The Financial Statements

Financial Statements are the business documents that companies use to report the results of activities to various external user groups.

Accounting is an information system. It measures business activities, processes date into reports (including financial statements) and communicates results to decision makers. Accounting is the "language of business"

Users of Accounting Information

- Individual
- Investors and Creditors
- Regulatory Bodies
- Nonprofit Organizations

Financial Accounting

Provides information for decision makers outside the entity.

- Investors
- Creditors
- Government agencies
- And the public

Managerial Accounting

Provides information for internal users, management

Organizing a Business

A **proprietorship** is a single owner.

Partnership
Two or more parties are co-owners and each owner is a partner.

Limited Liability Company (LLC)

One in which the business (not the owner) is liable for the company's debt.

Corporation

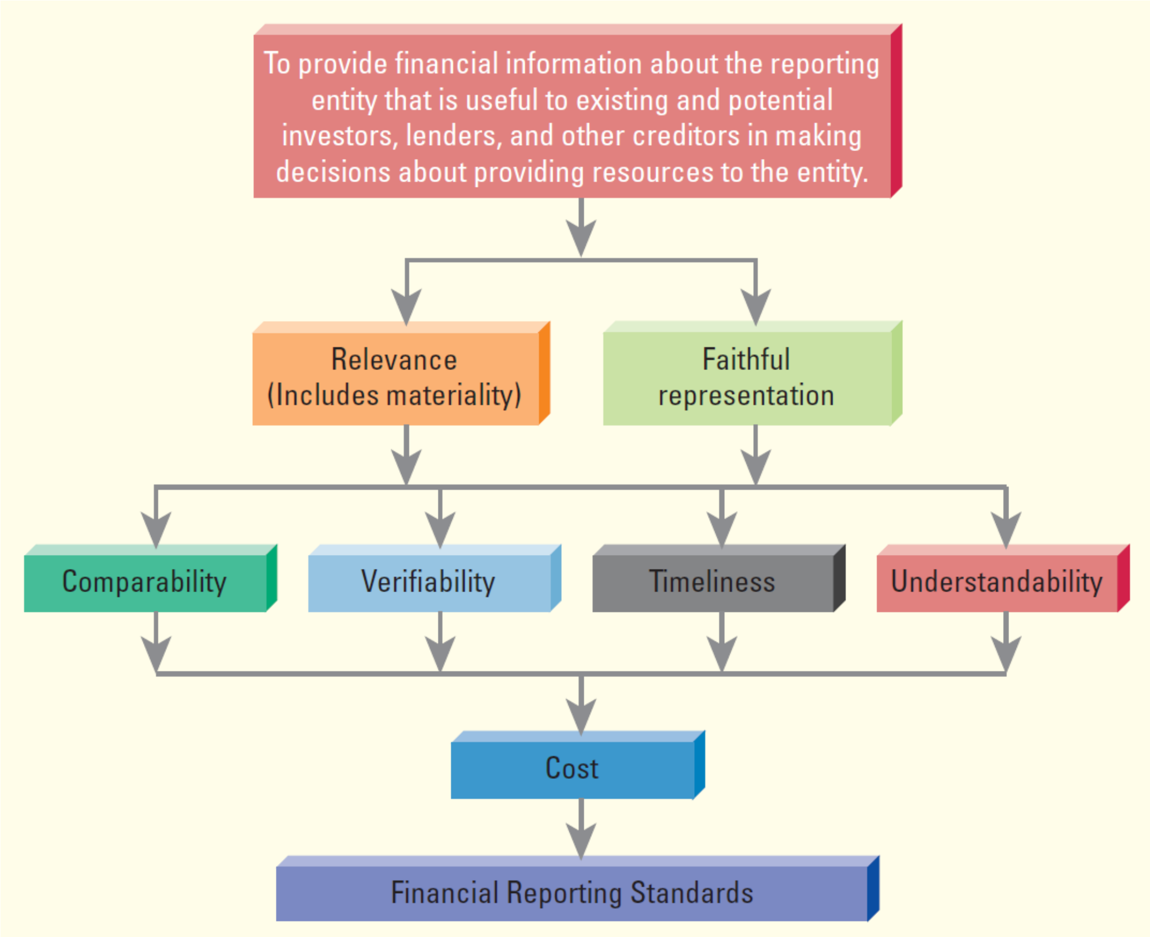
Is a business owner by stockholder or shareholders who own stock (common or preferred) representing shares of ownership in that corporation.

GAAP-Generally Accepted Accounting Principles
FASB- Financial Accounting Standards Board
IASB- International accounting Standards Board

Information should be useful must have fundamental qualitative characteristics including

- Relevance and faithful representation.

Relevant
Making a difference in decisions making
Material important enough to make a an informed user act differently if omitted.



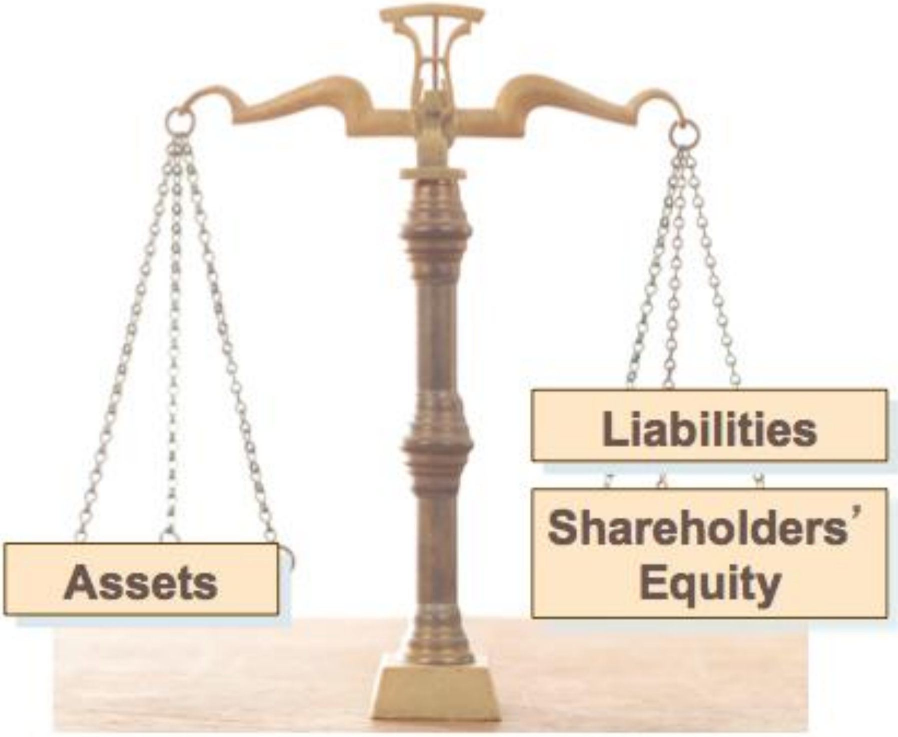
Entity Assumption: Organization stands apart from other organizations and individuals as a separate economic unit

Continuity (Going-Concern) Assumption: Entity will remain in operation for the foreseeable future

Historical Cost Principle: Assets should be recorded at their actual cost

Stable-Monetary-Unit Assumption: Effect of inflation is ignored, based on the assumption that the dollar's purchasing power is relatively stable

The Accounting Equation
ALOE
Assets = Liabilities + Owners Equity



Assets

Economic resources that are expected to produce a benefit in the future

Current assets are expected to be converted to cash, sold or consumed during the next 12 months or business operations cycle. Whichever is longer.

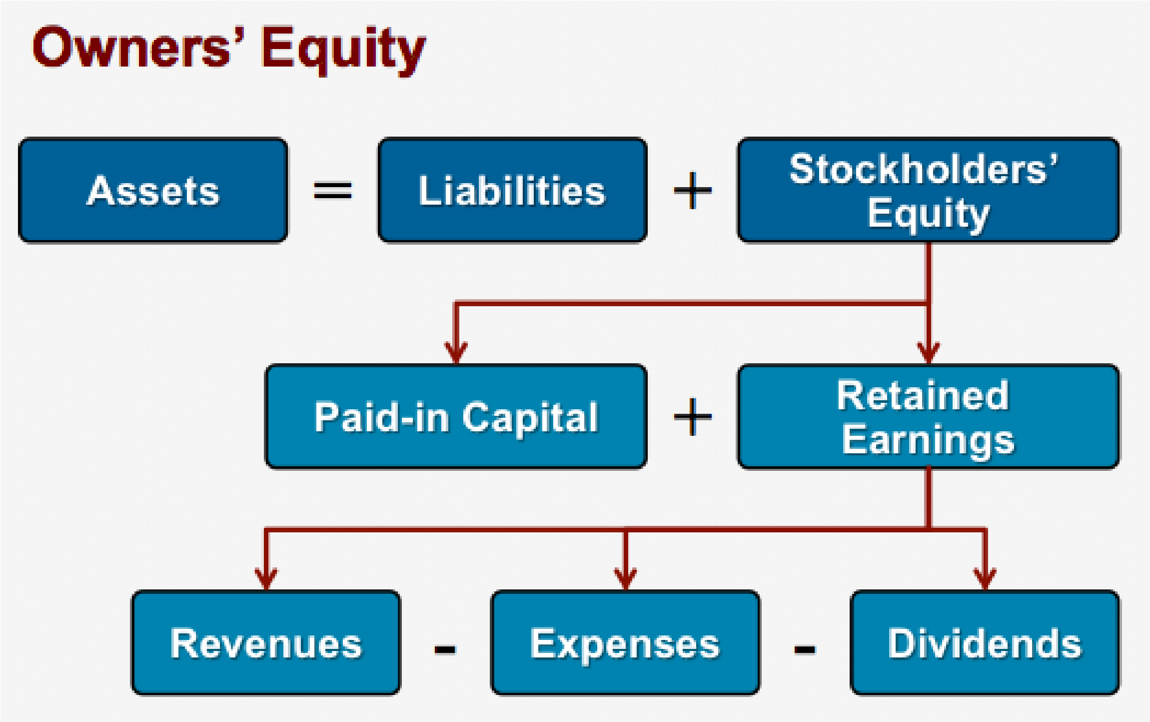
Liabilities

Outside claims. Debts payable to creditors

Owners' Equity or Shareholders Equity

Insider claims.

Owner's Equity



The Income Statement or Statement of Operations reports
Revenues minus expenses to equal Net Income.

The Statement of Retained Earnings

Shows What a company did with it's Net Income.
Retained Earnings is the portion of net income that has been kept by t he company.

The Balance Sheet or Statement of Financial Position reporting

- Assets,
- Liabilities
- And Stockholders Equity
- Or the accounting equation,

The Statement of Cash Flow

The Statement of Cash Flows reports three types of activities

- **Operating:** Cash flows from selling goods and providing services to customers
- **Investing:** Cash flows from the purchase and sale of long-term assets
- **Financing:**

    Borrowing and repayment of borrowed funds

    Equity transactions, such as issuing stock, paying dividends, and repurchase of company stock

INTERNAL CONTROLS

A **system of internal control** is an organizational plan designed to safeguard assets, encourage adherence to company policies, ensure accurate and reliable accounting records, and promote operational efficiency.

A. The **company's organizational plan and procedures** should help the business achieve operational efficiency and eliminate waste.

B. The business should use **methods and procedures** that safeguard assets, monitor the authorization of transactions, and ensure the reliability of the financial records.

A. Characteristics of an effective system of internal control include:

1. **Competent, reliable, and ethical personnel:** Attract top quality employees, train them well, and rotate them when needed.
2. **Assignment of responsibilities:** Each duty is clearly defined and assigned to an individual who is given the responsibility of carrying out the task.
3. **Proper authorization:** An organization generally has a written set of procedures. Tasks that fall outside this set of procedures may be performed only if properly authorized.
4. **Separation of duties:** By **dividing responsibilities** for transactions, a business limits the chances for fraud and promotes accuracy of the accounting records. Separation of duties may be divided into four parts, several of which are illustrated in the organizational chart in Exhibit 4-2.
    a. Separation of operations from accounting
    b. Separation of the custody of assets from accounting
    c. Separation of the authorization of transactions from the custody of related assets
    d. Separation of duties within the accounting function

5. **Internal and external audits:** Internal and external auditors identify weaknesses in internal control.
    a. An **audit** is an examination of the company's financial statements and the accounting systems, internal controls, and records that produced them.
    b. Internal auditors are employees.
    c. External auditors are accounting firms hired by a business to objectively examine its financial statements and the accounting systems, internal controls, and records that produce the statements.

6. Pre-numbering of **documents and records:** A gap in sequence calls attention to a missing document or record.

7. **Electronic and other controls:** Some examples of these include:
    a. **Encryption** transforms data by a mathematical process into a form unreadable except with a decryption key.
    b. **Firewalls** limit access to hardware, software, or data to persons within a network.
    c. **Intrusion detection devices** are electronic monitors that identify unauthorized entry.

BANK RECONCILIATION STATEMENT

A bank reconciliation is prepared in this format:

Balance per bank	$X	Balance per books			$X
Add: Deposits in transit	X	Add: Bank collections/EFT	$X		
	X	Interest revenue	X		X
Less: Outstanding checks	(X)				X
		Less: Service charges	$X		
		EFT	X		
		NSF checks	X		X
Adjusted bank balance	$X	Adjusted book balance			$X

Note: Errors can affect either the book or bank balance and may either be added or deducted. The side that makes the error is adjusted.

A. **Journal entries** are required for every adjustment to the **book's** balance. Merely entering adjustments on a reconciliation does not change account balances. The bank will make the entries for the adjustments to the bank's balance.

B. The amount of **cash listed on the balance sheet** is the adjusted book balance from the reconciliation.

C. Managers and owners use the bank reconciliation to help maintain control over cash.

Review Sheet
ACCT 201 - Accounting Principles I

Ch. 8. Liabilities

Current Liabilities

Current Liabilities are the company's debts that are due within one year or the company's operating cycle, whichever is longer.

Examples of Current Liabilities are:

- Accounts Payable (owed for inventories and services purchased on credit)
- Sales Tax Payable (sales tax collected from customers and due to state and local governments)
- Salaries and Wages Payable (yearly and hourly employees' payroll expenses owed but not paid at the end of the period)
- Interest Payable (interest expense accrued on notes payable but not paid at the end of the period)
- Employee-Income Tax and FICA Tax Payable (withheld from paychecks and due to state and local governments)
- Unearned Revenues (cash received in advance from customers but goods or services not provided yet)
- Current Portion of Long-Term Debt (amount of principal of long-term debt that is due within the current period)

Long-Term Liabilities

Long-Term Liabilities are the company's debts that are not current liabilities.

Examples of Long-Term Liabilities are:

- Notes Payable (long-term loans from banks or long-term promissory notes)
- Bonds Payable (a kind of long-term notes payable sold to the public)

    - If the stated interest rate on the bond is equal to market interest rate, the bond is issued at par (face value).
    - If the stated interest rate on the bond is less than market interest rate, the bond is issued at a discount (less than face value).
    - If the stated interest rate on the bond is greater than market interest rate, the bond is issued at a premium (greater than face value).

CHAPTER 1
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. Which of the following statements is false?
   - A. Accounting is the information system that measures business activities, processes that information into reports, and communicates the results to decision makers.
   - B. Financial statements report financial information about a business entity to decision makers.
   - C. Owners of a corporation are personally liable for the debts of the corporation.
   - D. The purpose of financial accounting is to provide information to people outside of the entity, such as investors and creditors.

2. Walter owns and operates a fishing tackle shop. Walter needs to borrow money to expand; therefore, he prepared financial statements to present to his banker. Walter obtained appraisals of all the assets of the business to ensure that the balance sheet would reflect the most current value of the assets. Walter has violated which of the following principles or concepts?
   - A. Reliability principle
   - C. Going-concern principle
   - B. Cost principle
   - D. Stable-monetary-unit concept

3. Which of the following is true?
   - A. Owners' Equity - Assets = Liabilities
   - B. Assets – Owners' Equity = Liabilities
   - C. Assets + Liabilities = Owners' Equity
   - D. Liabilities = Owners' Equity + Assets

4. G. Harrison Inc. experienced a decrease in total assets of $4,000 during the current year. During the same year, total liabilities decreased $12,000. If dividends for the year were $20,000 and the owners made no additional investment, how much was net income?
   - A. $28,000
   - B. $12,000
   - C. $36,000
   - D. $4,000

5. Which of the following statements is true?
   - A. The income statement reports all changes in assets, liabilities, and stockholders' equity of the business during the period.
   - B. Revenues and expenses are reported only on the balance sheet.
   - C. The statement of cash flows reports cash flows from three types of business activities--cash receipts, cash payments, and investing.
   - D. On the statement of retained earnings, the net income for the period is added to the beginning balance of retained earnings.

Table 1-1

The following information is taken from the accounting records after the first period of operation

Accounts payable	$ 18	Service revenue	76
Cash	50	Equipment	20
Common stock	400	Retained earnings (ending balance)	?
Dividends	30	Accounts receivable	8
Land	200	Office supplies	10
Utilities expense	4	Salary expense	16
Cash receipts:		**Cash payments:**	
Collections from customers	68	Acquisition of land	120
Issuance of stock to owners	140	Dividends	30
		To employees	12
		Purchase of equipment	10

6. Total assets are:
   A. $300.
   B. $362.
   C. $288.
   D. $316.

7. Net income is:
   A. $56.
   B. $26.
   C. $240.
   D. $76.

8. Cash flow from financing activities is:
   A. $(170).
   C. $110.
   B. $(110).
   D. $(30).

9. Which of the following statements is **not** true?
   A. Current assets include cash, accounts receivable, and inventory.
   B. Stockholders' equity is comprised of contributed capital and retained earnings.
   C. The income statement shows revenues and equity accounts.
   D. The balance sheet must be completed after the income statement.

10. On which financial statement can the ending balance in retained earnings be found?
    A. Balance sheet
    B. Income statement
    C. Statement of retained earnings
    D. Both A and C

TEN-MINUTE QUIZ

Circle the letter of the best response.

1. Which of these is (are) an example of an asset account?
   - A. Service Revenue
   - B. Dividends
   - C. Accounts Receivable
   - D. All of the above are assets.

2. Thomas Company received $1,200 on account. The effect of this transaction on Thomas' accounting equation is to:
   - A. decrease liabilities and increase stockholders' equity.
   - B. increase assets and decrease liabilities.
   - C. have no effect on total assets.
   - D. increase assets and increase stockholders' equity.

3. Which of these statements is false?
   - A. Increases in liabilities and decreases in revenues are recorded with a debit.
   - B. Increases in assets and decreases in stockholders' equity are recorded with a debit.
   - C. Increases in both assets and expenses are recorded with a debit.
   - D. Decreases in assets and increases in liabilities are recorded with a credit.

4. Note Payable has a normal beginning balance of $40,200. During the period, new borrowings total $100,000 and payments on loans total $20,600. Determine the correct ending balance in Note Payable.
   - A. $39,200, debit
   - B. $119,600, credit
   - C. $39,200, credit
   - D. None of the above

5. Which of these statements is correct?
   - A. The account is a basic summary device used in accounting.
   - B. A business transaction is recorded first in the journal and then posted to the ledger.
   - C. In the journal entry, all accounts that are increased are listed first and then all accounts that are decreased are listed next.
   - D. Both A and B are correct.

6. Which of these accounts has a normal debit balance?
   - A. Utility Expense
   - B. Dividends
   - C. Service Revenue
   - D. Both A and B

7. The July 31 trial balance reports a debit balance of $5,000 for Cash. During the month, one entry for $40 had been posted in error as a credit to Cash. What is the correct balance of Cash at July 31?
   A. $5,000
   B. $5,040
   C. $4,960
   D. Cannot determine from the information given

8. The beginning Cash account balance is $38,700. During the period, cash disbursements totaled $144,600. If ending Cash is $51,200, then cash receipts must have been:
   A. $105,900.
   B. $234,500.
   C. $132,100.
   D. $157,100.

9. Use the following selected information for the Perriman Company to calculate the correct credit column total for a trial balance:

Accounts receivable	$ 27,200
Accounts payable	15,900
Building	359,600
Cash	55,600
Common stock	155,000
Dividends	4,800
Insurance expense	1,800
Retained earnings	133,800
Salary expense	52,500
Salary payable	3,600
Service revenue	193,200

   A. $365,600
   B. $304,700
   C. $501,500
   D. $506,300

10. The journal entry to record the performance of services on account for $1,200 is:

A.	Accounts Payable	1,200	
	Service Revenue		1,200
B.	Accounts Receivable	1,200	
	Service Revenue		1,200
C.	Cash	1,200	
	Service Revenue		1,200
D.	Service Revenue	1,200	
	Accounts Payable		1,200

CHAPTER 3
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. The Smallwood Corporation began operations on January 1, 20X5. During 20X5, Smallwood collected $92,000 for management services; $12,000 of the amount collected was from a contract to provide management services for one year beginning November 1, 20X5. An additional $20,000 of management services had been earned but not collected by year end. The amount of revenue that should be reported for 20X5 under the cash basis and accrual basis is:

	Cash Basis	**Accrual Basis**
A.	$92,000	$80,000
B.	$80,000	$100,000
C.	$100,000	$112,000
D.	$92,000	$102,000

2. Which of the following statements is false?
   A. The time-period concept requires companies to prepare financial statements at least quarterly.
   B. According to the revenue principle, revenue should be recorded when a product or service has been delivered to the customer.
   C. When possible, expenses that can be linked to a specific revenue should be deducted from revenue in the same period that the revenue is recorded.
   D. The time-period concept, the revenue principle, and the matching principle all support the practice of preparing adjusting entries.

