	280,000
Total assets	(b)	(d)	600,000
Current liabilities	450,000	200,000	(g) *
Current assets	550,000	(e)	(h) *
Noncurrent liabilities	50,000	(f)	(i)
Total liabilities and shareholders' equity	(c)	700,000	(j)

* Assume: Current assets - current liabilities = $80,000.

Answers:

(a) ______ (d) ______ (g) ______

(b) ______ (e) ______ (h) ______

(c) _______ (f) _______ (i) _______

(j) _______

42. Using accumulated depreciation to estimate asset age.

a. Machine A costs $15,000, has accumulated depreciation of $9,000 as of year-end, and is being depreciated on a straight-line basis over 10 years with an estimated salvage value of zero. How long ago was machine A acquired?

Calculation:

b. Machine B has accumulated depreciation (straight-line basis) of $8,000 at year-end. The depreciation charge for the year is $4,000. The estimated salvage value of the machine at the end of its useful life is $2,000. How long ago was machine B acquired?

Calculation:

43. The following information relates to the activities of Z Company:

($ Millions)	Year 1	Year 2	Year 3
Sales..	$7,004	$6,677	$6,830
Cost of Goods Sold	3,178	3,123	3,270
Average Inventory.......................................	387	401	430

a. Compute the inventory turnover ratio for Year 3.

b. Compute the average number of days that inventories were held in Year 2.

c. Compute the gross margin percentage in Year 1.

d. How well has Z company managed its inventory balances over the three years? Comment briefly:

____

____

____

____

____

44. ABC Company has total capital of $1,500 consisting of a long term bank loan of $1,000 and shareholders' equity of $500. The bank loan carries an interest rate of 6% and ABC Company's incremental borrowing rate is estimated at 9%. ABC pays a dividend of $.12 per share per year on its common stock which is reported in Value Line to have a beta of 1.1. The expected market rate of return is 6.0% above the current yield on U.S. Treasury 10-year bonds of 5.5%. As a result of fairly substantial tax exempt interest on muni-bonds, ABC's effective tax rate is 25%.

a. What is ABC's **cost of debt**?

b. What is ABC's **cost of equity** using the capital asset pricing model?
(CAPM = Risk-free rate of return + Beta * (Market rate of return – Risk-free rate of return)

c. What is ABC's **weighted average cost of capital**?

45. Valuation Methods

See the attached page "**INTRODUCTION TO VALUATION METHODS" (Exhibit I)** that includes the 12/31/X1 Balance Sheet, Income Statement and Other Information for X Company.

Using the data from Exhibit I, answer the following questions. (Each of the questions below is independent of the others.)

a. Consultant A suggest that a quick way to appraise X Company would be to use X Company's **unadjusted book value** at 12/31/X1. On that basis, what is the "value" of X Company?

Calculation/Answer:

b. Consultant B suggest appraising X Company based on **adjusted book value** using the fair values of balance sheet items where their fair values diverge from their book values. Using the fair values noted in Exhibit I, develop an estimate of the "value" of X Company based on its adjusted book value.

Calculation/Answer:

c. Assume that X Company is publicly traded. Consultant C suggest that the values placed on the company's securities in the public markets (the **market value approach**) are a reasonable measure of the value of the company. Using the data on X Company noted in Exhibit I, develop an estimate of the "value" of X Company based on the market for its stock as of 12/31/X1.

Calculation/Answer:

d. Assume that X Company is a private company. Consultant D looks at X Company's Income Statement for the year ended 12/31/X1 and suggest that the company be valued based on "**multiples**" of various key measures of performance. These "multiples" are based on the value that the market puts on the securities of similar or "comparable" companies that are publicly traded. Using the data on provided for X Company, develop "values" for X Company at 12/31/X1 based on the following multiples:

(1) 5 times EBITDA for the year ended 12/31/X1

Calculation/Answer:

(2) 6 times EBIT for year ended 12/31/X1

Calculation/Answer:

EXHIBIT I

SELF-ADMINISTERED PLACEMENT TEST
INTRODUCTION TO VALUATION METHODS

($000's, except per share amounts)

X Company

Balance Sheet
12/31/X1

Cash	$ 100	Accounts payable	$ 300
Accounts receivable	150	Accrued expenses	200
Inventory (LIFO)	300		
Current Assets	550	Current Liabilities	500
Land	100	Mortgage loan	300
Building, net	750	Debenture bond	100
PP&E, net	850	Long Term Debt	400
Other assets	100	Shareholders' Equity	600
	$ 1,500		$ 1,500

Income Statement
Year ended 12/31/X1

Sales	$ 1,000
Cost of goods sold	250
Gross margin	750
Selling, general and administrative exp.	100
EBITDA	650
Depreciation and amortization	50
EBIT	600
Interest expense	11
Income before income taxes	589
Income taxes (@ 34%)	200
Net Income	$ 389
Earnings per share	$ 1.30

Other Information
12/31/X1

Fair values of selected B/S items for which fair value differs from book value:

Inventory	$ 360
Land	250
Building	1,500
Mortgage loan	280
Debenture bonds	90

Market price per share	$ 13.00
Number of shares outstanding	300

Law 358 - Financial Analysis
Self-Administered Placement Test
Suggested Answers

PART I -- MULTIPLE CHOICE

1	**a**	11	**b**	21	**d**	29	**d**
2	**c**	12	**d**	22	**d**	30	**a**
3	**a**	13	**b**	23	**b**	31	**c**
4	**a**	14	**c**	24	**b**	32	**d**
5	**b**	15	**c**	25	a **No** b **No**	33	**c**
6	**b**	16	**d**		c **Yes** d **Yes**	34	**b**
7	**c**	17	**d**		e **No**	35	**c**
8	**c**	18	**b**	26	**b**	36	**e**
9	**a**	19	**d**	27	**b**	37	**c**
10	**d**	20	**b**	28	**e**	38	**d**

PART I I -- CALCULATIONS, ETC.

