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**I. Multiple Choice Questions (ONE best answer for each question): 60%**

Use the following to answer questions #1 through #4

WidgetWorld Co.

Balance Sheet for Dec. 31, 2001

Cash	\$50	Accounts payable	\$100
Inventory	\$150	Notes payable	100
Fixed assets	<u>\$600</u>	Long-term debt	350
		Equity	<u>250</u>
Total assets	<u>\$800</u>	Total liabilities & equity	<u>\$800</u>

Income statement for 2001

Sales	\$800
Costs	<u>600</u>
EBT	\$200
Taxes (34%)	<u>68</u>
Net income	\$132

- Suppose that current assets, costs, and accounts payable maintain a constant ratio to sales. The firm retains 40% of earnings. If the firm is producing at only 90% capacity, what is the total external financing needed if sales increase 25%?
  - \$ 1
  - \$34
  - \$41
  - \$47
  - \$94
- Suppose the firm retains 28% of earnings, while assets and costs maintain a constant percentage of sales. If the firm is producing at full capacity, what is the internal growth rate?
  - 1.9%
  - 4.8%
  - 10.1%
  - 13.5%
  - 17.3%
- Suppose that assets and costs maintain a constant ratio to sales. The firm retains 30% of

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earnings. If the firm is producing at full capacity, what is the maximum growth rate, assuming no equity sales, that will maintain a constant debt-equity ratio?

- a. 5.2%
  - b. 15.6%
  - c. 18.8%
  - d. 21.0%
  - e. 29.2%
4. Suppose the firm wishes to maintain a constant debt-equity ratio, retains 60% of net income, and raises no new equity. Assets and costs maintain a constant ratio to sales. What is the maximum increase in sales the firm can achieve?
- a. \$ 88
  - b. \$249
  - c. \$371
  - d. \$429
  - e. \$580
5. Fresh out of college, you are negotiating with your prospective new employer. They offer you a signing bonus of \$1,000,000 today or a lump sum payment of \$1,250,000 three years from now. If you can earn 7% on your invested funds, which of the following is true?
- a. Take the signing bonus because it has the lower present value.
  - b. Take the signing bonus because it has the higher future value.
  - c. Take the lump sum because it has the higher present value.
  - d. Take the lump sum because it has the lower future value.
  - e. Based on these numbers, you are indifferent between the two.
6. You are choosing between investments offered by two different banks. One promises a return of 10% for three years using simple interest while the other offers a return of 10% for three years using compound interest. You should:
- a. Choose the simple interest option because both have the same basic interest rate.
  - b. Choose the compound interest option because it provides a higher return.
  - c. Choose the compound interest option only if the compounding is for monthly periods.
  - d. Choose the simple interest option only if compounding occurs more than once a year.
  - e. Choose the compound interest option only if you are investing less than \$5,000.
7. Which of the following statements is true?

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- a. NPV should never be used if the project under consideration has nonconventional cash flows.
  - b. NPV is similar to a cost/benefit ratio.
  - c. If the financial manager relies on NPV in making capital budgeting decisions, she acts in the shareholders' best interests.
  - d. NPV can normally be directly observed in the marketplace.
  - e. IRR is generally preferred to NPV in making correct capital budgeting acceptance decisions.
8. Project selection ambiguity can arise if one relies on IRR instead of NPV when:
- a. The first cash flow is negative and the remaining cash flows are positive.
  - b. Projects are independent of one another.
  - c. A project has more than one NPV.
  - d. The profitability index is greater than one.
  - e. Project cash flows are not conventional.
9. Rank the following decision rules from worst to best in terms of their overall usefulness in capital budgeting analysis.
- I. Profitability index
  - II. Payback
  - III. IRR
- a. III, I, II
  - b. II, III, I
  - c. II, I, III
  - d. I, III, II
  - e. III, II, I
10. A firm is considering a project which would increase accounts receivable by \$10,000, accounts payable by \$55,000, and inventory by \$30,000. Which of the following is true?
- a. Net working capital has increased.
  - b. Sales will increase.
  - c. Payments to creditors will slow.
  - d. Net working capital has decreased.
  - e. This is a net use of cash.

(背面仍有題目,請繼續作答)

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11. Which of the following activities would decrease net working capital the most?
- Financing a land purchase for a new manufacturing plant via a sale of new stock.
  - Adopting a more lax credit policy on sales.
  - Decreasing the number of product lines your firm carries.
  - Adopting a production schedule that produces goods only after a customer order is received.
  - Using long-term bank credit to reduce payables.
12. You have put together a set of cash flow forecasts for a project and have found, on your first calculation, that the NPV is negative. You should:
- Reject the project because you are certain to decrease shareholder wealth.
  - Accept the project because you are certain to increase shareholder wealth.
  - Re-assess the project after consideration of any managerial options that might be present.
  - Try to assess the degree of forecasting risk that exists with the project.
- I and II only
  - I, II, and IV only
  - I, III, and IV only
  - II, III, and IV only
  - III and IV only
13. Which of the following statements regarding NPV analysis is false?
- NPV calculations depend critically on cash flow projections.
  - NPV calculations are only as good as the information used in its calculation.
  - Negative NPV projects should be examined for potential option effects before being dismissed out-of-hand.
  - Positive NPV projects that have relatively low levels of fixed costs should be more heavily scrutinized than projects with relatively high levels of fixed costs.
  - NPV calculations will lead to incorrect decision-making if the wrong discount rate is used.
14. All else the same, if a firm revises its production process to use less labor and more machinery, the firm will have:
- An increased capital intensity.
  - A decreased accounting break-even.
  - An increased degree of operating leverage.
  - Smaller changes in OCF for a given change in sales quantity.