3. The Armstead Company has $1,800 worth of office supplies on hand at the beginning of the year. Purchases of office supplies totaled $4,000 during the year. A year-end inventory revealed $2,100 worth of office supplies still on hand. Which of the following is the correct adjusting entry for supplies?

A.	Supplies	2,100	
	Cash		2,100
B.	Supplies Expense	5,800	
	Supplies		5,800
C.	Supplies Expense	3,700	
	Supplies		3,700
D.	None of the above is the correct adjusting entry.		

4. On November 1, 20X5, the Jernigan Company paid $4,800 for a one-year insurance policy. On December 31, 20x5, the adjusting entry would include:
   A. a debit to Insurance Expense, $4,800.
   B. a credit to Insurance Payable, $800.
   C. a credit to Prepaid Insurance, $800.
   D. a debit to Insurance Expense, $4,000.

5. Which of these could **not** be a closing entry?

A.	Salary Expense	XX	
	Retained Earnings		XX
B.	Retained Earnings	XX	
	Dividends		XX
C.	Service Revenue		XX
	Retained Earnings		XX

D. All of the above could be a closing entry.

6. What type of account is Unearned Revenue (asset, liability, stockholders' equity, revenue, or expense) and what is its normal balance, respectively?
   A. Asset, debit
   B. Expense, debit
   C. Liability, credit
   D. Revenue, credit

7. Which of the following transactions is considered an accrued expense?
   I. Salaries that employees have earned but not received
   II. Management fees received in advance
   III. Newspaper advertising that has been purchased but has not yet appeared in the newspaper
   A. I only C. III only
   B. II only D. Both I and II

8. Which of the following accounts is **not** considered a current asset?
   A. Accounts Receivable C. Inventory
   B. Equipment D. Prepaid Rent

9. Which is the following accounts is **not** considered a current liability?
   A. Accounts Payable
   B. Accrued Interest Payable
   C. Mortgage Payable
   D. Unearned Subscription Revenue

10. The balance sheet for Arnold's Cleaners appears below:

Arnold's Cleaners
Balance Sheet
December 31, 20X5

Assets			**Liabilities**	
Cash		$400	Accounts payable	$300
Accounts receivable		460	Salary payable	20
Supplies		10	Unearned revenue	120
Prepaid insurance		60	Note payable (due in 5 years)	400
Equipment	$400		Total liabilities	840
Less: Acc. depr.	40	360	**Stockholders' Equity**	
Land		400	Common stock	370
			Retained earnings	480
			Total stockholders' equity	850
Total assets		$1,690	Total liabilities and stockholders' equity	$1,690

Arnold's current ratio for 20X5 is
   A. 2.11
   B. 2.09
   C. 2
   D. 1.52

CHAPTER 4
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. Which of the following would **not** be found in a company that has an effective system of internal controls?
   A. All checks and receipts are prenumbered and missing numbers are investigated.

   B. Every employee is required to take a regular vacation time each year while another employee performs her job.

   C. One employee is responsible for actual physical control over the inventory while a different employee enters inventory information in the computer.

   D. The person who signs checks and makes deposits also reconciles the bank statement each month.

Table 4-1
Use the following code letters to indicate where the items described in questions 2 – 5 would appear on the July bank reconciliation for Rankin Company:

A. Add to the bank statement balance
B. Deduct from the bank statement balance
C. Add to the book balance
D. Deduct from the book balance
E. Does not appear on the bank reconciliation

2. ______ Refer to Table 4-1. The bank statement included an EFT debit on July 17 for $700 representing Rankin's July insurance payment to EverReady Car Insurance.

3. ______ Refer to Table 4-1. Included on the bank statement was a deduction for $40 for a safe deposit box; Rankin does not have a safe deposit box at the bank.

4. ____ Refer to Table 4-1. The bank reported $38 of interest earned by the account during July.

5. ____ Refer to Table 4-1. A check written to Connally Supplies Company in June for $420 was not among the checks returned by the bank in either the June or the July bank statement.

6. While preparing the bank reconciliation for March, the accountant for Oliver & Company discovered that a $694 check in payment of an account payable had been entered incorrectly in the journal as $649. Which of the following statements is true?
   A. An adjusting entry must be made to debit Accounts Payable and credit Cash for $35.
   B. An adjusting entry must be made to debit Cash and credit Accounts Payable for $35.

C. The bank should be notified and the bank balance corrected by adding $35.
D. No adjusting entry is needed for this reconciling item because it appears on the bank side of the reconciliation.

7. Which of the following statements is true?
   A. Journal entries are required for every adjustment to the books' balance.
   B. Preparing a bank reconciliation changes the cash balance on the books.
   C. A bank reconciliation has no effect on control over cash.
   D. Two of the above are true.

8. Good internal control over cash receipts would include which of the following?
   A. A cash register receipt is given to every customer; each sale is rung up on the cash register.
   B. All incoming mail is opened by the mailroom employee who prepares a tape of all cash receipts received each day.
   C. A fidelity bond covers all employees who handle cash.
   D. All of the above are good internal controls over cash receipts.

9. Which of the following is **not** an element of internal control over cash payments?
   A. Checks are prenumbered in sequence to account for all payments and disbursements.
   B. The purchasing department is responsible for signing all checks in payment of purchases of merchandise.
   C. External auditors examine internal controls over cash payments to determine whether the accounting system produces accurate measurements for items related to cash disbursements.
   D. Paid invoices are punched, stamped, or otherwise voided to prevent duplicate payment.

10. Wolford Company's policy is to begin and end each month with $5,000 cash on hand. During October, management expects to collect $90,600 from customers and $200 in interest revenue on investments. Expected payments are $58,200 for the purchase of inventory and $19,800 for operating expenses. Debt repayment for October will total $8,700. Dividends paid each month total $2,500. How much cash, if any, will Wolford Company have to borrow in order to maintain the required $5,000 cash balance?
   A. $1,600
   B. $3,400
   C. - $0 -
   D. None of the above

CHAPTER 5
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. Which of the following statements about trading investments is false?
   A. The purpose of a trading investment is to sell it for more than its cost.
   B. Trading investments are reported after receivables on the balance sheet.
   C. Trading securities are reported on the balance sheet at their market value.
   D. A realized gain or loss usually occurs when the investor sells an investment.

2. Net accounts receivable is calculated as:
   A. sales less sales discounts.
   B. accounts receivable plus the allowance for uncollectible accounts.
   C. accounts receivable less the allowance for uncollectible accounts.
   D. accounts receivable less the uncollectible-account expense.

3. When the allowance method is used, the entry to write off a customer's account:
   A. increases uncollectible-account expense.
   B. has no effect on net accounts receivable.
   C. decreases net accounts receivable.
   D. increases the balance of the allowance for uncollectible accounts.

4. The journal entry to record the uncollectible-account expense under the allowance method is:

A.	Allowance for Uncollectible Accounts	XX	
	Uncollectible-Account Expense		XX
B.	Uncollectible-Account Expense	XX	
	Accounts Receivable	XX	
C.	Uncollectible-Account Expense	XX	
	Allowance for Uncollectible Accounts	XX	
C.	None of the above		

5. Under the direct write-off method:
   A. accounts receivable are reported at their full amount.
   B. the expense is not matched against the revenue in the same period.
   C. the direct write-off method is only acceptable when the amount of bad debts is immaterial.
   D. All of the above

Table 5-1

On December 31, 20X5, Troy Inc., had the following accounts and balances (before adjustment) on its books:

Accounts Receivable	$ 80,000	
Allowance for Uncollectible Accounts	2,000	(credit balance)
Net Sales	500,000	

6. Refer to Table 5-1. Troy estimates that its Uncollectible-Account Expense is 2% of Net Sales. The Uncollectible-Account Expense for 20X5 should be:

A.	$10,000.	C.	$8,000.
B.	$12,000.	D.	$1,600.

7. Refer to Table 5-1. Troy uses an aging schedule to estimate its uncollectible accounts. The aging schedule and the percentage of each category that is estimated to be uncollectible is given below:

Current	$40,000	2%
1-30 days past due	30,000	10%
Over 30 days past due	10,000	40%

The balance in the Allowance for Uncollectible Accounts after adjustment should be:
A. $2,000. B. $5,800. C. $7,800. D. $9,800.

8. Martinez Co. paid Acme Co. for merchandise with a $2,000, 90-day, 8% note dated April 1. If Martinez pays off the note at maturity, what entry should Acme make on its books at that time?

A.	Cash	2,160	
	Notes Receivable		2,160
B.	Notes Payable	2,000	
	Interest Expense	160	
	Cash		2,160
C.	Cash	2,040	
	Notes Receivable		2,000
	Interest Revenue		40
D.	Cash	2,160	
	Notes Receivable		2,000
	Interest Revenue		160

9. Which accounts would be debited and credited in the entry to record accrued interest on a note receivable?

	Debit	**Credit**
A.	Interest Revenue	Interest Receivable
B.	Interest Receivable	Interest Revenue
C.	Cash	Interest Revenue
D.	Interest Receivable	Cash

10. Given the following information, compute the quick ratio.

Salary Payable	$ 4,000	Trading investments	$ 10,000
Inventory	100,000	Equipment	96,000
Accounts Receivable	42,000	Cash	14,000
Supplies	8,000	Accounts Payable	62,000

A.	1	C.	1.2
B.	2.5	D.	2.45

CHAPTER 6
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. Teresa Company began the period with 10 units in inventory, costing $5 each. During the period the company purchased 100 units at a cost of $5 each. At the end of the period there were 13 units left on hand. What is the correct amount that should appear on the income statement for the period and on the balance sheet at the end of the period?

	Income Statement	Balance Sheet
A.	Cost of goods sold, $500	Inventory, $550
B.	Inventory, $485	Cost of goods sold, $550
C.	Cost of goods sold, $65	Inventory, $485
D.	Cost of goods sold, $485	Inventory, $65

2. Meridian Corp. has $10,000 of goods on hand at August 31, 20X6. Cost of goods sold averages 40% of sales revenue. Sales for the month of September are budgeted to be $143,000. If ending inventory at the end of September is budgeted to be $10,500, what amount of inventory will Meridian's managers need to purchase during September in order to meet this goal?
   A. $57,700
   B. $86,300
   C. $56,700
   D. Cannot be determined from the information given

Table 6-1

Consider the following data for Reed Company for the current year:

	#Units	Unit Cost	Total
Beginning inventory	55	$10	$550
Purchase February 4	22	12	264
Purchase May 15	20	13	260
Purchase October 20	48	15	720

Sales during the year, 84 units @ $30 each.

3. Refer to Table 6-1. What is the average cost per unit?
   A. $12.33 C. $12.50
   B. $12.37 D. $12.48

4. Refer to Table 6-1. What is the cost of ending inventory, assuming the LIFO method is used?
   A. $889 C. $622
   B. $905 D. $1,172

5. Refer to Table 6-1. What is cost of goods sold, assuming the FIFO method is used?
   A. $889 C. $622
   B. $905 D. $1,172

6. Refer to Table 6-1. What is Reed Company's gross profit percentage (rounded) for the year, assuming that ending inventory totaled $685?

A. 56%
B. 27%
C. 40%
D. 44%

7. During a period of rising prices, the inventory method that yields the highest net income and the lowest inventory value, respectively, will be:
A. LIFO and FIFO.
B. weighted-average and LIFO.
C. LIFO and LIFO.
D. FIFO and LIFO.

8. Booneville Company management omitted $65,000 of inventory when calculating their 20X4 ending inventory. As a result of this error,
A. 20X5 total assets will be overstated.
B. 20X5 cost of goods sold will be understated.
C. 20X4 stockholders' equity will be overstated.
D. 20X5 net income will be understated.

9. Which of these statements regarding GAAP as applied to inventories is true?
A. The disclosure principle requires that a company disclose the inventory method(s) used.
B. According to the consistency principle, the inventory method can never be changed.
C. The lower-of-cost-or-market rule states that, in order to be conservative, declines in inventory prices should be recognized in the period in which the goods are actually sold.
D. The materiality principle allows GAAP to be ignored when the result is material in amount.

10. Omar Hanson arrived early one morning at his place of business, Omar's Designs, to find that his shop had been burglarized during the prior night. Use the following information that Omar has gathered to estimate the amount of inventory that was stolen.

Normal gross profit rate	58%
Beginning inventory, January 1	$70,000
Purchases to date,	$199,800
Sales to date,	$450,000

A. $8,800
B. $189,000
C. $80,800
D. $180,200

CHAPTER 7
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. The items below represent expenditures related to the construction of a new office building:

Cost of land	$210,000	Legal fees relating to land purchase	$ 2,000
Cost of removing old building	1,000	Payment of delinquent property taxes	4,500
Grading the site	5,000	Payment to contractor	1,000,000
Cost of building permits	4,500	Interest cost incurred during construction	40,000
Cost of paving parking lot	20,000	Cost of fencing	5,000

The proper balances for the Land account and the Building account should be:

	Land	Building
A.	$217,000	$1,000,000
B.	$213,500	$1,001,000
C.	$222,500	$1,044,500
D.	$220,500	$1,041,000

2. Which of the following statements is false?
   A. Accelerated depreciation methods record more depreciation expense over the life of an asset than either the straight-line method or the units-of-production method.
   B. The cost of an asset, its residual value, and its estimated useful life are all used in computing depreciation.
   C. The units-of-production method is most appropriate for an asset that wears out due to physical use.
   D. Land is never depreciated.

Table 7-1

On January 1, 20X4, Guard Security Service purchased an alarm monitoring system for $80,000. The system is expected to be used for 4 years, after which it can be sold for $16,000.

3. Refer to Table 7-1. What is the book value of the equipment on December 31, 20X5, if Guard uses the straight-line method of depreciation?
   A. $64,000 C. $40,000
   B. $60,000 D. $48,000

4. Refer to Table 7-1. If Guard uses the double-declining-balance method of depreciation, what is depreciation expense for 20X5?
   A. $40,000 C. $20,000
   B. $32,000 D. $16,000

5. Refer to Table 7-1. If Guard sells the equipment for $20,000 at the end of the 4 years, the journal entry to record the sale will include all of the following **except** a
   A. $20,000 debit to Cash.
   B. $4,000 credit to Gain on Sale of Equipment.
   C. $20,000 credit to Equipment.
   D. $64,000 debit to Accumulated Depreciation.

6. Which of the following statements is false?
   A. Straight-line depreciation can be used for financial reporting or for income tax purposes.
   B. Double-declining-balance depreciation is the most commonly used method of depreciation in financial reporting.
   C. The units-of-production method results in higher depreciation in the years when an asset is more productive and lower depreciation in the years when an asset is less productive.
   D. MACRS depreciation creates a cash advantage over straight-line because higher amounts of depreciation are deducted on the tax return in the earlier years of an asset's life resulting in lower taxes paid.

7. In 20X4, Copper King Inc. paid $4,125,000 for land with an estimated 400,000 tons of copper. Copper King plans to sell the land for $125,000 when all of the copper has been extracted. In 20X1, 80,000 tons of ore were mined and sold. What is depletion for the year?
   A. $825,000
   B. $800,000
   C. $850,000
   D. $4,000,000

8. Which of the following is **not** accounted for as an intangible asset?
   A. Franchises
   B. Goodwill
   C. Trademark
   D. Research and development

9. An improvement made to a machine increased its fair market value and its productive capacity by 25% without extending the machine's useful life. The cost of the improvement should be:
   A. debited to Repair Expense.
   B. debited to Accumulated Depreciation.
   C. debited to Machinery.
   D. allocated between Machinery and Depreciation Expense.

10. Which of the following statements about the statement of cash flows is false?
    A. Financing activities are not affected by plant asset transactions.
    B. Depreciation is not a cash flow.
    C. Amortization of intangibles is added to net income when calculating cash provided by operations.
    D. The sale of equipment at a loss is recorded as a cash outflow from investing activities.

CHAPTER 8
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. On August 1, Lee Company borrowed $50,000 on a 10%, 9-month note payable to City National Bank. The correct entry at maturity, assuming all year-end (December 31) entries were made correctly, would include a:
   A. debit to Interest Expense for $1,667.
   B. debit to Interest Expense for $3,750.
   C. credit to Cash for $50,000.
   D. debit to Interest Payable for $1,667.

2. From the following list of account balances, calculate the correct amount of current liabilities:

Accounts receivable	$ 5,000
Accounts payable	6,300
Unearned revenues	900
Rent expense	2,400
Sales revenue	46,300
Sales tax payable	3,700
Estimated warranty payable	800
Note payable, due in 90 days	1,300
Accumulated depreciation	1,400

   A. $12,100 C. $13,000
   B. $61,200 D. $59,300

3. Which type of contingent liability below would most likely be found on the balance sheet?
   I. Probable contingent liability that can be estimated
   II. Reasonably possible contingent liability
   III. Remote contingent liability
   A. I only
   B. I and II
   C. I, II, and III
   D. II only

4. If English Company issues their $5,000,000, 8% bonds payable at a premium,
   A. the debit to Cash is greater than the credit to Bonds Payable.
   B. the maturity value is greater than the present value of the interest and principal payments.
   C. the market rate of interest must be less than the contract rate of interest.
   D. both A and C are true.

5. On January 1, Delicious Company issued $800,000, 10-year, 9% bonds at 85, to yield an 11% return. The bonds pay interest on June 30 and December 31 each year. What is the amount of discount amortized on December 31 in the first year, assuming the effective-interest method of amortization?
   A. $5,157 C. $13,400
   B. $1,477 D. $6,523

6. Sarah Company issued bonds payable at a discount and uses the effective-interest method of amortization. Which of these statements correctly describes Sarah's financial statements?
   A. The carrying amount of the bonds on the balance sheet will decrease each interest period.
   B. The interest expense each interest period will be greater than the cash paid for interest.
   C. The interest paid will be a constant percentage of the carrying amount.
   D. The Discount on Bonds Payable will be added to the liabilities on Sarah's financial statements.

7. George Corporation has outstanding $600,000 of 5-year, 8% bonds payable with a carrying value of $604,000. The bonds are retired at 101½, 2 years ahead of their scheduled maturity date. The journal entry to record the retirement will include all of the following **except** a:
   A. debit to Extraordinary Loss on Retirement of Bonds Payable, $3,000.
   B. credit to Cash, $609,000.
   C. debit to Bonds Payable, $604,000.
   D. debit to Premium on Bonds Payable, $4,000.

8. Which of the following statements concerning financing operations is false?
   A. Issuing stock rather than bonds payable dilutes ownership.
   B. Selling stock will decrease earnings per share.
   C. Earnings per share will be higher if bonds are issued rather than if stock is issued.
   D. Trading on the equity means that interest expense paid on bonds is greater than the earnings on the borrowed money.

9. Northern Corporation sells a product that includes a 3-year warranty. During that time, if the product breaks, it may be returned for replacement. At the beginning of 20X3, Estimated Warranty Payable had a $400 credit balance. During 20X3, 6,000 units were sold; historically, approximately 1% of the units prove to be defective. Each unit costs $75 and sells for $150. If 38 units are actually replaced during 20X3, what is the remaining balance in Estimated Warranty Payable at the end of 20X3?
   A. $4,900
   B. $2,050
   C. $3,700
   D. Cannot be determined from the information given.

10. When a company reports liabilities on its financial statements:
    A. the fair market value of long-term debt appears as a part of long-term liabilities on the balance sheet.
    B. borrowing and repayment of long-term debt appears as a part of investing activities on the statement of cash flows.
    C. deferred credits and deferred income taxes may appear as a part of long-term liabilities on the balance sheet.
    D. both operating leases and capital leases are a part of the liabilities section on the balance sheet, and may be either long or short term.

CHAPTER 9
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. Which of the following is an advantage of the corporate form of business organization?
   A. Unlimited liability
   C. Separate of ownership and management
   B. Continuous life
   D. Government regulation

Table 9-1

On December 31, 20X4, the Orthon Co. reported the following in its comparative financial statement :

	12/31/20X4	12/31/20X3
10% Cumulative preferred stock, $50 par and redemption value, 2,000 shares authorized and ? shares issued	$ 50,000	$ 50,000
Paid-in capital in excess of par—preferred	4,000	4,000
	54,000	54,000
Common stock, $2 par, 20,000 shares authorized and 4,000 (20X4) and 3,000 (20X3) shares issued and outstanding	8,000	6,000
Paid-in capital in excess of par—common	84,000	80,000
	92,000	86,000
Total paid-in capital	146,000	140,000
Retained earnings	140,000	110,000
Total stockholders' equity	$286,000	$250,000

2. The number of preferred shares issued and outstanding at the end of 20X4 is:
   A. 8,000.
   C. 1,000.
   B. 2,000.
   D. 500.