39. **$62,900**

The issue is to determine the present value of the future cash savings resulting from purchase of the new machine. The present value of the $30,000 savings per year for the first two years is calculated using the present value of an annuity for two periods.

Since the amount of the cash savings drops to $20,000 in year three, this amount must be calculated separately. The PV of an annuity for three periods minus the PV of an annuity for 2 periods, equals the PV of an amount to be received three years in the future. Using the “PV of Annuity of $1” information the total present value of the cash savings can be calculated as follows:

PV of $30,000 for 2 periods = $30,000 x 1.65	=	$49,500
PV of $20,000 in period 3 = $20,000 x 2.32-1.65)	=	13,400
Total present value of cash savings	=	**$62,900**

Alternatively, the "Present Value of $1" information can be used to solve this problem as follows:

PV of $30,000 in period 1	$26,400
PV of $30,000 in period 2	23,100
PV of $20,000 in period 3	13,400
Total present value of cash savings	**$ 62,900**

40. **$93,000**

Beginning Inventory	$10,000	(Given)
+ Purchases	**93,000**	**(Derived)**
= Goods Available for Sale	103,000	(Derived)
- Cost of Goods Sold	(89,000)	(Given)
= Ending Inventory	$14,000	(Given)

41.

Case A	Case B	Case C
(a) 400,000	(d) $700,000	(g) $100,000
(b) 900,000	(e) 50,000	(h) 180,000
(c) 900,000	(f) 200,000	(i) 220,000
		(j) 600,000

42. a. Acquired **6 years ago** ($15,000/10 = $1,500 depreciation per year).

b. Acquired **2 years ago** ($8,000 accum. depr./$4,000 per year).

43. a. **7.60** = Inventory Turnover, Year 3

Numerator	$3,270	Cost of Goods Sold
Denominator	$430	Average Inventory

b. **46.9** = Days Inventory Held, Year 2

Numerator	365	# of days in year
Denominator	$7.79	

$7.79 = Cost of Goods Sold of $3,123, divided by Average Inventory of $401

c. **54.6%** = Gross Margin Percentage, Year 1

Gross Margin = Sales minus Cost of Goods Sold
= $7,004 minus $3,178
= $3,826

Numerator	= $3,826 Gross Margin
Denomina	= $7,004 Sales

d. Z company experienced a decreasing inventory turnover and an increasing cost of goods sold to sales percentage. Sales declined between Year 1 and Year 2 and increased only 2.3 percent [=($6,830/$6,677) – 1] between Year 2 and Year 3. Z Company experienced difficulty moving its products during this period. It might have lowered prices in an effort to sell products, leading to an increasing cost of goods sold percentage. The decreasing inventory turnover suggest either that Z Company did not obtain the increased volume of sales it anticipated from the lower prices or that Z Company continued to produce products at its usual rate to keep its factories open and workers hired, or some combination of the two.

44. **ABC Company - Cost of Capital Calculations**

a. **Cost of Debt:**

Incremental borrowing rate	9.00%
less: Tax savings on tax-deductible interest at 25%	(2.25)
After-tax cost of debt	**6.75%**

b. **The capital asset pricing model (CAPM)**:

ROE = Risk-free Rate of Return + Beta X (Market Rate of Return - Risk-free Rate of Return)
ROE = 5.5% + 1.1 (6.0%)
ROE = 12.1%

c. **The weighted average cost of capital (WACOC):**

	Cost%	Weight	Weighted Average
Debt	6.75%	1000/1500	4.50%
Equity	12.10	500/1500	4.03
			8.53% WACOC
		or	8.5%

45. **Various methods for determining an estimated value for X Company**

a. **Book value method:**

Simply the book value of X company is the Shareholders' Equity at $600 as shown in the Balance Sheet.

b. **Adjusted book value method:**

	Fair Value	Book Value	Difference
Balance sheet items for which fair value differs from book value:			
Inventory	$360	$300	$60
Land	250	100	150
Building	1,500	750	750
Mortgage loan	280	300	20
Debenture bonds	90	100	10
Increase in book value			990
Book value:			
Shareholders' equity			600
Adjusted book value			**$1,590**

c. **Market Value Method:**

Market price per share	$13.00
x Number of shares outstanding	300
Value of equity ("Market Capitalization")	**$3,900**

d. **Use of multiples**

(1) Valuing X Company at 5 times EBITDA:

EBITDA for year ended 12/31/X1	$650
x5	x5
Value based on multiple of EBITDA	**$3,250**

(2) Valuing X Company at 6 times EBIT:

EBIT for year ended 12/31/X1	$600
x6	x6
Value based on multiple of EBIT	**$3,600**