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- a. I and III only
  - b. II and IV only
  - c. I, II, and III only
  - d. II, III, and IV only
  - e. I, II, III, and IV
15. In July, you purchase a September 20 put option contract on a common stock. You:
- a. Should exercise the option at expiration if the price of the stock is \$30.
  - b. Have the right to sell 100 shares of the stock for \$20 per share at anytime prior to the September expiration.
  - c. Have given the seller the right to buy a share of the stock at \$20 sometime prior to the September expiration.
  - d. Have the right to buy a share of the stock at \$20 sometime prior to the September expiration.
  - e. Will have a worthless option in August if the stock price is \$30 at that time.
16. Which of the following statements is false?
- a. The upper bound on the price of a call option on stock is the price of the stock itself.
  - b. The lower bound on the price of a call option on stock could be zero.
  - c. To prevent arbitrage, the value of the call today must be less than the stock price minus the exercise price.
  - d. At expiration, the price of a call option is its intrinsic value.
  - e. After expiration, an option on stock is worthless.
17. Which of the following is false regarding the differences between a warrant and a call option?
- a. Call options typically have shorter maturities than warrants.
  - b. Call options are issued by individuals while warrants are issued by firms.
  - c. Call options have finite expirations and warrants usually do as well.
  - d. Call options (when exercised) do not affect the share price and neither do warrants.
  - e. Call options do not affect the number of shares outstanding while warrants (when exercised) increase the number of shares outstanding.
18. Which of the following is true if interest rate parity exists between two nations?
- I. The interest rates in both countries are equal.
  - II. Significant covered interest arbitrage opportunities exist between the two nation's

（背面仍有題目，請繼續作答）

編號：F 358 系所：財務金融研究所

科目：財務管理

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currencies.

III. The interest rate differential between the two countries is equal to the percentage difference between the forward exchange rate and the spot exchange rate.

- a. I only
- b. II only
- c. III only
- d. I and II only
- e. II and III only

19. Which of the following describes a short-run exposure of exchange rate risk?

- I. Your firm has large oil drilling and mining interests in one of the former Soviet republics. A new government with a distinct anti-American agenda unexpectedly wins a majority in that country's new parliament.
- II. Your firm's wholly-owned Australian subsidiary is expanding rapidly and earning increased profits; meanwhile, the U.S. dollar has been strengthening dramatically against the Australian dollar for some time now. Your firm reports consolidated financial statements across all its worldwide operations and subsidiaries.
- III. You import computer chips from Korea for use in your U.S.-manufactured cellphone handsets. You agree on the terms of sale and the number of chips to be purchased 90 days in advance, but you do not pay the Korean contractor until the chips have actually been delivered to your U.S. plant. You invoice your transaction in the Korean currency.

- a. I only
- b. II only
- c. III only
- d. I and II only
- e. I, II and III

20. The 1-year forward rate for Swiss francs is SF9.45 per \$1.00. The rate on a risk-free Swiss asset is 6%. The spot rate is SF10.20 per \$1.00. Approximately what rate can you earn by investing in the U.S. risk-free security for 1 year?

- a. 8.68%
- b. 10.23%
- c. 11.79%
- d. 12.50%
- e. 14.41%

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## II. Calculation Questions: 40%

1. (25%) The common stock of the C.A.L.L. Corporation has been trading in a narrow range around \$50 per share for months, and you believe it is going to stay in that range for the next three months. The price of a three-month put option with an exercise price of \$50 is \$4, and a call with the same expiration date and exercise price sells for \$7.

a. What would be a simple option strategy using a put and a call to exploit your conviction about the stock's price's future movement? (5%)

b. What is the most money you can make on this position? How far can the stock price move in either direction before you lose money? (10%)

c. How can you create a position involving a put, a call, and riskless lending that would have the same payoff structure as the stock at expiration? The stock will pay no dividends in the next three months. What is the net cost of establishing that position now? (10%)

2. (15%) An exporter in the United States has receivables in Mexican pesos due two months from now. He wishes to hedge this exposure. How can he hedge the money in the foreign exchange and/or money market? What is the hedging cost? Assume the following market rates:

Two-month U.S. dollars 15.00%-15.25%

Two-month Mexican pesos 30.00%-31.00%

Spot rate for US\$1 Mex\$26.00-Mex\$26.10

Two-month outright US\$1 Mex\$26.60-Mex\$26.75