3. Refer to Table 9-1. Assume Orthon had not paid any dividends in 20X1-20X3. In 20x4, Orthon declared cash dividends of $48,000 to both the preferred and common stockholders. The total dividend received by the common stockholders was (assuming the number of preferred shares did not change):
   A. $48,000.
   C. $38,000.
   B. $28,000.
   D. $43,000.

4. Refer to Table 9-1. Assume net income for 20X4 is $66,000, and there are no dividends in arrears. What is Orthon's return on common stockholders' equity for 20X4?
   A. 30.8%
   B. 28.5%
   C. 24.6%
   D. 22.8%

5. Refer to Table 9-1. Assume that there are no dividends in arrears. What is Orthon's book value per share of common stock at the end of 20X4?
   A. $53
   B. $56.75
   C. $58
   D. $71.50

6. Which of the following transactions increases stockholders' equity?
   A. A three for one stock split
   B. Issuance of stock at a price above par value
   C. A 30% stock dividend
   D. Purchase of treasury stock above par

7. The journal entry to record the distribution of a *small* stock dividend would include all of the following **except**:
   A. Retained Earnings, debit.
   B. Common Stock, credit.
   C. Paid-in Capital in Excess of Par, credit.
   D. All of the above are included in the entry.

8. Which one of the following statements is true?
   A. A large stock dividend increases the number of shares issued, but a stock split does not.
   B. A stock split reduces the market price of the stock, but a large stock dividend does not.
   C. A stock split does not decrease the par value of the stock, but a large stock dividend does not.
   D. Both stock splits and stock dividends have no effect on total stockholders' equity.

9. Mariah Inc. purchased 5,000 shares of its own $2 par value common stock for $28 per share. Later, Mariah sold 200 shares of the treasury stock for $30 per share. The entry to record the sale of the treasury stock is:

A.	Cash	6,000	
	Treasury Stock		6,000
B.	Cash	6,000	
	Treasury Stock		400
	Paid-in Capital from Treasury Stock Transactions		5,600
C.	Cash	6,000	
	Treasury Stock		5,600
	Paid-in Capital from Treasury Stock Transactions		400
D.	Cash	6000	
	Common Stock		400
	Gain on Sale of Stock		5,600

10. Which of the following transactions would **not** be found on the statement of cash flows?
    A. Declaration of a cash dividend
    B. Purchase of treasury stock above par
    C. Issuance of preferred stock at a price above par
    D. Sale of treasury stock at a price below the cost

CHAPTER 10
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. Which of the features does **not** correctly describe an available-for-sale investment?
   A. It is reported at current market value on the balance sheet.
   B. It will appear among either the current or the long-term assets on the balance sheet.
   C. Cash dividends are recorded with a credit to the Dividend Revenue account.
   D. The income statement will reflect Unrealized Gain or Loss when the investment is sold.

2. Up Company purchased 30% of the outstanding shares of Down Corporation for $34,000. During the year, Down pays dividends of $5,000 and reports net income of $25,000. At year end, the stock has a market value of $46,000. The year-end balance sheet of Up Company will report Long-Term Investment of:
   A. $43,000.
   B. $40,000.
   C. $54,000.
   D. $46,000.

3. Which one of these statements related to consolidations is false?
   A. When a corporation owns 20% - 50% of another company's stock, the two companies must report consolidated financial statements for the period.
   B. Minority interest results if the parent company does not purchase 100% of the subsidiary company.
   C. Both the parent company and the subsidiary company continue to maintain their own set of accounting records even if they report as a consolidated entity.
   D. Goodwill results when the parent company pays more to acquire a subsidiary company than the market value of the subsidiary's net assets.

Table 10-1

On March 1, 20X5, Antonio, Inc., purchases $300,000, 10%, 5-year bonds at 94. Interest is paid semiannually on March 1 and September 1. The company considers these bonds a held-to-maturity investment, and uses the straight-line method to amortize any premium or discount.

4. Refer to Table 10-1. What total amount of Interest Revenue would be recorded by Antonio on September 1, 20X5?
   A. $15,000
   B. $13,200
   C. $16,800
   D. $1800

5. Refer to Table 10-1. What is the carrying amount of the long-term bond investment on Antonio's December 31, 20X5, balance sheet?
   A. $285,000
   B. $300,000
   C. $282,000
   D. $285,600

6. Which of the following would be included in an elimination entry on a consolidation work sheet?
   A. Debit to Retained Earnings of the Subsidiary
   B. Debit to Common Stock of the Parent
   C. Credit to Investment in Subsidiary
   D. Both A and C

7. A U.S. company makes a credit sale in Japanese yen when the exchange rate is $.0094 and receives payment for the goods when the exchange rate is $.0092. Which of the following statements is true?
   A. A foreign-currency translation adjustment loss has occurred.
   B. A foreign-currency transaction gain has occurred.
   C. A foreign-currency transaction loss has occurred.
   D. A foreign-currency translation adjustment gain has occurred.

8. A U.S. company acquired an Italian subsidiary and is in the process of translating the balance sheet prepared in lira to U.S. dollars. Which of the following exchange rates would be used to translate liabilities?
   A. The average rate for the life of the Italian corporation
   B. The average rate for the current year
   C. The current exchange rate at the balance sheet date
   D. The exchange rate in effect when the liability was incurred

9. What organization is working primarily to achieve worldwide harmony of accounting standards?
   A. IRS
   B. FASB
   C. SEC
   D. IASC

10. Included among Door Corporation's cash flows for the year are the following:

Cash paid to purchase long-term investment	(55,000)	
Cash received from sale of land		162,000
Cash paid to purchase equipment	($98,000)	
Cash received from borrowing on a long-term note	75,000	
Interest revenue received on long-term investment	11,250	

What amount should Door Corporation report as net cash flows from investing activities on their current year statement of cash flows?
   A. $9,000
   B. $20,250
   C. $84,000
   D. $95,250

CHAPTER 11
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. Which of the following statements is false?
   A. A cumulative effect of a change in accounting principle is the difference between net income computed under the old method and under the new method for the current and prior years.
   B. Extraordinary gains and losses should be both infrequent and unusual.
   C. Income from continuing operations does not include extraordinary gains and losses.
   D. Discontinued operations should be reported on the income statement net-of-tax.

2. Gambill Corporation earned net income of $868,000 for 20X4. The following balances were also available:

$5.00 Preferred stock, $80 par, 5,000 shares issued and outstanding..	$ 400,000
Common stock, $5 par, 300,000 shares issued and outstanding............	1,500,000
Treasury stock, common, 10,000 shares at cost...	125,000

   The EPS for 20X4 (assuming no changes in the stock accounts during the year) is:
   A. $2.99. C. $2.91.
   B. $2.81. D. $2.89.

3. Cozumel Inc. has pretax accounting income of $450,000 in 20X2 and taxable income of $430,000. Assuming a 30% income tax rate, compute income tax expense and income tax payable.

	Income Tax Expense	**Income Tax Payable**
A.	$135,000	$129,000
B.	$129,000	$135,000
C.	$129,000	$141,000
D.	$141,000	$135,000

4. In 20X4, the accountant at Sow's House, Arnold Ziffle, discovered that 20X3 insurance expense had been understated $4,000. Arnold should treat this discovery as a:
   A. change in accounting principle.
   B. restriction of retained earnings.
   C. discontinued operation.
   D. prior-period adjustment.

5. Which of the following items would **not** be reported on a statement of stockholders' equity?
   A. Distribution of a stock dividend
   B. Accumulated other comprehensive income
   C. Issuance of treasury stock above cost
   D. Extraordinary loss

6. Haney Inc.'s accounting records contain the following information for 20X5 before income taxes:

Cost of goods sold	$ 95,000
Net sales	200,000
Extraordinary loss	30,000
Gain on discontinued operations	20,000
Operating expenses	50,000
Income tax expense	4,000
Tax effect:	
Discontinued operations	(6,000)
Extraordinary loss	18,000

What is the income from continuing operations?

A. $55,000
B. $51,000
C. $67,000
D. $63,000

Table 11-1

The stock price and common dividends per share of Toy Land Inc. are $35 and $1.20, respectively. Toy Land's net income and average number of common shares outstanding during the year were $468,000 and 180,000 shares, respectively. Toy Land's net income included an $18,000 extraordinary loss. The investment capitalization rate is 12%.

7. Refer to Table 11-1. The total estimated value of the common stock and the current market value of the company is:

	Estimated Value	Current Market Value
A.	$6,300,000	$4,050,000
B.	$2,100,000	$3,900,000
C.	$4,050,000	$6,300,000
D.	$3,900,000	$6,300,000

8. Refer to Table 11-1. The estimated value of one share of common stock is:

A. $35.00.
B. $25.00.
C. $22.50.
D. $21.67.

9. Another term for a "clean" audit opinion is:

A. qualified.
B. unqualified.
C. fair.
D. disclaimer.

10. The responsibility for the financial statements of a company belongs to:

A. the stockholders.
B. management.
C. the auditors.
D. the government.

CHAPTER 13
TEN-MINUTE QUIZ

Circle the letter of the best response.

Table 13-1

Balance Sheet
December 31, 20X5 and 20X4

Assets	20X5	20X4	*Liabilities and Stockholders' Equity*	20X25	20X14
Cash	$ 400	$ 520	Accounts payable	$ 1,500	$ 1,800
Accounts receivable	1,600	2,000	Accrued expenses payable	500	400
Inventory	2,750	3,480	Bonds payable	2,500	5,000
Plant assets	12,050	14,800	Common stock	8,250	10,250
Less: Accumulated depreciation	(2,300)	(1,300)	Retained earnings	1,750	2,050
Total assets	$14,500	$19,500	Total liabilities and Stockholders' equity	$14,500	$19,500

Income Statement
Years ended December 31, 20X5 and 20X4

	20X5	20X14
Net sales	$24,000	$21,000
Cost of goods sold	18,000	16,000
Gross profit	6,000	5,000
Operating expenses	3,900	3,500
Operating income	2,100	1,500
Interest expense	300	200
Income before income tax	1,800	1,300
Income tax	600	400
Net income	$ 1,200	$ 900

1. Refer to Table 13-1. The percentage change in Net Sales is:
   A. 7%.
   B. 14.3%.
   C. 12.5% .
   D. 87.5%.

2. Refer to Table 13-1. The common-size percentage for 20X5 Operating Income is:
   A. 40%.
   B. 175%.
   C. 7.1%.
   D. 8.75%.

3. Refer to Table 13-1. The acid-test ratio for 20X5 is:
   A. 1.33.
   B. 2.38.
   C. 1.
   D. .44.

4. Refer to Table 13-1. The return on assets for 20X5 is:
   A. 8.8%.
   C. 10.3%.

B. 7.1%. D. 8.3%.

5. Which of the following is a measure of the ability of a business to pay its long-term debt?

A. Times-interest-earned C. Current ratio

B. Inventory turnover D. Dividend yield

6. Which of the following statements is true?

A. In trend analysis, each item is expressed as a percentage of the last year.
B. On a common-size income statement, the 100% figure is Net Income.
C. A primary purpose of horizontal analysis is to determine trends.
D. It is possible for the dollar amount of an income statement item to increase while its common-size percentage decreases.

7. Which of the following is (are) used to measure a company's profitability?

	Return on Equity	Earnings Per Share	Dividend Yield
A.	yes	yes	yes
B.	yes	yes	no
C.	no	no	yes
D.	no	yes	yes

8. Which of the following statements is false?

A. Benchmarking is the practice of comparing a company to a standard set by other companies with a view toward improvement.

B. Companies can be compared to industry averages as well as to key competitors.

C. Successful companies generate the greatest percentage of their cash from selling assets.

D. A sudden change in a ratio can indicate a potential problem that should be investigated by the analyst.

9. Johnson Co. reported the following information for 20X5 and 20X6.:

	20X5	20X6
Sales	$100,000	$120,000
Cost of goods sold	50,000	66,000
Inventory turnover	4	6

Given these facts, which of the following statements could be true?

A. Accounts receivable increased.

B. Average inventory increased.

C. Cost of goods sold decreased.

D. Average inventory decreased.

10. Economic value added is:
   - A. a measure to determine whether the company’s operations have increased stockholder wealth.
   - B. an expression of the increase in net income caused by an increase in average stockholders’ equity.
   - C. the amount that stockholders and lenders charge a company for the use of their money.
   - D. the weighted average of the returns demanded by the company’s stockholders and lenders.

ANSWER KEY TO CHAPTER 1 QUIZ

1.	C	6.	C
2.	B	7.	A
3.	B	8.	C
4.	A	9.	C
5.	D	10.	D

ANSWER KEY TO CHAPTER 2 QUIZ

1. C	6. D
2. C	7. B
3. A	8. D
4. B	9. C
5. D	10. B

ANSWER KEY TO CHAPTER 3 QUIZ

1. D	6. C
2. A	7. A
3. C	8. B
4. C	9. C
5. D	10. A

ANSWER KEY TO CHAPTER 4 QUIZ

1. D
6. A
2. D
7. A
3. A
8. D
4. C
9. B
5. B
10. C

ANSWER KEY TO CHAPTER 5 QUIZ

1. B	6. A
2. C	7. C
3. B	8. C
4. C	9. B
5. D	10. A

ANSWER KEY TO CHAPTER 6 QUIZ

1. D	6. A
2. A	7. D
3. B	8. B
4. C	9. A
5. B	10. C

ANSWER KEY TO CHAPTER 7 QUIZ

1. C	6. B
2. A	7. B
3. D	8. D
4. C	9. C
5. C	10. D

ANSWER KEY TO CHAPTER 8 QUIZ

1. A	6. B
2. C	7. C
3. A	8. D
4. D	9. B
5. B	10. C

ANSWER KEY TO CHAPTER 9 QUIZ

1. B	6. B
2. C	7. D
3. B	8. D
4. D	9. C
5. C	10. A

ANSWER KEY TO CHAPTER 10 QUIZ

1.	D	6.	D
2.	B	7.	C
3.	A	8.	C
4.	C	9.	D
5.	A	10.	A

ANSWER KEY TO CHAPTER 11 QUIZ

1. A	6. B
2. C	7. C
3. A	8. D
4. D	9. B
5. D	10. B

ANSWER KEY TO CHAPTER 13 QUIZ

1. B.	6. D
2. D	7. B
3. C	8. C
4. A	9. D
5. A	10. A

Long Term Investment and Present Value

Generally companies have a capital budgeting process in place. Projects are requested from the departments and are screened by the budget committee. Officers then decide which projects should be funded and finally the board of director approves the capital budget. Most of the decisions on capital budgeting are based on cash flow numbers. For example Cash Outflows may include Initial investment, repairs and maintenance, increase in operating costs, and overhaul of equipment. Cash Inflows relate to sale of old equipment, increase in cash from customers, reduced operating expenses, and salvage value of old equipment. To arrive at a decision the company would need to take into account the time value of money and therefore compute present value of the cash flows using the present value table (or excel).

Decision to be made	Information needed for decision	Tools used for decision making	How to evaluate results
Should the company invest in a proposed project?	Cash flow estimates, discount rate	Net Present Value = Present value of cash inflows – Present value of cash outflows	The investment is financially acceptable if NPV is positive
Which investment project should a company accept?	Estimated cash flows and discount rate for each proposal	Profitability Index = Present Value of net cash flows/Initial Investment	The investment proposal with the highest profitability index should be accepted
Should the company invest in a proposed project?	Estimated cash flows and the required rate of return (hurdle rate)	Internal rate of return (IRR) = Interest rate that results in a net present value of zero	If the IRR> required rate of return for the project, then the project is financially acceptable

(Source: Managerial Accounting, by Weygandt, Kimmel, and Kieso 6th ed. Page 568)

To compute NPV. 1. Identify the cash inflows and outflows. 2. Identify the interest rate that will be used to discount these cash flows, 3. Determine the table that you are going to use – a) Present value of a $1 table or b) Present value of an annuity of $1 table. Use table b only if you have equal cash flows for say more than two periods. 4. Look up the correct present value factor 5. Multiply it by the cash inflow or outflow to find the present value. Then use the above decision table to make a decision.

Example. If you have to find present value of 100000 to be received every year for three years at the end of every year. In this case it will be easier to use the present value of an annuity table. Say given rate is 10%. Look under three periods and 10%. PV factor is 2.48685. This means that if you receive $1 each year for three years the present value of those three payments today will be $2.48685. Now multiply this factor by 100000*2.48685= $248685. This represents the present value of cash inflows.

Property, Plant & Equipment, Natural Resources and Intangible Assets

Because we wish to measure profits accurately, a number of GAAPs come into play. Expense Recognition (Matching) requires that expense be recognized on the Income Statement in the period which corresponds with or matches the income which it helped to generate. In the case, then, of a number of long-lived assets whose usefulness extends over several years, spreading their costs over multiple periods as expense is necessary. The terms used for this process vary depending on what type of asset is considered: **Depreciation** (property, plant & equipment), **Depletion** (natural resources) and **Amortization** (intangible assets).

The journal entries

Depreciation Expense	xxx	
Accumulated Depreciation		xxx
Depletion of Natural Resources	xxx	
Natural Resources (or Accumulated Depletion)		xxx
Amortization Expense	xxx	
Accumulated Amortization (or the intangible asset)		xxx

are alike in that the debit is to the appropriate expense (or in some cases, a cost account) and the credit is either to the asset which is diminishing in value or, always in the case of PPE, the specified accumulated depreciation account (a contra asset which is paired with the asset in question, the two of which, taken as a whole, represent the net book value of the asset at any given time). Calculations for the entries are made using simple formulas, using one of the three methods available.

Amortization is calculated using **Straight Line**, depletion using (rarely Straight Line) or nearly always **Units of Production** and Depreciation using Straight Line, Units of Production or **Declining Balance**.

The formulas for these three methods are not complex; it is the values used for elements in the formulas which can cause trouble.

SL Straight Line (the easiest method, perfectly acceptable, very popular)

Cost[1] - Residual (scrap or salvage) Value[2] = Amount to be expensed overall[3]
Useful Life (in years)[4] = expense per year[5]

UP Units of Production (results in the best "match" of cost or expense to revenue)

Cost[1] - Residual (scrap or salvage) Value[2] = Amount to be expensed overall[3]
Useful Units[6] = expense per unit x units during the period[7] = period expense

DB Declining Balance (an accelerated method attractive to business owners resulting in big expense deductions early on and small expense deductions in later years)

First formula establishing target for overall expense: Cost[1] - Residual (scrap or salvage) Value[2] = Amount to be expensed overall[3]
Second formula establishing first-year expense: Cost[1] or NBV[8] x (some multiple[9]) x SL Rate[10] = expense for first year[5]
Third formula establishing expense for subsequent years: NBV[8] x (some multiple[9]) x SL Rate[10] = expense for subsequent year[11]

[1] Amount needed to acquire asset--may include "add ons" such as sales tax, delivery charges, installation costs, etc.--may need to calculate separate amounts in the event of a bulk purchase of multiple assets
[2] Value anticipated at end of assets usefulness--must be estimated
[3] Targeted expense over asset's life--this is a "brick wall" beyond which expensing may not occur
[4] Anticipated lifetime usefulness of asset--must be estimated
[5] If there is a partial (less than 12 month) year, the figure must be prorated
[6] Anticipated lifetime production usefulness (miles for vehicles, documents for copier, tonnage or cubic footage of natural resource) of asset--must be estimated

[7] Number of miles, documents, tons, etc. actually produced during specified period
[8] Net book value or cost less accumulated depreciation to date-always a declining figure--cost and NBV are one and the same at the beginning
[9] Double equals 2; triple equals 3; 150% equals 1.5--these are terms used in double or triple or 150% declining balance
[10]The straight line rate is 1/Useful Life--33 1/3%, 25%, 20%, 66 2/3%, 14 1/7%, 12 1/2%, 10%, 5%, and 2 1/2% for 3, 4, 5, 6, 7, 8, 10, 20 and 40 year lives respectively
[11]This formula is used each year but produces a lesser expense each year as the NBV is smaller each year--the target point at which depreciation must stop arrives sooner than one would expect (before the final estimated year in the asset's life) so one much make some sort of accommodation to bring the process to an appropriate end--this can be done by switching over to SL when the expense calculated using SL is greater than that using DB.

Comprehensive Example

A firm acquires a property (land) under which there are known to be natural gas reserves which can be extracted. The acquisition cost must be allocated between land (WHICH DOES NOT DEPRECIATE) and the gas reserves which will be depleted through extraction. This will require consultation with real estate professionals and geologists to ascertain the estimated quantity and relative value of the gas reserves as well as the land.

January 1/year 1	Land	500,000	
	Gas Reserves	6,500,000	
	Mortage Payable (probably)		7,000,000

The firm commences activities enabling it to drill for and extract the gas. This includes outlays for all sorts of supplies, tools, piping, excavation equipment, related wages and payroll taxes, interest on the mortgage—the list is endless. In other circumstances some of these things would appear to be expenses and others would be items of property, plant and equipment. In this case, all such outlays are made prior to the extraction and sale of the gas and are, therefore, classified as IDCs (intangible drillings costs) and must be capitalized and subsequently amortized once production and sales begin. Additionally, drilling equipment and other items of PPE necessary for the ongoing drilling and sales operation are acquired.

September 1/year 1	Intangible Drilling Costs	300,000	
	Equipment	700,000	
	Cash/AP/Notes Payable		1,000,000

The firm now has four long-lived assets with which it must deal and make appropriate entries:

Land	no depreciation available, cost of the land will be recovered whenever it may be sold in the future
IDCs	amortization available using SL, useful life of 5 years selected, first year is short (4 months)
Gas Reserves	depletion available using UP, MCFs (volume) of 65,000,000 estimated, 500,000 extracted in first year, 2,000,$000 in second year
Equipment	depreciation available using the chosen method of DDB and useful life of 7 years, first year is short (4 months), salvage value 50,000

December 31/year 1	Depreciation Expense	66,667		*$700,000 x 2 / 7 yrs x 4 mo / 12 mo*
	Amortization Expense	20,000		*$300,000 / 5 yrs x 4 mo / 12 mo*
	Depletion of Gas Reserves	50,000		*$6,500,000 / 65,000,000 MCFs x 500,000 MCFs*
	Accumulated Depreciation		66,667	
	Accumulated Amortization		20,000	
	Accumulated Depletion		50,000	
December 31/year 2	Depreciation Expense	180,952		*($700,000 - $66,667) x 2 / 7 yrs*
	Amortization Expense	60,000		*$300,000 / 5 yrs*
	Depletion of Gas Reserves	200,000		*$6,500,000 / 65,000,000 MCFs x 750,000 MCFs*
	Accumulated Depreciation		180,952	
	Accumulated Amortization		60,000	
	Accumulated Depletion		200,000	

ACCT 201: Review Sheet for ETS Exam

Chapter 3: Accrual Accounting & Income

1. *The distinction between cash accounting and accrual accounting*

There is a distinction between Cash-basis of accounting and the Accrual-basis of accounting.

Cash-basis accounting records revenues when the cash is received and expenses when the cash is paid. In this situation, cash receipts are treated as revenues and cash payments are treated as expenses. There is no recording for sales and/or purchases on account. Cash-basis accounting is appropriate for small business that transact only in cash. This type of accounting is not GAAP. Profit is the cash profit (the difference between the receipts and payments).

Accrual-basis accounting records revenues when they are earned and expenses when they are incurred. Transactions on account (that is, buy now, pay later) are recognized. Profit is the revenues minus the expenses. Accrual-basis accounting is suitable for all types of businesses but is required for larger business. It is GAAP because it is regarded as providing a more accurate Income Statement and Balance Sheet allowing for better comparability and decision-making.

2. *The Time-Period Concept*

Accrual accounting requires the application of the Time-Period Concept. The time-period concept ensures that accounting information is reported at least annually, if not 6-mothly, or 3 monthly, or monthly. The time-period concept <u>matches</u> the revenues with the expenses for that accounting period. For most businesses in the US, the financial (fiscal) year is from January 1 to December 31 (which is the same as the Tax year).

When using accrual accounting, end-of-period adjustments are required to ensure that the matching principle is applied properly. Accounts to be adjusted will include those transactions that affect this year's Income Statements and Balance Sheets as well as future year's Income Statement and Balance Sheet.

Examples of End-of-Period Adjustments

1. Pre-paid expenses

Example: A 12-month insurance policy for $1200 is paid in advance with cash on May 1. Therefore, on May 1 the pre-paid insurance is a Current Asset of $1200. The entry would be:

		Debit	*Credit*
May 1:	Prepaid Insurance	$1200	
	Cash		$1200

On December 31 (balance-day), eight months of the prepaid insurance has been used up (an expense), leaving 4 months still paid in advance (an asset). The adjusting entry would be:

		Debit	*Credit*
Dec 31:	Insurance Expense		$800

Prepaid Insurance $800

The Prepaid Insurance balance in the Balance Sheet is now $400; the amount of Insurance still with future benefit (therefore an Asset).

2. Unearned revenues

Example: On August 1, XYZ Ltd., a landlord, receives a $24,000 check from their tenant to pay for the next 12 months rent. Therefore, on August 1 the Unearned Revenue of $24,000 is recorded as a liability. The entry would be:

		Debit	*Credit*
August 1:	Cash	$24,000	
	Unearned revenue		$24,000

On December 31 (balance-day), four months of the unearned revenue has been earned (revenue) leaving eight months still unearned (a liability). The adjusting entry would be:

		Debit	*Credit*
Dec 31:	Unearned revenue		$8000
	Rent revenue		$8000

On December 31, the Unearned Revenue balance in the Balance Sheet is now $16,000; the amount of unearned revenue still with a present obligation (therefore a liability).

3. **Depreciation** (using the straight-line method)

Depreciation allocates the cost of a tangible long-term asset over its estimated life.

Example: On September 1 2012, a business paid cash of $21,000 for a motor vehicle to be used in the business. It has an estimated life of 4 years and a residual value of $1000. The entry to record the purchase would be:

		Debit	*Credit*
Sept. 1:	Motor Vehicle		$21,000
	Cash		$21,000

At the end of the 2012 fiscal year, to allocate the cost of the motor vehicle the depreciation entry would be:

		Debit	*Credit*
Dec 31:	Depreciation expense		$1,667
	Accumulated Depreciation		$1,667

[This Depreciation expense is calculated as follows: $21,000 - $1,000 /5 years = $4000 per year. Then, because the asset was purchased part way through the year, the actual amount is $4,000/12 x 4 = $1667].

Accumulated Depreciation is regarded as a contra-asset because it is shown in the Asset section of the Balance Sheet but subtracted from the cost of the asset (in this case Motor Vehicle). That is:

(Extract of) Balance Sheet as at December 31, 2012

Motor Vehicle	$21,000
Accumulated Depreciation	1,667
Book value of asset	$19,333

Depreciation expense for the next full year of 2013 would be entered as:

		Debit	*Credit*
Dec 31:	Depreciation expense		$4,000
	Accumulated Depreciation		$4000

At the end of 2013, the Accumulated Depreciation will be $4000 higher. That is:

(Extract of) Balance Sheet as at December 31, 2013

Motor Vehicle	$21,000
Accumulated Depreciation	4,667
Book value of asset	$19,333

Therefore, each year the Accumulated Depreciation would increase by $4000 until the book value of the Motor Vehicle was $1,000 (the residual value at the end of the fourth year).

4. Accrued Expenses

Often an expense is incurred before the expense is paid. Wages is a good example of this with employees usually waiting at least two-weeks after they have earned the income to receive payment. A Current Liability for the unpaid wages at the end of the year must be recognized (as it is a present obligation to be paid within the next 12 months).

Example: ABC Ltd. pays wages on every second Friday on wages earned up to the Friday before. The wages bill for the last 10-day period was $20,000. December 31 falls on Wednesday. Therefore, ABC Ltd. needs to recognize 8 days of wages that it has not paid for yet. That is, $16,000. The entry would be:

		Debit	*Credit*
May 1:	Wages expense	$16,000	
	Wages payable		$16,000

Wages Payable is a liability until the wages are paid on the second Friday.

Note: Every end-of-period adjustment has two affects: one is for the Income Statement and one is for the Balance Sheet. An end-of period adjustment never affects the Cash account. End of period adjustments are internal transactions.

At the completion of the end-of period adjustments, the business can develop the *Trial Balance After Adjustments*. From this, an Income Statement and a Balance Sheet is derived.

3. Closing Entries

At the end of the accounting period, businesses "close the books". This is the process of closing off the Revenue, Expense and Dividend accounts so that they each show zero balances to begin the new year. The accounts that are closed off to zero are called Temporary Accounts while those not closed off; that is Asset, Liability and Stockholders Equity accounts are called Permanent Accounts". The Revenue and Expense accounts are closed off to an Income Summary account while the Dividends account is closed off to the Retained Earnings account. The balance in the Income Summary account (i.e., the Net Income or Net Loss) is also closed off to the Retained Earnings account.

4. Reversing Entries

Some adjusting entries need to be reversed on the first day of the new year. Accrued revenue (e.g., Interest Receivable) and accrued expense (Wages Payable) account need to be reversed so that the transaction is not double-counted.

5. 10-column worksheets

A 10-column worksheet is an informal device for calculating and sorting information needed for the financial statements. It does not replace the formal financial statements but is an internal document that provides for a fast way to calculate the Net Income and the Balance Sheet balances.

End of Review Sheet

Inventory

There are four types of inventory held for resale. The first type of inventory is **retail inventory** which is normally resold in the same state in which it was purchased. **Manufactured inventory** consists of **raw materials inventory, work in process inventory and finished goods inventory**. Legal title to inventory is the general rule which determines who has rights. The two common types of shipping terms which are generally part of agreement of sale are free on board or **F.O.B. Shipping Point**, where legal title passes to buyer when seller delivers goods to a common carrier (trucking company) and the buyer pays the freight, the other type is free on board or **F.O.B. Destination**, where legal title passes when the seller receives the goods from the common carrier and the seller pays the freight.

Generally accepted accounting principles **(GAAP)** requires that inventory be carried at its **cost** where it is assumed that the cost will be recovered when the product is sold in the ordinary operations with a normal profit margin on the sale. Cost would include the direct and indirect costs of getting the product to its retail condition and location. An example of these costs would include "freight in" and normal spoilage. Selling expenses would include "freight out" and abnormal spoilage. An exception to the cost principle in regard to inventory includes the concept of **"lower of cost or market"**. The GAAP principle of **conservatism** requires the loss be recognized in the period incurred **(matching principle).** The following terms need to be understood in determining inventories "lower of cost or market", **market ceiling (also known as net realizable value)** which is the selling price minus the costs to complete, **market floor** which is the market ceiling less a normal profit margin and finally the **replacement cost** which is the cost to purchase the item as of the valuation date. The market value is then determined by taking the middle value of the products market ceiling, market floor and replacement costs. The journal entry to write down inventory is generally to debit cost of goods sold and credit inventory. Once written down it cannot be reversed under GAAP. Under International Financial Reporting Standards **(IFRS)** it can be reversed but limited to the amount of the original write down.

There are two types of inventory systems to record inventory or keep track of the **count** of items. The **periodic** method uses **purchases** (not inventory), which is a temporary account, to record buys of additional inventory. The periodic method only determines inventory quantities and related costs upon the actual physical count of the goods or ending inventory. Beginning inventory plus purchases minus a "plug" or the cost of goods sold equals the ending inventory derived from the physical count. The **perpetual** system does not use purchases but rather the inventory account is updated for every purchase and sale as it happens.

The final discussion of inventory includes the cost flow assumptions. The four most prevalent cost flow assumptions are the **specific identification method**, used for distinctive high priced items, first in, first out **(FIFO)**, used primarily whenever normal spoilage is a concern, **weighted average method**, used with similar items and with a periodic count system and finally last in, first out **(LIFO)**, used in a period of rising prices to reduce income and income tax liability. LIFO is not permitted under IFRS.

Transaction Anaylsis

A. A business **transaction** is an event that affects the financial position of a business *and* may be reliably recorded.

B. **Account –** a basic component of an accounting system. The account, a basic summary device, shows all the increases and decreases in a particular asset, liability, or stockholders' equity. Accounts are grouped based on the accounting equation, **A = L + SHE**.

C. **Assets** – economic resources that benefit a business now, or will be of benefit to the business in the future. Cash, receivables, inventory, prepaid expenses, land, building, furniture, and equipment are examples of assets.

D. **Liabilities** – debts or other obligations of the business that must be satisfied in the future. Accounts and notes payable, salary payable, taxes payable, interest payable, and other accrued expenses are all examples of liabilities.

E. **Stockholders' Equity –** owners' (investors') claims on assets owned by the corporation. Common stock, retained earnings, dividends, revenues, and expenses are all stockholders' equity accounts. Other similar terms are "shareholders' equity" or "owners' equity."

F. **Revenues** – income earned from performing services or selling products. Revenues increase net income and retained earnings and thus increase stockholders' equity.

G. **Expenses** – costs incurred in operating a business. Expenses decrease net income and retained earnings and decrease stockholders' equity, which is just the opposite effect of revenues.

H. Business transactions are analyzed according to their effect on the **accounting equation**. The accounting equation must balance after each transaction is recorded.

I. **Single-entry** records one side of the transaction.

J. **Double-entry** records both the giving and receiving side of each transaction.

ACCOUNTING EQUATION

Assets = Liabilities + Stockholder's Equity

1. **Owners' investment of cash** increases both assets and stockholders' equity.
2. **Purchase of an asset for cash** increases assets and decreases assets (no effect on *total* assets).
3. **Purchase of an asset on credit** *(on account)* increases both assets and liabilities.
4. **Receipt of cash for service revenue** increases both assets and stockholders' equity.
5. **Performance of services *on account*** increases both assets and stockholders' equity.
6. **Cash payment of expenses** decreases both assets and stockholders' equity.
7. **Payment *on account*** decreases both assets and liabilities.
8. Personal transactions of the owner do not affect the business, per the entity concept.
9. **Collection of cash *on account*** increases assets and decreases assets.
10. **Sale of an asset** at a price equal to its cost increases assets and decreases assets.
11. **Declaration and payment of cash dividends** decreases both assets and stockholders' equity.

The FOUR FINANCIAL STATEMENTS

1. The **income statement** reports net income or net loss for the period (revenues minus expenses equals net income; if expenses exceed revenues, a net loss is reported).
2. The **statement of retained earnings** reports the change in retained earnings for the period, including both net income (from the income statement) and dividends.
3. The **balance sheet** reflects the accounting equation at the end of the period, proving that assets = liabilities + stockholders' equity. Included in the stockholders' equity section of the balance sheet is ending retained earnings (from the statement of retained earnings).
4. The **statement of cash flows** reports all cash receipts and disbursements for the period. Ending cash on the statement is the same as cash on the balance sheet.

DOUBLE ENTRY SYSTEM OF ACCOUNTING

A. Accounting is a **double-entry system** that reports the dual effects, giving and receiving, of all business transactions. Each transaction affects at least two accounts.

B. The **T-account** is an abbreviated form of an account, used to help illustrate the effect of transactions.

Account Name	
Debit entries (left side)	**Credit** entries (right side)

C. The type of account determines the side on which increases and decreases are recorded; the **rules of debit and credit** keep the accounting equation in balance.

1. **Increases in assets** are recorded on the **left (debit)** side of the account. **Decreases in assets** are recorded on the **right (credit)** side.

2. Rules for liabilities and stockholders' equity accounts are the opposite of the rules for assets. **Increases in liabilities and stockholders' equity** accounts are recorded on the **right (credit)** side of an account, and **decreases** are recorded on the **left (debit)** side.

E. Double-entry bookkeeping and the rules of debit and credit are based on the **accounting equation, A = L + SHE**. After each transaction is recorded, the equation must remain in balance.

F. After increases and decreases in an account are recorded, the amount remaining in the account is its **balance**. All account balances are computed by adding the beginning balance and the increases, and subtracting the decreases. (The balance equals the difference between total debit entries and total credit entries.)

JOURNALIZING AND POSTING

Transactions are **recorded first in the journal**, a chronological listing of all the entity's business transactions.

A **journal entry** would appear as follows:

Account Name	XX (debit amount)	
Account Name		XX (credit amount)

A brief explanation of the transaction appears here.

Ledger – a group of accounts. All the accounts of a business grouped together form a book called the ledger (or general ledger).

Posting – the process of copying (transferring) data from the journal to accounts in the ledger.

1. Debits in the journal are posted as debits to the appropriate accounts; credits in the journal are posted as credits to the appropriate accounts.
2. All transactions must be keyed by date or number to provide a link between the journal and the ledger

The **trial balance** is a listing, in general ledger order (assets, liabilities, then stockholders' equity), of the debit or credit balance in each account.

The **chart of accounts** lists all the accounts (in numerical order by their account number) and their account numbers

1. Accounts are **numbered** beginning with assets, then liabilities, stockholders' equity, revenues, and finally expenses; accounts in the ledger are always in this same order.

The **normal balance** of an account is the side used to record increases;

Uncollectible Accounts Receivable

Accounts receivable (AR) are the amounts due from customers who have purchased goods or services from a company on credit. In the normal situation, the customer pays the money owed within 30 to 60 days. However, not all customers pay; this is referred to as an uncollectible accounts receivable, and it is an expected expense of doing business. Accounts receivable are a current asset, so it would be misleading for a company to continue to report old uncollectible AR on the balance sheet. Companies must reduce their AR to reflect the receivables that are uncollectible. There are two different ways to do this; the direct write-off method and the allowance method.

Direct Write-Off Method: With this method, a company waits until they have completely given up on collecting a particular customer's AR before writing it off. For example, in October 2012, ABC Company makes a credit sale to Green Company for $100,000 and records the credit sale with this journal entry:

Accounts Receivable-Green	100,000	
Sales		100,000

Green does not pay during 2012 or 2013. Finally, in April 2014, ABC decides to write off the receivable due from Green as follows:

Bad Debt Expense (also called Uncollectible Account Expense)	100,000	
Accounts Receivable-Green		100,000

There are **TWO WEAKNESSES** with the direct write-off method:

1. **Violates Matching on the Income Statement** - Revenue of $100,000 is recorded in the 2012 income statement, but a related expense (Bad Debt Expense) is recorded two income statements later in 2014.
2. **Overstates Accounts Receivable on the Balance Sheet**- Accounts receivable are not recorded at their Net Realizable Value (NRV) on the 2013 balance sheet. NRV is the gross amount of the AR less the amount estimated to be uncollectible. Leaving Green's old AR of $100,000 on the 12/31/13 balance sheet is very misleading because it is unlikely that the $100,000 will be collected, so this AR has no future benefit and, therefore, is not an asset.

Allowance Method: Due to these two weaknesses, the direct write-off method is NOT permitted under GAAP. Instead, GAAP permits the Allowance Method. There are two different approaches permitted under the Allowance Method:

1. **Income Statement Approach (also called Percentage of Sales)** - corrects for the matching weakness under the direct write-off method.

2. **Balance Sheet Approach (also called Percentage of AR or AR Aging)** - corrects for the overstatement of AR under the direct write-off method.

Income Statement Approach (Percentage of Sales) - Under this approach, managers of a company must estimate what percentage of the current period's sales they believe will be uncollectible (based on past experience) and record these uncollectible AR in the SAME accounting period as the revenues. This results in proper matching. For example, if XYZ Company has total credit sales in October 2014 of $800,000, and based on past experience, expects 1% to be uncollectible, the following two journal entries would be recorded:

Oct./2014	Accounts Receivable	800,000	
	Sales		800,000
Oct./2014	Bad Debt Expense ($800,000 X .01)	8,000	
	Allowance for Doubtful Accounts		8,000

These entries are making sure that once the revenues of $800,000 are recorded in the 2014 income statement, that the related expense, Bad Debt Expense, is matched to those revenues in the same 2014 income statement. Bad Debt Expense would appear on the Income Statement as an operating expenses. The Allowance for Doubtful Accounts (also referred to as the Allowance for Uncollectible Accounts) is a contra asset account and would appear as a reduction to the AR account on the balance sheet.

Balance Sheet Approach (Percentage of AR Balance) - Under this approach, managers of a company must estimate what percentage of the AR balance is believed to be uncollectible (based on past experience) and make sure that this estimated amount is the balance in the Allowance for Doubtful Accounts (AFDA). For example, if EFG Company has an AR balance of $161,000 and an AFDA balance of $2,500 credit at 12/31/2014, and if management estimates that 3% of their AR balance will be uncollectible, then the following entry would be needed to adjust the AFDA to the correct balance:

12/31/2014	Bad Debt Expense	2,330	
	Allowance for Doubtful Accounts		2,330

.03 X $161,000 = $4,830. This amount ($4,830) is needed in the AFDA; however, there is already $2,500 in the AFDA, so only $2,330 more should be added to the AFDA ($4,330 - $2,500 = $2,330).

Balance Sheet Approach (AR Aging) - Rather than taking a single percentage times the entire AR balance as was done above, companies can instead "age" their AR into various aging categories and apply a different percentage to each category. The percent estimated to be uncollectible would likely go up as the age of the AR goes up. For example, at 12/31/2014, QRS Company has a total of $500,000 in AR and $5,200 credit in AFDA. QRS Company ages its AR into the following four aging categories:

Age of AR	**Amount**	**% Estimated to be Uncollectible**	**Amount Uncollectible**
1 to 30 days	$280,000	1%	$2,800 (.01 X $280,000)

31 to 60 days	$100,000	3%	3,000
61 to 90 days	$ 70,000	5%	3,500
Over 90 days	$ 50,000	10%	5,000
	$500,000		$14,300 Total

The amount needed in the AFDA is a credit balance of $14,300; however, there is already a credit of $5,200 in the AFDA, so another $9,100 needs to be added into the AFDA ($14,300 - $5,200 = $9,100):

12/31/2014	Bad Debt Expense	9,100	
	Allowance for Doubtful Accounts		9,100

Writing Off an Account Under the Allowance Method: Once a company gives up on collecting a particular customer's AR under the allowance method (e.g., $100,000 due from Red Company), the following entry is made:

Allowance for Doubtful Accounts	100,000	
Accounts Receivable-Red		100,000

This entry has NO effect on the financial statements; it is reducing the asset account, AR, and it is also reducing the contra AR account, AFDA, so the end result is no effect on total assets and no effect on the financial statements. For example, assuming an AR balance of $4,000,000 and an AFDA balance of $400,000 before the write-off of the $100,000 AR due from Red Company, here is the effect of the write-off:

	Before Write-Off		**After Write-Off**	
AR	$4,000,000		$3,900,000	
AFDA	400,000		300,000	
Net AR		$3,600,000		$3,600,000

So since there is no effect on the financial statements of writing off an AR, then why even make the write-off entry? The entry needs to be made periodically so that the company's list of customers who have an outstanding AR balance (which is called the AR subsidiary journal) does not become overly voluminous due to being full of very old uncollectible AR balances.

Combining the Income Statement Approach and Balance Sheet Approach: Most companies use these two approaches together. The income statement approach is used for monthly or quarterly financial statements prepared during the fiscal year. The balance sheet approach (usually with an aging) is used at fiscal year end.

ACCOUNTING 202

ETS MFTB Review Sheets
ACCT202 Managerial Accounting —Spring 2015
Activity-Based Costing, Standard Costs and Variances, and Performance Evaluation
By Ron Woan, 2/27/2015

1. Activity-Based Costing (ABC)

Activity: work performed or task undertaken by an organization that cause cost to be incurred.

The activity/cost hierarchy: A useful guide setting up activity cost pools:

Unit-level (volume-related) activities: those activities performed each time a unit is produced, e.g., grinding, polishing, assembly, etc.

Batch-level activities: those activities performed each time a batch is produced, e.g., setups, purchasing, materials handling, etc.

Product-level activities: those activities performed to enable the various products to be produced, e.g., engineering changes to products, introducing new products, expediting goods, etc.

Facility (or Plant)-level activities: those activities performed to sustain a factory's general manufacturing processes, e.g., plant management salaries, property taxes, providing plant maintenance and security, plant insurance, etc.

Cost driver (CD): A CD drives/causes activity's costs. CD is used to measure activity volume.

Allocation base (cost driver) is selected for each activity cost pool formed from each level in the hierarchy and the costs of an activity cost pool are allocated to cost objects/products based on their relative consumption/usage of the cost driver. Traditional plant-wide or departmental MOH allocations use only unit-level (volume-related) allocation bases such as direct labor hours, direct labor cost or machine hours. Thus, traditional MOH cost allocation tends to overcost high volume products and undercost low volume products.

The process of allocating MOH to products under ABC follows that of departmental MOH allocation with activity cost pools replacing departmental cost pools.

Using activity-based costing to assist cost management is called activity-based management (ABM). ABC is mainly used for cost management, more accurate product cost for pricing or other decision making.

The distinctive contribution of ABC to cost allocation is the recognition of unit-level, batch-level, product-level and plant-level overhead cost hierarchy; Traditionally, only unit-level activities are recognized.

2. Standard Cost

Standard cost is predetermined cost of producing (or budget for) a single unit of product.

Ideal (or perfection) standards: standards based on perfect/ideal operating conditions. They do not allow for any poor-quality raw materials, waste in the production process, machine breakdown or other inefficiencies.

Practical (or attainable) standards: standards based on normal operating conditions. They include allowances for normal amounts of waste and inefficiency.

In general, practical standards are used in practice for control purpose, whereas ideal standards are used for continuous improvement (kaizen costing) purpose. For each product cost elements (direct materials (DM), direct labor (DL), manufacturing overhead (MOH)) there are two standards: quantity and price standards

3. Variances

For DM and DL, flexible budget variance is decomposed into the following:

Price/rate variance = (Actual price/rate per input unit – Standard price/rate per input unit) x Actual quantity of input

Quantity/ efficiency variance = (Actual quantity of input – Standard quantity of input allowed) x Standard price per input unit

Flexible budget variance = Price variance + quantity variance

For MOH,

Variable MOH rate/spending variance = AB x (AR - SR)

Variable MOH efficiency variance = SR x (AB - SBA)

Where, AB = Actual allocation base amount, SBA =Standard allocation base amount allowed for actual production, AR = actual variable MOH rate and SR = Standard variable MOH rate
(Note that variances for variable MOH are similar to those for DM and DL)

Flexible budget variance =Spending variance + Efficiency variance

Fixed overhead budget variance = Actual fixed MOH - Budgeted fixed MOH

Fixed overhead production volume variance = Budgeted fixed MOH - Standard fixed MOH allocated to actual production

4. Performance Evaluation

Management by exception directs management's attention to a large variance between an actual and budget amounts (budget variance) in a performance report.

The budget variances are generally disaggregated into flexible budget variances and volume variances.

Responsibility centers:

Cost Center (CC): In a CC, managers are accountable to costs.

Revenue Center (RC): In a RC, managers are accountable to revenues.

Profit Center (PC): In a PC, managers are accountable to **both** revenues and costs, and hence, profits. Contribution margin income statement is used to evaluate a PC.

Investment Center (IC): In an IC managers are accountable to revenues, costs and assets.

The following key performance index (KPI) are generally used for IC evaluation:

Return on Investment (ROI) = Operating income ÷ Total Assets = Sales/Profit Margin x Capital /Asset Turnover, where

Sales Margin = Operating income ÷ Sales and Capital Turnover = Sales ÷ Total Assets

Residual Income (RI) = Operating income – (Target rate of return x Total assets)

RI promotes/enhances goal congruence better than ROI. Goal congruence occurs when the goals of segment managers align with the goals of top management

Review Sheet
ACCT 202 - Accounting Principles II

Ch. 9. The Master Budget and Responsibility Accounting

- Companies and organizations use budgets to plan for the future and control their business activities.
- Budget Cycles are:
  - *Planning* (preparing budget),
  - *Directing* (carrying out budget), and
  - *Controlling* (results compared to budget to provide feedback and to take corrective actions).
- Budgets provide a *benchmark* that motivates employees to achieve, and a *benchmark* for evaluating performance comparing actual results to budget.
- The *master budget* is the comprehensive planning document including all of the supporting budgets of the entire company.
- Supporting budgets for a manufacturing company in the order they are prepared
  - Sales budget
  - Production budget
  - Direct materials budget, direct labor budget, and manufacturing overhead budget
  - Operating expenses budget
  - Budget income statement
  - Cash receipts budget and cash disbursement budget
  - Budgeted balance sheet
- A *responsibility center* is a sub-unit of an organization whose manager is accountable for their activities for which budgets are prepared.
- Examples of Responsibility Centers are:
  - Cost center (at a manufacturing plant, managers are responsible for controlling costs.)
  - Revenue center (in a region, managers are responsible for generating sales revenues.)
  - *Etc.*
- *Responsibility accounting* is a system for evaluating the performance of each *responsibility center* and its manager.

Cash Flow Statement – Indirect Method.
Objective: To prepare a cash flow statement using indirect method.
Cash Flow Statement has three sections – Operating, Investing, and Financing. The order of presentation of these three sections must be followed. Make sure you understand the definitions of operating, investing, and financing activities. Cash Flow statement explains the change in cash balance from one period to another in a balance sheet. Mechanics of making a cash flow are given below:
Cash Flow Statement Operating Activities
Net Income (or Net Loss)
add depreciation/amortization during the period (from the income statement)
add loss on sale of assets
add decrease in current assets
add increase in current liabilities
less gain on sale of assets
less increase in current assets
less decrease in current liabilities

Net cash provided/(used) by operating activities (1)

Cash flow from Investing Activities

Add Cash Receipts from sale of property/equipment/property/business segment
Add Cash Receipts from sale of investments in securities other than trading securities
Less Cash Payment for sale of property/equipment/property/business segment
Less Cash Payment for purchase of debt or equity securities other than trading securities
Less Cash paid for loans to other entities

Net cash provided/(used) by investing activities (2)

Cash flow from Financing Activities

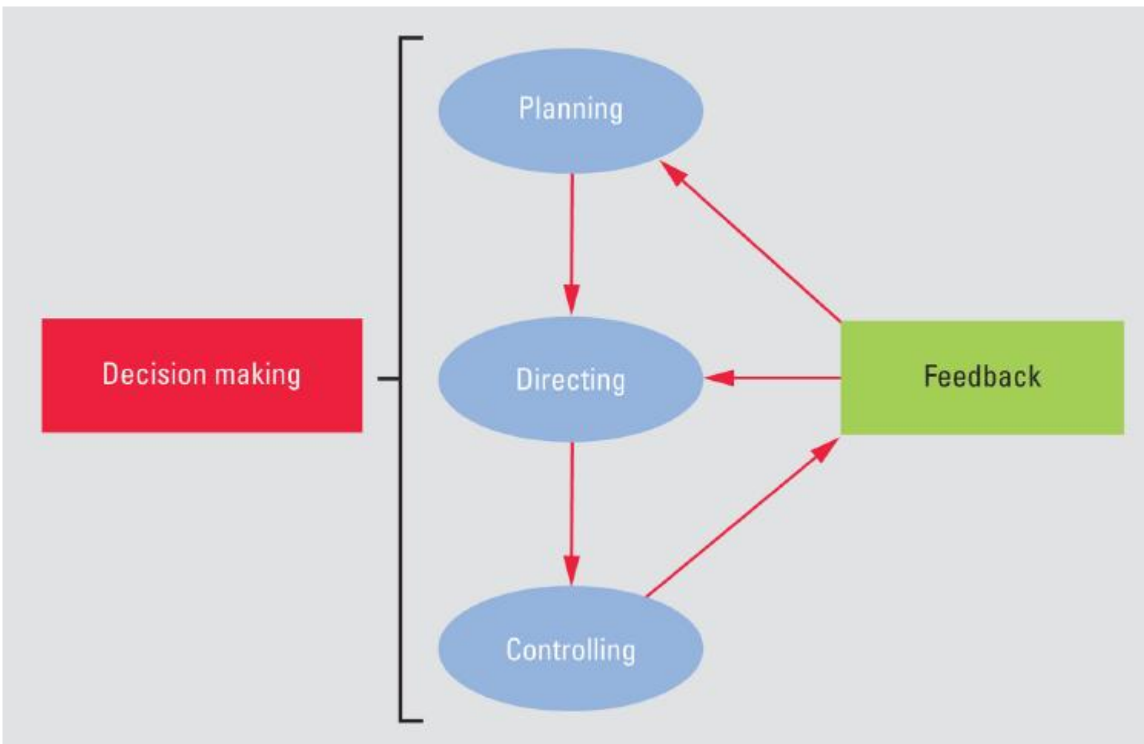
Add cash receipts from issuing own stock
Add cash receipts from borrowing
Less cash payment on repurchasing own stock (treasury)
Less cash payments for dividends
Less principal amount repaid

Net cash provided/(used) by Financing activities (3)
The increase or decrease in cash from adding (1+2+3) the net cash flows from three activities is the change in cash balance from one period to another.

Introduction to Managerial Accounting

Managerial Accounting helps managers fulfill their three primary responsibilities

1. **<u>Planning</u>**
   a. Involves setting goals and objectives
2. **<u>Directing</u>**
   a. Overseeing the day to day operations
3. **<u>Controlling</u>**
   a. Evaluating results of business operations against the plan and making adjustments.



Differences Between Managerial and Financial Accounting

MANAGERIAL ACCOUNTING	ISSUE	FINANCIAL ACCOUNTING
Internal users such as managers.	Who are the primary users of the information?	External users, such as creditors, stockholders, and government regulators.
To help managers plan, direct, and control business operations and make business decisions.	What is the purpose of the information?	To help external users make investing and lending decisions.
Any internal accounting report deemed worthwhile by management.	What is the primary accounting product?	Financial statements.
Management determines what it wants in a report, and how it wants it formatted. Reports are prepared only when management believes the benefit of using the report exceeds the cost of preparing the report.	What must be included in the report, and how must it be formatted?	Generally Accepted Accounting Principles (GAAP) determine the content and format of financial statements.
While some information is based on past transactions, managerial accounting focuses on the future. It provides information on both external and internal transactions.	What is the underlying basis of the information?	The information is based on historical transactions with external parties.
The data must be relevant.	What information characteristic is emphasized?	The data must be reliable and objective.
Segments of the business, such as products, customers, geographical regions, departments, and divisions.	What business "unit" is the report about?	The company as a whole (consolidated financial statements). Limited segment data is provided in the footnotes.
It depends on management's needs. Some reports are prepared daily, while others may be prepared only one time.	How often are the reports prepared?	Annually and quarterly.
There are no independent audits. However, the company's internal audit function may examine the procedures used in preparing the reports.	Does anyone verify the information?	Independent certified public accountants (CPAs) audit the annual financial statements of publicly traded companies and express an opinion on the fairness of the financial information they contain.
No authoritative body requires managerial accounting reports.	Is the information required by an outside group/ government agency?	Yes, the Securities and Exchange Commission (SEC) requires publicly traded companies to issue annual audited financial statements.
Management carefully considers behavioral implications when designing the managerial accounting system.	Is there any concern over how the reports will affect employee behavior?	The concern is about adequacy of disclosure; behavioral implications are secondary.

Organizational Structure

The stockholders elect a **<u>Board of Directors</u>** to oversee the company.
CEO-Chief Executive Officer
CFO-Chief Financial Officer

The **<u>institute of Management Accountants</u>** is a professional association for management accountant in the United States. The IMA issues the CMA Certified Management Accountant Certification.

The IMA has developed principles and standards to help management accountant deal with ethical challenges.

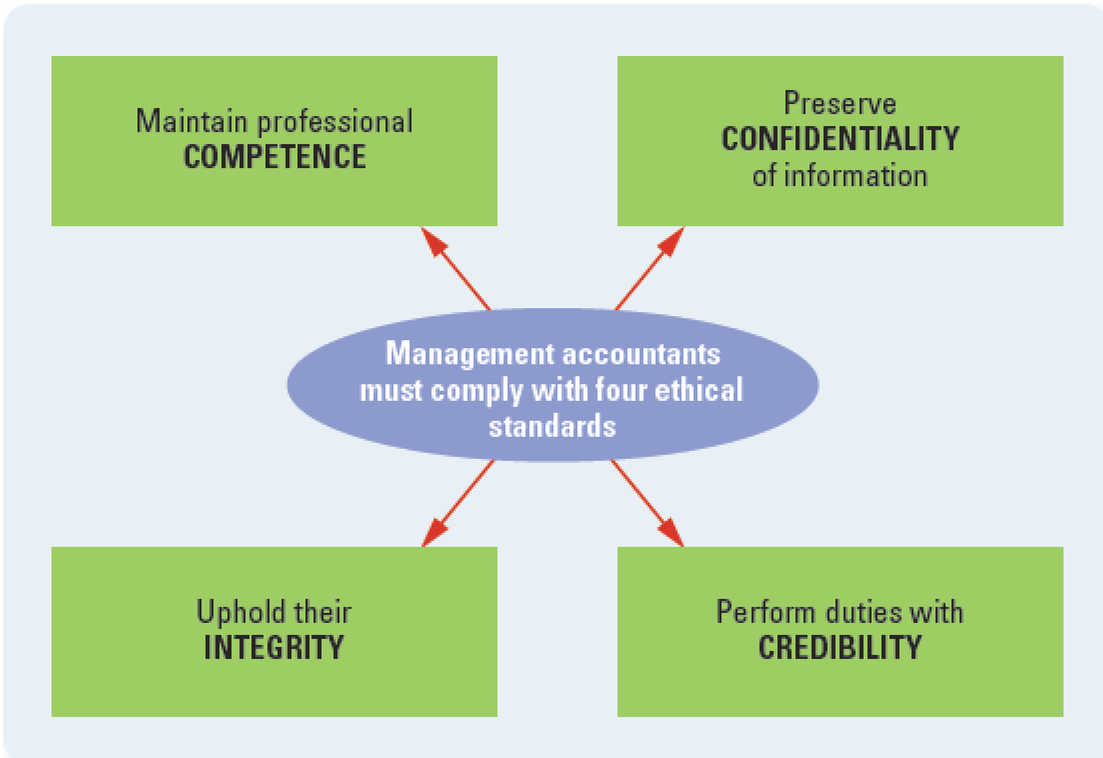


EXHIBIT 1-6 IMA Statement of Ethical Professional Practice

Members of IMA shall behave ethically. A commitment to ethical professional practice includes: overarching principles that express our values, and standards that guide our conduct.

Principles

IMA's overarching ethical principles include: Honesty, Fairness, Objectivity, and Responsibility. Members shall act in accordance with these principles and shall encourage others within their organizations to adhere to them.

Standards

A member's failure to comply with the following standards may result in disciplinary action.

I. Competence

Each member has a responsibility to:

1. Maintain an appropriate level of professional expertise by continually developing knowledge and skills.
2. Perform professional duties in accordance with relevant laws, regulations, and technical standards.
3. Provide decision support information and recommendations that are accurate, clear, concise, and timely.
4. Recognize and communicate professional limitations or other constraints that would preclude responsible judgment or successful performance of an activity.

II. Confidentiality

Each member has a responsibility to:

1. Keep information confidential except when disclosure is authorized or legally required.
2. Inform all relevant parties regarding appropriate use of confidential information. Monitor subordinates' activities to ensure compliance.
3. Refrain from using confidential information for unethical or illegal advantage.

III. Integrity

Each member has a responsibility to:

1. Mitigate actual conflicts of interest. Regularly communicate with business associates to avoid apparent conflicts of interest. Advise all parties of any potential conflicts.
2. Refrain from engaging in any conduct that would prejudice carrying out duties ethically.
3. Abstain from engaging in or supporting any activity that might discredit the profession.

IV. Credibility

Each member has a responsibility to:

1. Communicate information fairly and objectively.
2. Disclose all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, analyses, or recommendations.
3. Disclose delays or deficiencies in information, timeliness, processing, or internal controls in conformance with organization policy and/or applicable law.

Institute of Management Accountants. Adapted with permission (2006).

Building Blocks of Managerial Accounting

<u>Service Companies</u> are in business to sell intangible assets, insurance, banking, law firms, accounting firms. They have no inventory accounts.

Merchandising Company

Resell tangible products, like Wal-Mart and Best buy. Retailers sell to consumer, while wholesalers are middlemen who sell to retailers.
Merchandisers have one inventory account.

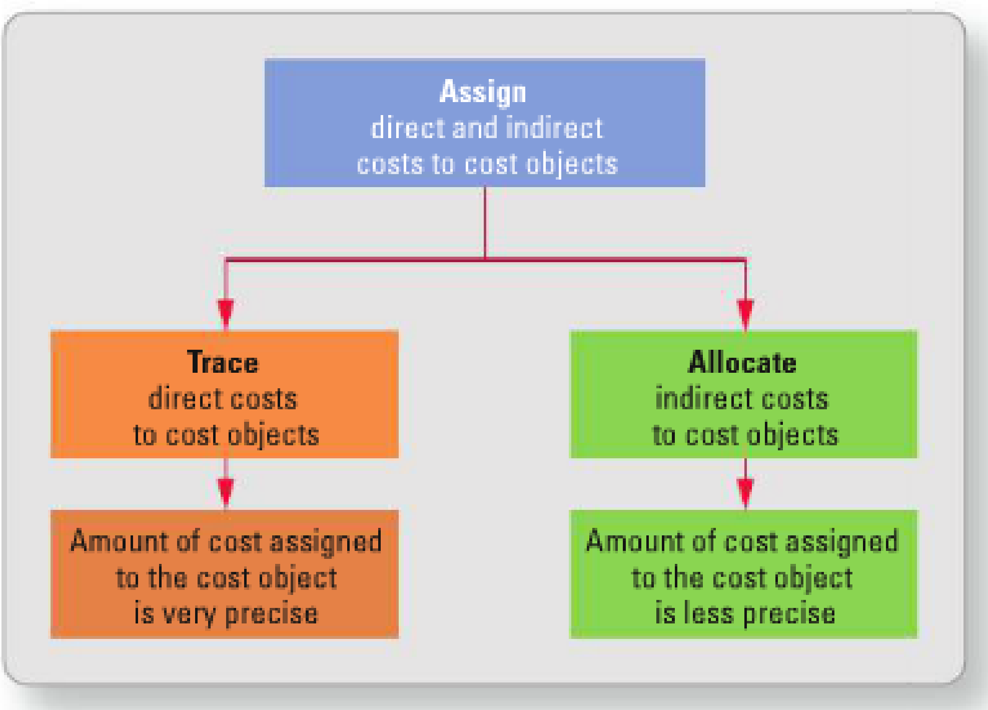
Manufacturing Companies

Use labor, plant and equipment to convert raw materials into finished products.
They have 3 inventory accounts

1. Raw Materials
2. Work in Process (WIP)
3. Finished Goods

The value chain adds value to products and services.

A cost object is anything for which managers want a separate measurement of cost.
Costs are classified as either direct or indirect in respect to a cost object.
A direct cost is a cost that can be traced to the cost object. An indirect cost is a cost that relates to the cost object but cannot be traced to it. Assigning Costs to Cost Objects



Product vs. Period Costs

Inventorable product costs include only the costs incurred during the production or purchase stage of the value chain . For manufactures, Direct Materials (DM), Direct Labor (DL), and Manufacturing Overhead (MOH).

Period costs are often called operating expenses or Selling General and Administrative Expenses (SG&A).

Direct Materials:

Are the primary material that become physical part of the finished product.

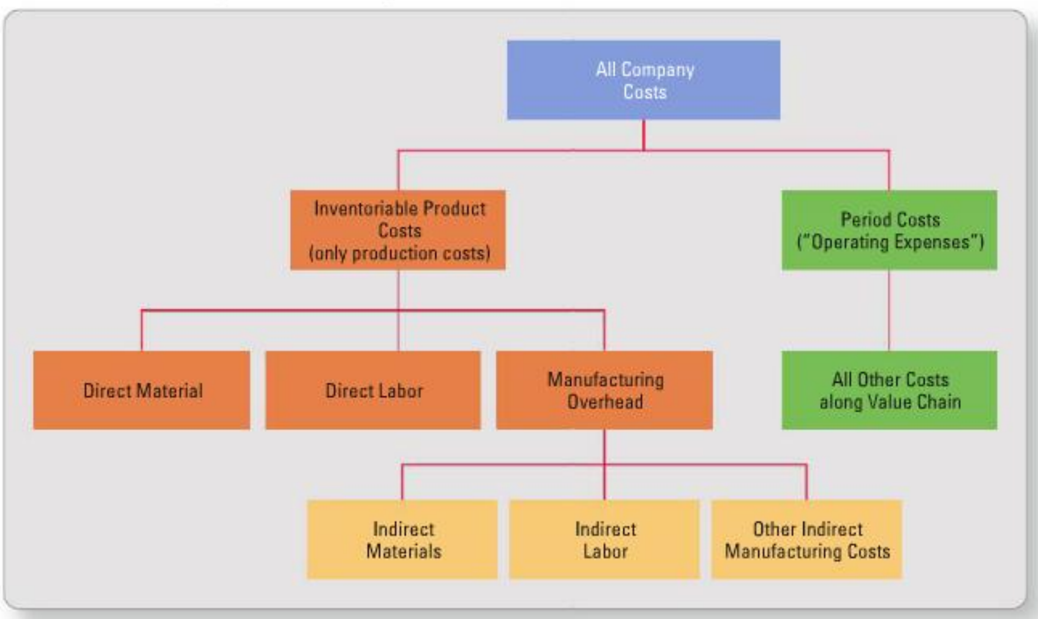
Direct Labor:

Is the cost of compensating employees who physical convert raw materials into company products.

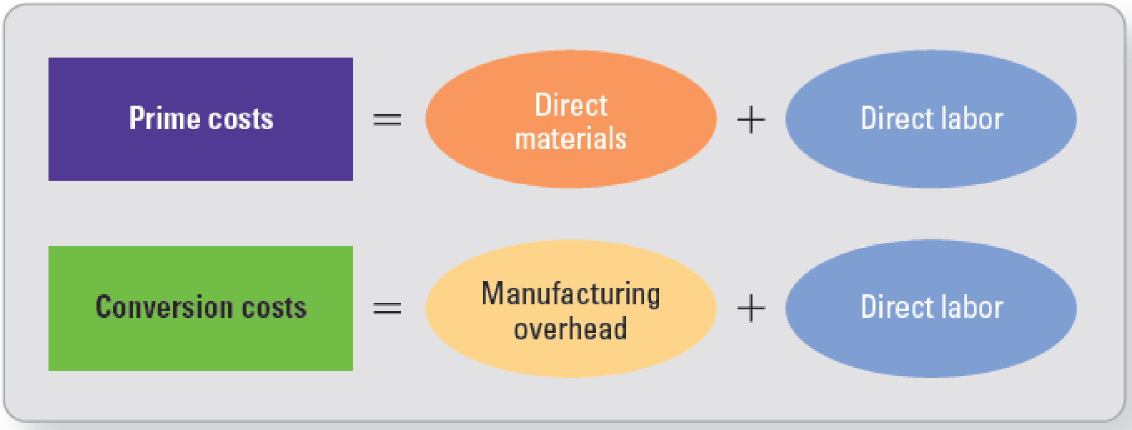
Manufacturing Overhead (MOH)

Includes all manufacturing costs other than direct material and direct labor, namely indirect costs including indirect materials and indirect labor.

Summary of Manufacturing Companies Costs



Prime and Conversion Costs

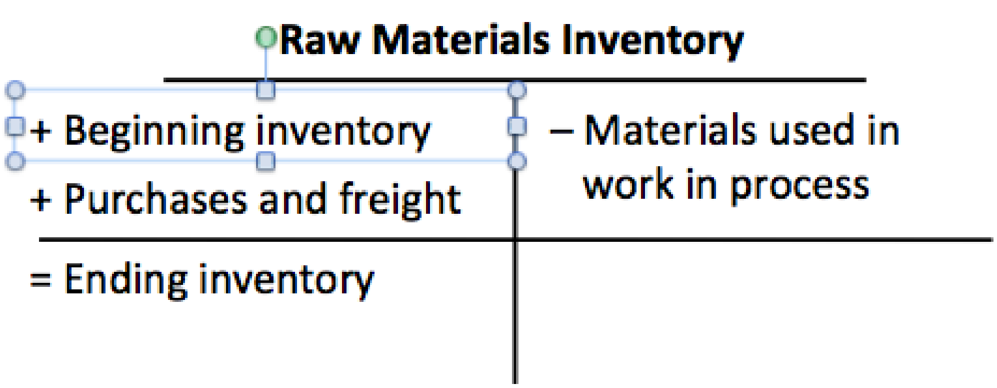


Product vs. Period Costs

	----------------------------------All Costs Across the Value Chain----------------------------------	
	Inventoriable Product Costs	**Period costs**
Service Companies	None	All costs across value chain
Merchandising Companies	Cost of merchandise itself Freight-in Import duties and customs, if any	All other costs across value chain
Manufacturing Companies	Direct materials Direct labor Manufacturing overhead	All other costs across value chain
Accounting Treatment	Treat as inventory until product is sold. When sold, expense as "Cost of Goods Sold."	Expense in period incurred as "Operating Expenses" or "Selling, General, and Administrative expenses."

Manufacturing Companies Inventory Accounts

Raw Material Inventory



Work In Process Inventory

Work in Process Inventory

+ Beginning inventory + Materials used from raw materials + Direct Labor + Manufacturing overhead	– Cost of goods manufactured and sent to finished goods
= Ending inventory	

Finished Goods Inventory

Finished Goods Inventory

+ Beginning inventory + Cost of goods manufactured	– Cost of goods sold
= Ending inventory	

Controllable and Uncontrollable Costs

Controllable

Management can influce the change in cost

Uncontrollable

Management cannot change of influence the cost int eh short term.

Relevant costs are differential.

Sunk cost is in the past, nothing you can do about it now.

Marginal cost is the cost of making one more unit.
Fixed costs do not change in total but change per unit.
Variable costs do not change per unit but vary in total.

CHAPTER 1
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. Which of the following are a manager's four primary responsibilities?
   A. Budgeting, Directing, Controlling, Decision-Making
   B. Budgeting, Planning, Controlling, Decision-Making
   C. Planning, Directing, Controlling, Decision-Making
   D. Budgeting, Planning, Directing, Controlling

2. Which of the following is an example of controlling?
   A. Management decides to open a new storage facility in Canada.
   B. After comparing budget to actual, management adjusts its plan to keep the company on goal.
   C. After reviewing the daily sales, management revises its staffing schedule.
   D. Management sets goals to meet in the next fiscal year.

3. Which of the following is TRUE about managerial accounting vs. financial accounting?
   A. Both managerial and financial reports are prepared quarterly and annually.
   B. Managerial accounting is primarily utilized by internal users, while financial accounting is primarily utilized by external users. .
   C. The primary information characteristics for managerial accounting are reliability and objectivity, while the primary information characteristic for financial accounting is relevance.
   D. The IMA requires managerial accounting reports and the SEC requires financial accounting reports.

4. Which of the following statements is FALSE?
   A. Managers are concerned with the internal use of accounting information.
   B. Managerial accounting information relies heavily on its reliability and objectivity.
   C. Managerial accounting reports are not required by any authoritative body.
   D. Managerial accounting information must be relevant.

5. Which of the following statements is FALSE?
   A. The treasurer and controller report directly to the CFO.
   B. The COO is responsible for the company's operations.
   C. The board of directors hires the CEO to manage the company on a daily basis.
   D. The internal audit department reports solely to the CFO.

6. The individual responsible for managing all of the operations of the organization, such as product packaging, is the:
   A. COO.
   B. CFO.
   C. CEO.
   D. CPA.

7. Which of the following skills is NOT required of management accountants?
   A. Analytical skills
   B. Ability to work on a team
   C. Oral and written communication skills

D. Speak a foreign language

8. Management accountants must comply with all of the following ethical standards EXCEPT:
   A. reporting ethical breaches to the IMA.
   B. maintaining professional competence.
   C. performing duties with credibility.
   D. preserving confidentiality of information.

9. Which of the following is NOT an important result of the Sarbanes-Oxley Act of 2002?
   A. Stiffer penalties and imprisonment were instituted for white collar crimes.
   B. The audit committee must be independent and include a financial expert.
   C. Employees are responsible for the financial reporting completed in their department.
   D. CPA firms have limitations on non-audit service for audit clients.

10. Which of the following is NOT a current business trend?
   A. Total Quality Management
   B. Inventories delivered in large quantities at a discount
   C. Time sensitivity for purchase, delivery, & service
   D. ISO quality standards

CHAPTER 2
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. A portion of a company's inventory is shown below:

Sales		$350,000
Cost of Goods Sold:		
Beginning Inventory	$ 15,000	
Purchases	250,000	
Cost of Goods Available for Sale	265,000	
Less: Ending Inventory	13,000	
Cost of Goods Sold		252,000
Gross Profit		$ 98,000

What type of company is illustrated?
E. Service Corporation
F. Merchandising Corporation
G. Manufacturing Corporation
H. Not-for-profit Corporation

2. Which of the following is NOT a value chain activity?
E. Research & Development
F. Production
G. Distribution
H. Quality Control

3. Which of the following is a direct cost in the production of tire jacks for a machine shop?
A. Utilities
B. Taxes
C. Steel
D. Rent

4. Which of the following is an indirect cost in the construction cost of a home for a building company?
B. Insurance
B. Paint
C. Lumber
D. Carpeting

5. Which of the following companies has all costs along the value chain accounted for as period costs?
A. Service Corporation
B. Merchandising Corporation
C. Manufacturing Corporation
D. None of the above

6. A manufacturer would treat direct materials, direct labor, and overhead as:
   E. inventoriable product costs.
   F. period costs.
   G. both inventoriable product and period costs.
   H. neither inventoriable product nor period costs.

7. Which of the following is NOT a relevant cost when buying new manufacturing equipment?
   E. Sales tax
   F. Cost of machine being replaced
   G. Purchase price
   H. Insurance on the machine

8. Which of the following is a fixed cost for a plant that manufactures iPods?
   E. Plastic used to make the cases
   F. Employee wages for assembly
   G. Computer chip used in each iPod
   H. Straight-line depreciation on stamping machine used to form iPod cases

9. Which of the following is a variable cost for a plant that manufactures iPods?
   E. Advertising costs
   F. Salary of payroll clerk
   G. Straight line depreciation of warehouse building
   H. Wire used for the headphones

10. Rocketspray's manufacturing costs for July are:
    * Materials cost: $4,000
    * Labor cost: $3,200
    * Overhead: $800

    If Rocketspray's one plant employee manufactured 10 bottles per hour, and worked 8 hours per day for 20 days in July, what is the cost per bottle?

    A. $3 C. $20
    B. $5 D. $24

CHAPTER 5
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. Which of the following would use process costing?
   A. Custom home builder
   B. Bottled catsup manufacturer
   C. Law office
   D. Wedding planner

2. Equivalent units:
   A. express the amount of work done during a period in terms of fully completed units of output.
   B. are not necessary when preparing a production cost report.
   C. for direct materials and conversion costs are always the same.
   D. are used in job order costing systems.

3. Recording the cost of direct materials used in the Forming Department would include a:
   A. debit to Raw Materials Inventory
   B. debit to Work in Process – Forming
   C. credit to Accounts Payable
   D. credit to Manufacturing Overhead

4. Conversion costs include:
   A. direct materials and direct labor.
   B. direct materials and manufacturing overhead.
   C. direct labor and manufacturing overhead.
   D. manufacturing overhead only.

5. Which of the following statements about the FIFO and weight-average methods is TRUE?
   A. The FIFO method of process costing is simpler than the weighted-average method.
   B. The results between the FIFO and weighted-average methods are usually significantly different.
   C. The two costing methods differ only in how they treat beginning inventory.
   D. The weighted-average method requires that any units in beginning inventory be costed separately from any units started in the current period.

6. Hay Company had 2,000 units in its beginning inventory, 4,000 units in its ending inventory, and completed and transferred out 16,000 during the month. What are the total units to account for?
   A. 18,000
   B. 22,000
   C. 12,000
   D. 20,000

7. Transferred-In costs include which of the following?
   A. Costs incurred in the current process.
   B. Costs incurred in the previous process.
   C. Costs of the previous process combined with costs of the current process.

D. Costs of the current process combined with costs of the next process.

8. The Shaping Department started the month with a beginning work in process inventory of $20,000. During the month, it was assigned the following costs: direct materials $148,000; direct labor, $54,000; overhead allocated at the rate of 30% of direct labor cost. Inventory with a cost of $220,000 was transferred to finished goods. What was the ending balance of work in process inventory for the department?
   A. $ 18,200
   B. $ 2,000
   C. $220,000
   D. $238,200

9. There are 15,000 units in work in process inventory for the Mixing Department at the end of the month. The units were 30% complete for direct materials. What are the equivalent units for direct materials using the weighted-average method?
   A. 5,000
   B. 15,000
   C. 10,000
   D. 4,500

10. Using the same information as in Question 9, assume that the beginning work in process inventory for the Mixing Department had $7,000 in direct material cost; and that $38,000 in direct materials were added during the month. What is the cost per equivalent unit for direct materials?
    A. $ 8.44
    B. $ 9.00
    C. $10.00
    D. $ 4.50

CHAPTER 3
TEN-MINUTE QUIZ

Circle the letter of the best response:

3. Which of the following products would have its costs accumulated using a job costing system?
   I. Wrapping paper
   J. iTunes cards
   K. Dinner at a restaurant
   L. Fishing supplies

4. Which of the following companies would use a process costing system?
   I. Diamond mining corporation
   J. Home construction company
   K. Marketing firm
   L. Law firm

3. Which of the following is used to document the manufacturing costs of direct materials, direct labor, and manufacturing overhead?
   A. Raw materials record
   B. Cost Assignment record
   C. WIP inventory
   D. Job cost record

4. When accounting for materials and labor, materials purchased are recorded in:
   C. raw materials inventory. C. finished goods inventory.
   B. work in process inventory D. cost of goods sold.

5. When accounting for materials and labor, indirect labor is recorded in:
   A. raw materials inventory. C. finished goods inventory.
   B. work in process inventory. D. manufacturing overhead.

6. The predetermined manufacturing overhead rate is computed using:
   i) actual manufacturing overhead costs.
   ii) total estimated manufacturing overhead costs.
   iii) actual quantity of the manufacturing overhead allocation base.
   iv) total estimated quantity of the manufacturing overhead allocation base.

   I. i and iii C. iii and i
   J. ii and iv D. iv and ii

7. When selecting a manufacturing overhead allocation base, managers should select the:
   I. cost driver of those manufacturing overhead costs.
   J. activity based products.
   K. number of products produced.
   L. same number used in prior years.

8. Which is the entry to record the completion of a job costing $5,000 to produce?

I.	Raw Materials Inventory	5,000	
	Finished Goods Inventory		5,000
J.	Finished Goods Inventory	5,000	
	Work in Process Inventory		5,000
K.	Work in Process Inventory	5,000	
	Finished Goods Inventory		5,000
L.	Cost of Goods Sold	5,000	
	Finished Goods Inventory		5,000

9. Which is the journal entry to record the closing of manufacturing overhead given the following facts?
   * The actual manufacturing overhead is $7,100.
   * The estimated manufacturing overhead was $7,000.
   * The amount of overhead allocated is $7,200.

A.	Cost of Goods Sold	200		
	Manufacturing Overheard			200
B.	Cost of Goods Sold	100		
	Manufacturing Overhead			100
C.	Manufacturing Overhead	100		
	Cost of Goods Sold		100	
D.	Manufacturing Overhead	200		
	Cost of Goods Sold			200

10. A computer consultant uses the job costing system and has a pre-determined overhead rate of $10 per direct labor hour. This amount is based on an estimated overhead of $20,000 and an average time of 0.5 hours per job. Job # 521 incurred direct material costs of $25 and two direct labor hours costing of $55 per hour. The total cost of job 521 is:

C.	$ 90.	C.	$155.
D.	$100.	D.	$180.

CHAPTER 5
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. Which of the following would use process costing?
   A. Custom home builder
   B. Bottled catsup manufacturer
   C. Law office
   D. Wedding planner

2. Equivalent units:
   A. express the amount of work done during a period in terms of fully completed units of output.
   B. are not necessary when preparing a production cost report.
   C. for direct materials and conversion costs are always the same.
   D. are used in job order costing systems.

3. Recording the cost of direct materials used in the Forming Department would include a:
   A. debit to Raw Materials Inventory
   B. debit to Work in Process – Forming
   C. credit to Accounts Payable
   D. credit to Manufacturing Overhead

4. Conversion costs include:
   A. direct materials and direct labor.
   B. direct materials and manufacturing overhead.
   C. direct labor and manufacturing overhead.
   D. manufacturing overhead only.

5. Which of the following statements about the FIFO and weight-average methods is TRUE?
   A. The FIFO method of process costing is simpler than the weighted-average method.
   B. The results between the FIFO and weighted-average methods are usually significantly different.
   C. The two costing methods differ only in how they treat beginning inventory.
   D. The weighted-average method requires that any units in beginning inventory be costed separately from any units started in the current period.

6. Hay Company had 2,000 units in its beginning inventory, 4,000 units in its ending inventory, and completed and transferred out 16,000 during the month. What are the total units to account for?
   A. 18,000
   B. 22,000
   C. 12,000
   D. 20,000

7. Transferred-In costs include which of the following?
   A. Costs incurred in the current process.
   B. Costs incurred in the previous process.
   C. Costs of the previous process combined with costs of the current process.

D. Costs of the current process combined with costs of the next process.

8. The Shaping Department started the month with a beginning work in process inventory of \$20,000. During the month, it was assigned the following costs: direct materials \$148,000; direct labor, \$54,000; overhead allocated at the rate of 30% of direct labor cost. Inventory with a cost of \$220,000 was transferred to finished goods. What was the ending balance of work in process inventory for the department?
   A. \$ 18,200
   B. \$ 2,000
   C. \$220,000
   D. \$238,200

9. There are 15,000 units in work in process inventory for the Mixing Department at the end of the month. The units were 30% complete for direct materials. What are the equivalent units for direct materials using the weighted-average method?
   A. 5,000
   B. 15,000
   C. 10,000
   D. 4,500

10. Using the same information as in Question 9, assume that the beginning work in process inventory for the Mixing Department had \$7,000 in direct material cost; and that \$38,000 in direct materials were added during the month. What is the cost per equivalent unit for direct materials?
   A. \$ 8.44
   B. \$ 9.00
   C. \$10.00
   D. \$ 4.50

CHAPTER 6
TEN-MINUTE QUIZ

Circle the letter of the best response.

5. Costs that do not increase as the volume of production increases are:

M.	variable costs.	C.	mixed costs.
N.	fixed costs.	D.	step costs.

6. When graphing total fixed costs, using a horizontal axis representing units of production and the vertical axis representing total costs, the line on the graph would be shown as a(n):
   M. horizontal line.
   N. vertical line.
   O. upward sloping line.
   P. downward sloping line.

3. Which of the following statements is NOT true about costs <u>per unit</u> within the relevant range?
   A. Variable costs stay constant with changes in volume.
   B. Curvilinear costs stay constant with changes in volume.
   C. Fixed costs decrease in proportion to increases in volume.
   D. Mixed costs decrease, but not in direct proportion to increases in volume.

4. How would the equation for total costs be written using the following?

   y = total costs
   v = variable cost per unit of activity
   x = volume of activity
   f = total fixed costs

A.	y = f	C.	y = f + xv
B.	y = xv	D.	y = xf

5. A cell phone bill consisting of a monthly base, plus an added amount when too many minutes are used can be classified as a:
   E. variable cost.
   F. fixed cost.
   G. mixed cost.
   H. step cost.

6. A company is analyzing its mixed costs. During March, its busiest month, a company had total labor hours of 13,000 and total costs of $33,000. During August, its slowest month, the company had labor hours of 7,000 and total costs of $21,000. The company is planning for 17,000 direct labor hours next March. How many dollars should the company budget for <u>fixed costs</u> during March?

K.	$6,000	C.	$34,000
L.	$7,000	D.	$41,000

7. A company is analyzing its mixed costs. During March, its busiest month, a company had total labor hours of 13,000 and total costs of $33,000. During August, its slowest month, the company had labor hours of 7,000 and total costs of $21,000. The company is planning for 11,000 direct labor hours next March. How many dollars should the company budget for <u>total costs</u> during March?

A.	$6,000	C.	$12,000
B.	$7,000	D.	$29,000

8. Which of the following statements is NOT true regarding regression analysis?
   M. Regression analysis is a statistical procedure for determining the line that best fits the data.
   N. Regression analysis uses the high volume and low volume points to determine the best fit between the two data points.
   O. Regression analysis helps generate a statistic, called the R-square, which tells how well the line fits the data points.
   P. Regression analysis helps managers implement activity based costing systems.

9. Which of the following is a data concern when using the high-low method and regression analysis?
   I. Outliers
   J. The use of only two data points
   K. Low variable cost per unit
   L. High fixed costs

10. An income statement organized according to the contribution margin approach:
   E. subtracts variable costs from sales revenue to show the contribution margin.
   F. presents all variable costs whether relating to the merchandise sold or selling and administrative activities, above the contribution margin line.
   G. is all of the above.
   H. is none of the above.

CHAPTER 7
TEN-MINUTE QUIZ

7. Which of the following is NOT an assumption of Cost-Volume-Profit analysis?
   O. Inventory levels will not change.
   P. Managers can classify each cost as either variable or fixed, and mixed costs can be broken down into their variable or fixed component.
   Q. Revenues are linear throughout the relevant range of volume.
   R. Volume is not the only factor that affects costs.

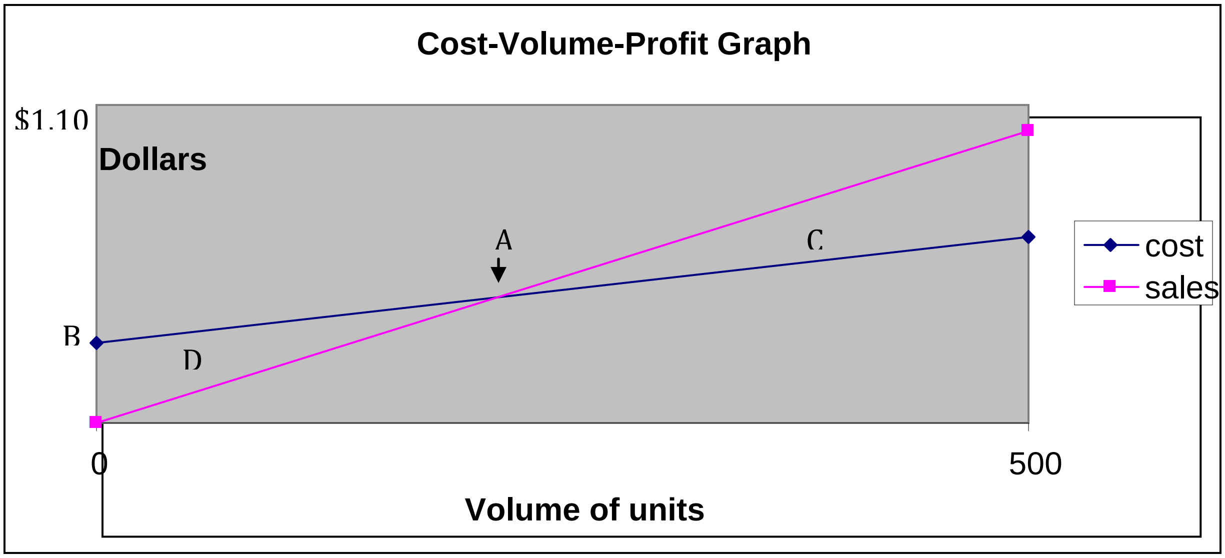
8. If the sales price is $12, the variable cost is $3, the fixed cost is $10,000, and 10,000 units are produced, the contribution margin per unit is:
   Q. $12. C. $9.
   R. $11. D. $1.

9. If the sales price is $13, the variable cost is $4, the fixed cost is $9,000, and 10,000 units are produced, the break-even in units is:
   A. 9,000. C. 818.
   B. 1,000. D. 750.

10. If the sales price is $12, the variable cost is $3, and the fixed cost is $9,000, the contribution margin ratio is:
   D. 100%. C. 75%.
   B. 92%. D. 83%.

11. If the sales price is $40, the variable cost is $26, and the fixed cost is $8,400, the break-even in sales dollars is:
   I. $ 8,400. C. $24,000.
   J. $15,600. D. $35,000.

12. If the sales price is $15, the variable cost is $5, the fixed cost is $11,000, and 11,000 units are produced, how many units need to be sold if the desired profit is $5,000?
   M. 11,500
   N. 8,500
   O. 1,600
   P. 500



7. In the cost-volume-profit graph (above), what is represented by the point marked "A"?
   M. Operating loss area
   N. Operating income area
   O. Break-even point
   P. Fixed expenses

8. In the cost-volume-profit graph (above), what is represented by the point marked "B"?
   A. Operating loss area
   B. Operating income area
   C. Break-even point
   D. Fixed expenses

9. In the cost-volume-profit graph (above), what is represented by the point marked "C"?
   A. Operating loss area
   B. Operating income area
   C. Break-even point
   D. Fixed expenses

10. In the cost-volume-profit graph (above), what is represented by the point marked "D"?
    A. Operating loss area
    B. Operating income area
    C. Break-even point
    D. Fixed expenses

CHAPTER 8
TEN-MINUTE QUIZ

Circle the letter of the best response.

13. The most relevant costs are:

S.	current costs.	C.	estimated future costs.
T.	nominal costs.	D.	costs already incurred.

14. Which is NOT one of the differences between relevant and irrelevant costs?
    S. Relevant costs do not differ under different alternatives.
    T. Some irrelevant costs are related to the past.
    U. Relevant costs are avoidable or can be eliminated by choosing one alternative over another.
    V. Relevant costs must be considered in making decisions while irrelevant costs should not be considered.

3. Soundbass Corporation received a special order request for 50,000 new speakers at a sales price of $20 each. This is a $20 reduction in the normal sales price. The variable costs per speaker are $19. The total fixed costs of $100,000 will not change. Which of the following is TRUE?
    A. Management should accept the order if the variable costs per unit and fixed costs in total will not change with the order.
    B. Management should accept the order if they have no excess capacity.
    C. Management should accept the order if the customers will expect the price decrease as the standard price in the future.
    D. Management should reject the special order because the contribution margin per unit is small.

4. A stamp production company has the capacity to produce 15,000 units per month while incurring the following costs:

Direct materials	$3.00
Direct labor	$4.00
Variable manufacturing overhead	$1.50
Variable selling expense	$0.50
Fixed manufacturing overhead	$1.00

A special order has been received from a customer who wants to pay a reduced price of $11 per unit. There would be no selling expense in connection with this order and no other expenses or sales will be affected. If the order is for 5,000 units, the impact on operating income would be a(n):

E. increase in operating income of $7,500.
B. increase in operating income of $12,500.
C. decrease in operating income of $12,500.
D. decrease in operating income of $7,500.

5. In order to sell its products, a company must meet the competition's price. Which of the following is TRUE about the company's product?
   K. The company is a price-setter.
   L. There is not a lot of competition for the product.
   M. The product lacks uniqueness.
   N. The company uses cost-plus pricing.

6. If a company has a policy of charging its customers 15% above direct materials and direct labor costs, the company:
   Q. is a price-setter.
   R. is a price-taker.
   S. can control its production costs.
   T. considers production costs before setting prices.

7. Signature Corporation has three product lines: silver, gold, and platinum. All three products have a positive contribution margin, but the gold line has an operating loss. Management is considering eliminating the product line because all of gold's variable costs can be eliminated as well. If all other factors remain the same and management eliminates the product line, what will happen to operating income?
   Q. Operating income will increase.
   R. Operating income will decrease.
   S. Operating income will not change.
   T. Not enough information is present to make that determination.

8. Thematics Publishing produces 10,000 binders each year. Each binder has a variable cost of $12 and total fixed costs of $80,000 per year. The binders can be purchased from an outside supplier for $18 each. The production space will remain idle, but fixed costs can be reduced by 25%. The annual impact of purchasing the binders will be to:
   Q. increase operating income by $40,000.
   R. increase operating income by $20,000.
   S. decrease operating income by $20,000.
   T. decrease operating income by $40,000.

9. Quinn Bakery bakes gingerbread cookies and sells them by the dozen. During the holiday season, they bake 1,000 dozen cookies. They can sell the plain, undecorated cookies ("as is") for $2 per dozen. If they decorate the cookies at an additional cost of $1 per dozen, each decorated dozen could be sold for $3.50. Should Quinn Bakery sell the cookies undecorated ("as is") or should the cookies be decorated ("processed further")?

   A. Quinn Bakery should decorate the cookies since operating income will be higher by $500 than if they sell them undecorated ("as is").
   B. Quinn Bakery should decorate the cookies since operating income will be higher by $3,500 than if they sell them undecorated ("as is").
   C. Quinn Bakery should sell undecorated cookies ("as is") since operating income will be higher by $500 than if they sell them decorated ("processed further").
   D. Quinn Bakery should sell undecorated cookies ("as is") since operating income will be higher by $3,500 than if they sell them decorated ("processed further").

10. Smythe Company manufactures and sells ceramic pots. Leone Corporation has offered Smythe

Company $10 per pot for 2,000 pots. Smythe Company's normal selling price is $12 per pot. The total manufacturing cost per pot is $9 and consists of variable costs of $7 per vase and fixed overhead costs of $2 per vase. (NOTE: Assume excess capacity and no effect on regular sales.) Should Smythe Company accept or reject the special sales order?

A. Accept, because operating income would increase $6,000.
B. Reject, because operating income would decrease $6,000.
C. Reject, because operating income would decrease $34,000.
D. Accept, because operating income would increase $34,000.

CHAPTER 9
TEN-MINUTE QUIZ

Circle the letter of the best response.

15. Which of the following is NOT one of the benefits of budgeting?
    U. Budgets eliminate waste in an organization.
    V. Budgets force managers to plan.
    W. Budgets force managers to consider relations among operations across the entire value chain.
    X. Budgets provide a benchmark that motivates employees.

16. The operating budget consists of which of the following components?
    W. Financial budget
    X. Capital expenditures budget
    Y. Cash budget
    Z. Budgeted income statement.

3. Which of the following budgets are NOT included in the list of budgets prepared by a service company?
    A. Sales budget
    B. Cost of Goods Sold, Inventory, and Purchases budget
    C. Capital expenditures budget
    D. Operating expense budget

4. A company anticipates unit sales during the first three months of the upcoming year at 3,000 for January, 3,500 for February, and 5,000 for March. If it wishes to maintain its finished goods inventory at 75% of the following month's sales, and the January 1 finished goods inventory consisted of 1,225 units, how many units must it produce in January?
    F. 1,225
    B. 1,775
    C. 2,625
    D. 4,400

5. Usually the first step in the budgetary process is the preparation of the:
    O. sales budget.
    P. cost of goods sold, inventory, and purchases budget.
    Q. operating expense budget.
    R. production budget.

6. Which of the following is NOT a major part of a cash budget?
   U. Collections from customers
   V. Capital expenditures
   W. Payments for purchases
   X. Depreciation

7. Which of the following is TRUE of the budgeting process?
   U. Financial budgets must be prepared before operating budgets can be prepared.
   V. Operating budgets must be prepared before the cash budget can be prepared.
   W. Budgets can be prepared in any order as long as the employees buy into them.
   X. The cash budget has an effect on all operating budgets.

8. Triangle Goods had January sales of $13,000. Anticipated sales during February are $17,000, and March sales are projected at $15,000. Sixty percent of sales are cash sales; the remainder is on account. Sales on account are expected to be collected 35% in the month of sale, 50% in the month following the month of sale, and 15% in the second month following the month of sale. How much are anticipated cash collections during the month of March?
   U. $13,000
   V. $15,180
   W. $15,280
   X. $27,000

9. An accounting system where the operations are broken down into cost centers is known as:
   M. budgetary accounting.
   N. control accounting.
   O. responsibility accounting.
   P. sensitivity analysis.

10. A profit center is a unit where managers are:
    I. responsible for costs.
    J. accountable for investments, revenues, and costs.
    K. accountable for both revenues and costs.
    L. accountable for revenues.

CHAPTER 10
TEN-MINUTE QUIZ

Circle the letter of the best response.

17. Which of the following is the difference between a flexible budget and a static budget?
    - Y. The static budget considers all costs and a flexible budget considers only variable costs.
    - Z. The static budget is prepared for one level of production and a flexible budget is prepared for various levels of production.
    - AA. The static budget provides for accurate performance evaluations, while the flexible budget's various levels make performance evaluations difficult.
    - BB. The static budget is prepared for the entire production facility and consists of all the flexible budgets prepared for each division.

18. One level of a company's flexible budget was prepared for production of 7,000 units. Total costs were $25,000 and included direct materials, direct labor, and variable overhead at $1, $2, and $0.50 per unit respectively. What is the total cost for production of 7,700 units?
    - AA. $ 500
    - C. $26,950
    - BB. $25,000
    - D. $27,450

3. A manager hired an employee with more experience and skills than anticipated and at a higher rate than when the pay rate standards were set. This employee's skills resulted in less labor hours than normal. What is the effect on the rate and efficiency variances respectively?
    - A. Favorable, favorable
    - B. Favorable, unfavorable
    - C. Unfavorable, favorable
    - D. Unfavorable, unfavorable

4. A manager purchased materials of inferior quantity for a lower cost than anticipated and the result was more spoilage than normal. What is the effect on the price and quantity variances respectively?
    - A. Favorable, favorable
    - B. Favorable, unfavorable
    - C. Unfavorable, favorable
    - D. Unfavorable, unfavorable

5. A company uses a single raw material in its production process. The standard price for a unit of material is $7.50. During the month the company purchased and used 9,500 units of this material at a price of $7.00 per unit. The standard quantity required per finished product is 4 units and during the month, the company produced 2,500 finished units. How much was the material price variance?
    - S. $3,750 favorable
    - T. $4,750 unfavorable
    - U. $4,750 favorable
    - V. $3,750 unfavorable

6. A company uses a single raw material in its production process. The standard price for a unit of material is $7.50. During the month the company purchased and used 9,500 units of this material at a price of $7.00 per unit. The standard quantity required per finished

product is 4 units and during the month, the company produced 2,500 finished units. How much was the material quantity variance?
A. $4,750 favorable
B. $3,750 unfavorable
C. $3,750 favorable
D. $4,750 unfavorable

7. A company produced 2,700 units of output during a production process that normally requires 3 hours of labor per unit of output. The standard labor rate is $15 per hour, but the company paid $16 per hour. Actual hours needed to complete the production process were 7,700. How much was the labor efficiency variance?
Y. $ 6,000 favorable
Z. $11,400 favorable
AA. $11,400 unfavorable
BB. $ 6,000 unfavorable

8. A company produced 2,700 units of output during a production process that normally requires 3 hours of labor per unit of output. The standard labor rate is $15 per hour, but the company paid $16 per hour. Actual hours needed to complete the production process were 7,700. How much was the labor rate variance?
A. $11,400 favorable
B. $ 7,700 favorable
C. $11,400 unfavorable
D. $ 7,700 unfavorable

9. The overhead flexible budget variance indicates:
A. the difference between actual overhead and standard overhead.
B. how well management has controlled overhead costs.
C. the difference between the flexible budget and the standard budget.
D. how well management has met strategic goals.

10. The difference between the flexible budget overhead and the standard overhead allocated to production is called the:
A. sales volume variance.
B. overhead flexible budget variance.
C. direct material variance.
D. production volume variance.

CHAPTER 11
TEN-MINUTE QUIZ

Circle the letter of the best response.

19. Which of the following is NOT a reason for firms to decentralize?
    CC. Improve customer relations.
    DD. Increase employee motivation.
    EE. Allow top management more time for day to day decision making.
    FF. Allow top management more time for long-term planning.

20. A reason that a firm might choose to maintain centralized decision-making instead of decentralizing would be:
    CC. cost duplication resulting from decentralization.
    DD. the increased cost necessary to support expert knowledge in a centralized environment.
    EE. the training that is provided to lower management by decentralized operations.
    FF. the superior customer relations which typically result from centralized operations.

3. Which of the following would be subject to evaluation in a balanced scorecard approach to performance evaluation?
    A. Lag indicators
    B. Financial performance measures and operational performance measures
    C. Financial performance measures and company goals
    D. Company strategies

4. Which of the following is NOT a goal of performance evaluation systems?
    A. Goal congruence among managers and departments
    B. Motivation of employees
    C. Feedback to upper management
    D. Understand customer expectations

5. Which of the following is NOT one of the perspectives of a balanced scorecard?
    W. Customer perspective
    X. Financial perspective
    Y. Employee perspective
    Z. Internal business perspective

6. Understanding that excelling in innovation, operations, and post-sales service helps to satisfy customers is part of which balanced scorecard perspective?
   Y. Customer perspective
   Z. Financial perspective
   AA. Employee perspective
   BB. Internal business perspective

7. When evaluating a cost center, the performance reports generally focus on the:
   CC. revenue and expenses.
   DD. flexible budget variance.
   EE. sales volume variance.
   FF. flexible budget variance and profit variance.

8. When evaluating a revenue center, the performance reports generally focus on the:
   A. revenue and expenses.
   B. flexible budget variance.
   C. sales volume variance.
   D. flexible budget variance and sales volume variance.

9. A company analyzed two products and computed the following information:

	Sales Margin	Capital Turnover	ROI
High Power	5%	2	10%
Low Power	5%	2.5	12.5%

All of the following statements are true EXCEPT:
   Q. High Power uses its assets less efficiently than Low Power.
   R. both divisions earn the same amount of profit per sales dollar.
   S. Low Power division uses its assets more efficiently than High Power.
   T. High Power can increase its ROI by increasing its inventory levels.

10. A company is considering evaluating its divisions based on Return on Investment (ROI) and Residual Income (RI). Management looked at the information and found some conflicting results. In deciding which measure to use, management might prefer:
   M. ROI because it considers the size of the division's assets.
   N. ROI because ROI isn't biased by management's goals.
   O. RI because RI is more likely to lead to goal congruence.
   P. RI because it considers how effectively each division uses its assets.

CHAPTER 13
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. Which of the following statements is INCORRECT about a statement of cash flows?
   A. A statement of cash flows is separated into operating, investing, and financing sections.
   B. Two different methods may be used to compute the net cash flows from operating activities.
   C. Non-cash investing and financing activities do not need to be disclosed.
   D. The statement of cash flows reports the changes in cash and cash equivalents.

2. Which of the following is a cash equivalent?
   A. Money market funds
   B. Certificates of deposit that mature in less than three months
   C. U.S. treasury bills
   D. All of the above

3. Which of the following activities is an operating activity?
   A. Purchase of land
   B. Collection of interest from a note receivable
   C. Issuance of common stock for a building
   D. Payment of cash dividends

4. Which of the following activities is an investing activity?
   A. Purchase of used equipment
   B. Issuance of common stock
   C. Purchase of merchandise inventory
   D. Payment of cash dividends

5. Which of the following activities would NOT be considered a financing activity?
   A. Issuance of bonds payable
   B. Payment of cash dividends
   C. Purchase of land for cash
   D. Borrowing money by issuing a long-term note

6. On a statement of cash flows, the net increase in cash was $37,000. Cash provided from operations was $45,000. If the net cash inflow from investing activities was $14,000, then what was the net cash flow from financing activities?
   A. A net inflow of $22,000
   B. A net outflow of $22,000
   C. A net inflow of $6,000
   D. A net outflow of $6,000

7. Which section of the statement of cash flows is affected by the decision to use either the direct or the indirect method?
   A. Operating
   B. Investing
   C. Financing
   D. Both investing and financing

8. Which of the following statements is INCORRECT regarding the indirect method of preparing a statement of cash flows?
   A. An increase in inventory is added to net income.
   B. A loss on the sale of an investment is added to net income.
   C. Depreciation expense is added to net income.
   D. A decrease in wages payable is subtracted from net income.

9. Which of the following statements is correct regarding the indirect method of preparing a statement of cash flows?
   A. Depreciation expense is added.
   B. A gain on the sale of property, plant and equipment is subtracted.
   C. A loss on the sale of an investment is added.
   D. All of the statements above are correct.

10. A company issued common stock for property valued at $900,000. How would this transaction be reported by the company?
   A. On the schedule of non-cash transactions on the statement of cash flows
   B. On the statement of cash flows as an investing activity
   C. On the statement of retained earnings
   D. On none of the above

Answer Key to Chapter 1 Quiz

1. C
2. B
3. B
4. B
5. D
6. A
7. D
8. A
9. C
10. B

Answer Key to Chapter 2 Quiz (Quiz on following pages.)

1. B
2. D
3. C
4. A
5. A
6. A
7. B
8. D
9. D
10. B

Answer Key to Chapter 3 Quiz (Quiz on following pages.)

1. C
2. A
3. D
4. A
5. D
6. B
7. A
8. B
9. C
10. C

Answer Key to Chapter 5 Quiz (Quiz on following pages.)

1. B
2. A
3. B
4. C
6. D
7. B
8. A
9. D

5. C
10. C

Answer Key to Chapter 6 Quiz (Quiz on following pages.)

1. B
2. A
3. B
4. C
5. C
6. B
7. D
8. B
9. A
10. C

Answer Key to Chapter 7 Quiz

1. D
2. C
3. B
4. C
5. C
6. C
7. C
8. D
9. B
10. A

Answer Key to Chapter 8 Quiz (Quiz on following pages.)

1. C
2. A
3. A
4. B
5. C
6. A
7. B
8. D
9. A
10. A

Answer Key to Chapter 9 Quiz (Quiz on following pages.)

1. A
2. D
3. B
4. D
5. A
6. D
7. B
8. C
9. C
10. C

Answer Key to Chapter 10 Quiz (Quiz on following pages.)

1. B
2. D
3. C
4. B
5. C
6. C
7. A
8. D
9. B
10. D

Answer Key to Chapter 11 Quiz (Quiz on following pages.)

1. C
2. A
3. B
4. D
5. C
6. D
7. B
8. D
9. D
10. C

Answer Key to Chapter 13 Quiz (Quiz on following pages.)

1. C
2. D
3. B
4. A
5. C
6. B
7. A
8. A
9. D
10. A

Process Costing - Weighted Average Method template

Tracings cost flows from the first process to the second process

Step 1. Physical flow of units:			
		Physical	
		Units	
	Beginning Work In Process Inventory		
ADD	Units started during the period		
=	Total units to account for		
	Completed Units Transferred Out	**T**	
ADD	Ending Work In Process Inventory (**EI units**)	**EI units**	
=	Total units accounted for		

Step 2. Units of Equivalent Production Schedule				
		Materials (M)	**Conversion Costs (CC)**	
	Completed Units Transferred Out	T	T	From Step 1
ADD	Ending Work In Process Inventory (**EI units**)			From Step 1
	M (EI units * Materials Percentage complete)	M%		
	CC (EI Units* Conversion Costs percentage complete)		CC%	
=	***Equivalent Units Completed during period***	**A**	**B**	

Step 3. Unit Cost Schedule				
		Materials (M)	**Conversion Costs (CC)**	
	Costs in Beginning Work In Process Inventory	$BI for Materials	$BI for CC	
ADD	Costs Added During the Period to Work in Process	$ for Materials	$ for CC	
	Amount to be allocated or accounted for	$M	$CC	= TOTAL $ to ACC FOR
DIVIDE BY	Equivalent Units Completed during period	A	B	From Step 2
=	***Unit Cost per Equivalent Unit***	**$X**	**$Y**	

Step 4. Applying Costs to Units Schedule					
		Materials (M)	**Conversion Costs (CC)**	**TOTAL**	
	Units completed and transferred out:				
	Units transferred to next Dept	T	T		From Step 2
MULTIPLY BY	Unit Cost per Equivalent Unit	$X	$Y		From Step 3
=	***Cost of Goods Manufactured and Transferred OUT***	**c**	**d**	**(c+d)**	
ADD	Ending Work in Process Inventory:				
	Equivalent Units in Ending WIP	M%	CC%		From Step 2
MULTIPLY BY	Unit Cost per Equivalent Unit	$X	$Y		From Step 3
=	***Ending Work in Process Inventory***	**e**	**f**	**(e+f)**	

RECONCILIATION

Amount accounted for	c+d+e+f	**These two should be the same $ amount**
Amount to be accounted for	$M+$CC	

ACCT 202: Review Sheet for ETS Exam

Chapter 3: Job Costing

1. *What is job costing?*

Job costing is a method to accumulate/determine the cost of manufacturing a product. The three costs in a product are:

Direct materials

Direct labor

Manufacturing overhead (including indirect materials, indirect labor & other costs).

Actual direct materials and direct labor are traced to a job through documents (e.g., material requisition, labor time record) while manufacturing overhead costs are allocated/applied to the job by multiplying a predetermined overhead rate by the actual amount of the allocation base (activity) units used in that job. This combination of actual material and direct labor costs plus the allocated/applied manufacturing overhead costs for a product is called "normal costing".

Job costing is to be used when the product is manufactured to a customer's specifications (e.g., wedding invitations, garage doors, houses, interior design). If a question states "custom-made" then that is a clue that the job-costing method should be used.

In contrast, process-costing is to be used when the product is mass-produced e.g., beverages, bricks, oil, paint, paper.

One aspect of job-costing to be learned is the calculation of the pre-determined overhead rate. The calculation is as follows:

$$\frac{\text{Estimated overhead}}{\text{Estimated activity}} = \text{Pre-determined Overhead Rate}$$

For example, if the estimated overhead is \$1,200,000, and the estimated activity is 120,000 direct labor hours, then the pre-determined overhead rate is \$10 per direct labor hour. Therefore, if a job has 1,000 direct labor hours in it, then the applied overhead to that job will be \$10,000. This amount would be added to the cost of actual direct materials e.g., \$5,000. If the actual direct labor cost were \$15,000 then the job would have an applied cost of:

DM (\$5,000) + DL (\$15,000) + MOH (\$10,000) = \$30,000.

There are typically four broad activities/cost drivers: (i) direct labor hours, (ii) direct labor cost (iii) direct material cost, and (iv) machine hours. In job-costing, a department uses one category.

There are four steps in applying overhead to jobs during the year.

1. Determine the activity base (e.g., labor hours, labor cost).
2. Calculate the pre-determined overhead application rate using the budgeted overhead and budgeted activity.

3. Apply the pre-determined overhead rate to each job using the actual amount of activity.
4. When the actual overhead amounts are known, then the accountant will calculate the difference between the applied overhead for all jobs and the actual overhead for the accounting period. The difference is called the overhead variance. The amount of the variance is an adjustment through the Cost of Goods Sold.

   When the overhead is over-applied (i.e., more overhead has been applied than the actual amount), then the amount would be credited to the Cost of Goods Sold account. When the overhead is under-applied (i.e., less applied than the actual amount), then the amount would be debited to the Cost of Goods Sold account.

   When determining the pre-determined overhead rate, it is important that the activity base reflects the type of activity undertaken when manufacturing the product. For example, for labor-intensive jobs (e.g., making custom-made wedding dresses) then the pre-determined overhead rate should be based on direct labor hours or direct labor costs. For a product that is machine intensive, then machine hours should be the activity (allocation) base. Should a product go through two different stages of manufacturing with different cost drivers, then machine hours could be used for one stage of production and labor hours for the other stage of production.

   After the cost of a job is determined, the cost per unit is determined by dividing the job cost by the number of units in the job.

   <u>An example showing the four steps of job-costing</u>.

   Invitations R Us Inc. produces custom-made invitations. Each customer order is given a job number. The cost driver is direct materials. The budgeted overhead for the month is \$20,000 and the estimated direct materials cost for the month is \$10,000.

   <u>Part 1:</u> Sally-Anne, a customer, has placed an order for 100 wedding invitations. The job number is 129. The actual direct materials are \$500 and the actual direct labor cost are \$200. Calculate the cost of Job 129.

   Step 1: Calculate the pre-determined overhead rate.

   \$20,000/\$10,000 = \$2 per direct material cost = 200% of DM.

   Step 2: Total the costs for Job 129.

   DM (\$500) + DL (\$300) + OH (\$500 x \$2) = \$1800.

   <u>Part 2:</u> The actual overhead for the month was \$22,000. The actual cost for direct materials was \$9,000. The total of overhead applied to all jobs for the month was \$23,000. Determine the amount of over or under applied overhead for the month and show the general journal entry to account for it.

   Step 1: Calculate the overhead variance.

   Applied overhead (\$23,000) – Actual overhead (\$22,000) = \$1,000 over-applied.

Step 2: Complete the journal entry to adjust for the over-applied overhead.

Debit:	Overhead	$1,000
Credit:	Cost of goods sold	$1,000

Note that having an under or over applied overhead does not mean that someone made a mistake. All it means is the estimate was different to the actual amounts. There could be many reasons for this, e.g., an unexpected increase/decrease in utility costs, rent, property taxes and maintenance. However, under/over applied overhead should be noted so that next year's budget more closely reflects the actual amounts.

End of Review Sheet

Cost Volume Profit Analysis – Study Sheet

1. Break-Even Point in Sales Units = $\dfrac{\text{Fixed Cost}}{\text{Unit Contribution Margin}}$

   Where,
   Unit Contribution Margin = Sales Price per Unit – Variable Costs per unit

2. Break-Even Point in Sales Dollars = $\dfrac{\text{Fixed Cost}}{\text{Contribution Margin Ratio}}$

   Where,
   Contribution Margin Ratio = Contribution Margin/Sales Revenue

3. Sales Units to achieve Target Profit = $\dfrac{\text{Fixed Cost + Target Profit}}{\text{Unit Contribution Margin}}$

4. Sales Dollars to achieve Target Profit = $\dfrac{\text{Fixed Cost + Target Profit}}{\text{Contribution Margin Ratio}}$

5. Margin of Safety in Units = Actual or Expected Sales in Units – Break Even Sales in Units

6. Margin of Safety in Dollars = Actual or Expected Sales in Dollars – Break Even Sales in Dollars

7. Degree of Operating Leverage = $\dfrac{\text{Contribution Margin}}{\text{Net Income}}$

An Operating Leverage (OL) factor of 10 means that for every 1% increase in Sales, Net Income will increase by 10% (i.e., 1% x 10) and for every 1% decrease in Sales, Net Income will decrease by 10%. A high operating leverage indicates a high percentage of debt in the capital structure and can be risky.

CVP Assumptions:

1. Behavior of both costs and revenues is linear throughout the relevant range of the activity index.
2. All costs can be classified as either variable or fixed with reasonable accuracy.
3. Changes in activity are the only factors that affect costs.
4. All units produced are sold.
5. When more than one type of product is sold, the sales mix will remain constant.

Computing Weighted Average Contribution Margin (Multi Product)

	Product A	Product B
Sales Price per unit	$100	$150
Variable Cost per unit	(60)	(100)
Contribution Margin per unit	40	50

Relative Sales Mix 3 units of Product A for every 2 units of Product B

Total Contribution for sales mix = $40 * 3 + $50 * 2 = $120 + $100 = $220 (from 5 units total)

Weighted Average Contribution Margin = $220 / 5 = $44/unit

Relevant Cost and Incremental Analysis – Study Sheet

Decision making using relevant cost information:
Information to be "relevant" to the decision at hand needs to a) differ between alternatives, AND b) pertain to the future. Therefore, "sunk" costs are NOT relevant to decision making.

Decision Making Situations and decision rules:

1. **Accept an order at a Special Price**

Decision rule: If the variable costs of manufacturing (DM + DL +VMOH) the product are **less than** the "special price" accept the order (as long as free excess capacity exists). If excess capacity does not exist, then reject the order. If additional fixed costs need to be borne to make the special order product, this is considered a relevant cost and must be considered in the decision process.

2. **Make or Buy the product**

Decision rule: If the variable costs of manufacturing the product are **less than** the "buy price" then make the product in house and do not outsource. If an alternative use can be made of released capacity by outsourcing, then that information should be considered in the decision process (opportunity cost).

3. **Sell or Process Further**

Decision rule: If the incremental revenue from processing further is greater that the incremental costs of processing the product further, then process further. If costs exceed benefits, do not process further.

4. **Eliminate Unprofitable Segment**

Decision rule: If the contribution margin (CM) of the segment is negative, eliminate the segment. On the other hand, if the CM of the segment is positive, analyze further. If CM of the segment is > the avoidable fixed costs associated with the segment, KEEP the segment and vice versa.

5. **Repair or Replace Equipment**

Decision rule: Consider ONLY relevant information. Old purchase price of equipment is a "SUNK" cost and should NOT be considered.

Always consider the Qualitative Aspects of your decision.

ETS Test Review
Quantitative Business Analysis

Note: You may need to re-read sections from your Bus-Stat Textbook several times before a concept is grasped.

The Role of Statistics in Business & Managerial Decision Making

Why Study Statistics? (Steps for Achieving Goals and Objectives)

1. Start with a Real World Problem
2. Formulate problem in managerial terms.
3. Translate problem into one or more managerial questions to be answered.
4. Formulate managerial questions in statistical terms.
5. Conduct Statistical Analysis (QBUS 215, MATH 214)
6. Get answers to statistical questions.
7. Find answers to managerial question. Note this step may lead to a reformulation of the problem (Step 2) or it may also lead to new questions being asked (Step 3).
8. Reach managerial solution to problem. This may lead back to the same or other real world problems (Step 1)

Statistics, Data and Statistical Thinking - Important terms to know

- Data: Consists of the set of all measurements & info in which the investigator is interested

- types of data (quantitative, qualitative)
- data collecting methods (published source, designed experiment, survey, collected observationally)

- Exploratory Data Analysis - EDA: Techniques to determine relationships and trends, identify outliers and influential observations, and quickly describe or summarize data sets.
- statistical inference: Predict and forecast values of population parameters, Test hypotheses about values of population parameters, Make decisions
- population
- variable (Discrete and Continuous Random Variables)
- sample
- key formulas & summation notation

More importantly, focus on:

1. **Counting rules**
   - How many ways can you order the 3 letters A, B, and C? Ans.: 3! = 3*2*1
   - What if we chose only 3 out of the 6 letters A, B, C, D, E, and F? nPr = 6Pr = 6!/(6-3)! = 120
   -
2. **Probabilities and Probability Distributions**
   Maybe, possibly, could be, chances are, probably are all words or phrases we use to convey uncertainty about something. When we use the term *probability* we are talking about the *proportion* of objects in some population.
   The Normal and Binomial Probability Distributions.

3. **Sampling and estimation**
   In order to make reasonable inferences about a population from a sample, we must insure that we are observing sample data that is not, in some artificial way, going to lead us to wrong conclusions about the population. A random experiment or random sample is considered a fair or unbiased basis for estimating population parameters.

   Unbiased Estimate: If a sample of n values is randomly selected from a population of values, the sample mean is said to be an unbiased estimate of the population mean.

4. **Measures of central tendency and dispersion**
   Measures of Central Tendency **(Measures of Location)**: Median, Mode, Mean
   Measures of Variability: Range, Interquartile range, Variance, Standard Deviation

5. **Hypothesis testing: Concepts & Terms (One/Two Populations)**
   A hypothesis is a statement or assertion about the state of nature (about the true value of an unknown population parameter):
   - Type I Error: Reject a true H0
   - Type II Error: Fail to reject a false H0
   - Small-sample confidence interval for a population mean
   - Hypothesis testing elements (H_o, H_a, test statistic, rejection region, etc.)
   - Observed significance levels: p-values

- Small-sample test of hypothesis about a population mean
- Small-sample test of hypothesis about the diff between two population means

6. Correlation and regression

In regression analysis, we want to develop a formula for a straight line which optimally predicts each Y score from a given X score.

- Fitting models to data, linear relationship, correlation, scatter diagram, etc.
- Regression model, regression equation, and estimated equation.
- LS Method, Regression line, LS Equation (Intercept, Slope).
- Assumptions, independent errors, constant variance, etc.
- Residuals (or estimated errors) and squared errors.

7. Time Series:

In addition:

- A time series is a set of observations measured at successive points in time or over successive periods of time.
- If the historical data used are restricted to past values of the series that we are trying to forecast, the procedure is called a time series method.
- If the historical data used involve other time series that are believed to be related to the time series that we are trying to forecast, the procedure is called a causal method.
- Time Series Components:
  - Trend Component
  - Cyclical (Long term > one year)
  - Seasonal (Short term <= one year: every Friday, every afternoon, every summer, etc.)
  - Irregular Component: Unidentifiable, sudden and unpredictable movements.
- Three time series methods are:
  - smoothing
  - trend projection
  - trend projection adjusted for seasonal influence
- Measures of Forecast Accuracy
  - Mean Squared Error (MSE)
  - Mean Absolute Deviation (MAD)
- Smoothing Methods
  - Moving averages
  - Centered moving averages
  - Weighted moving averages
  - Exponential smoothing
- Index Numbers

8. Linear programming

- The maximization or minimization of some quantity is the objective in all linear programming problems.
- All LP problems have constraints that limit the degree to which the objective can be pursued.
- Generally speaking, a mathematical optimization model has the following typical components:
  - a set of decision variables
  - an objective function, expressed in terms of the decision variables, that is to be minimized or maximized
  - a set of constraints that limit the possible values of the decision variables

- A feasible solution satisfies all the problem's constraints.
- An optimal solution is a feasible solution that results in the largest possible objective function value when maximizing (or smallest when minimizing).
- A graphical solution method can be used to solve a linear program with two variables.
- If both the objective function and the constraints are linear, the problem is referred to as a linear programming problem.
- Problem formulation or modeling is the process of translating a verbal statement of a problem into a mathematical statement
- Slack and surplus variables represent the difference between the left and right sides of the constraints.
- A linear program which is over-constrained so that no point satisfies all the constraints is said to be infeasible.
- Remember, it is important to realize that before an actual implementation, one should cycle through the first four steps below, a sufficient number of times so as to ensure that a reasonably valid model has been achieved:
    - Problem Identification
    - Formulation
    - Derivation of Optimal Solution(s)
    - Model Validation
    - Implementation

Finance 310
Study Guide

ETS Questions:

Write Up on Time Value of Money (TVM)

In business, managers constantly face trade-offs in situations where actions that require outflows of cash today may produce inflows of cash later. Because the cash that comes in the future is worth less than the cash that firms spend up front, managers need a set of tools to help them compare cash inflows and outflows that occur at different times.

Compounding = is the process of determining the future value (FV) of a cash flow or a series of cash flows. The compounded amount, or future value, is equal to the beginning amount plus the interest earned.

Future Value of a single payment: $FV = PV(1 + I)^N$

Discounting = is the process of finding the present value (PV) of a future cash flow or a series of cash flows; discounting is the reciprocal, or reverse, of compounding.

Present Value of a single payment: $PV = FV/[(1 + I)^N]$

An Annuity = is defined as a series of equal periodic payments (PMT) for a specified number of periods. An annuity whose payments occur at the end of each period is called an **ordinary annuity**.

Future Value of an ordinary annuity = $FVA = PMT[[(1 + I)^N/I] - (1/I)]$

Present Value of an ordinary annuity = $PVA = PMT[(1/I) - [1/(I(1 + I)^N)]]$

If each payment occurs at the beginning of the period rather than at the end, then we have an **annuity due**. The PV of each payment would be larger, because each payment would be discounted back one year less, so the PV of the annuity would also be larger. Similarly, the FV of the annuity due would also be larger because each payment would be compounded for an extra year.

Future Value of an annuity due = $FVA_{due} = FVA_{ordinary}(1 + I)$

Present Value of an annuity due = $PVA_{due} = PVA_{ordinary}(1 + I)$

A **perpetuity** is an annuity with an infinite number of payments.

Value of a perpetuity = PMT/I

If comparing the costs of loans that require payments more than once a year, or the rates of return on investments that pay interest more frequently, then the comparisons should be based on **equivalent** (or **effective**) rates of return. This can be done by utilizing the following formula.

$EAR = EFF\% = [1 + (I_{NOM}/M)]^M - 1$ where M = the number of compounding periods and I_{NOM} = the stated annual interest rate.

Example of an uneven cash flow stream:

Suppose a firm has an opportunity to spend $15,000 today on some investment that will produce $17,000 spread out over the next five years as follows:

Year 1	$3,000
Year 2	$5,000
Year 3	$4,000
Year 4	$3,000
Year 5	$2,000

The discount rate is 10%. Is this a wise investment? To solve this problem, we will need to solve for the Net Present Value (NPV).

NPV using the calculator:

<u>BA II Plus</u>
CF_0 = -15,000
C_{01} = 3,000
F_{01} = 1
C_{02} = 5,000
F_{02} = 1
C_{03} = 4,000
F_{03} = 1
C_{04} = 3,000
F_{04} = 1
C_{05} = 2,000
F_{05} = 1
Then use the NPV button:
I = 10
NPV = -$1,844

<u>Scientific Calculator (TI-83, 84, 89, etc.)</u>
npv(10, -1,000, {3000,5000,4000,3000,2000})
NPV = -$1,844

The answer is a resounding NO!

ETS Questions:

Write Up on Financial Ratios

Financial statement analysis generally begins with a set of financial ratios designed to reveal a company's strengths and weaknesses as compared with other companies in the same industry and to show whether its financial position has been improving or deteriorating over time. The ratios are divided into five categories as follows:

1. **Liquidity ratios** provide an idea of the firm's ability to pay off debts that are maturing within a year. Two commonly used liquidity ratios are the *current ratio* and the *quick (or acid test) ratio.*
2. **Asset management (activity)** ratios show how efficiently the firm is using its assets. These ratios include *inventory turnover*, *days sales outstanding*, *fixed assets turnover*, and *total assets turnover.*
3. **Debt management ratios** indicate how the firm has financed its assets as well as the firm's ability to repay its long-term debt. They include the *debt ratio*, *times-interest-earned ratio*, and *EBITDA coverage ratio.*
4. **Profitability ratios** give an idea of how profitably the firm is operating and utilizing its assets. They include the *profit margin on sales*, the *basic earning power ratio*, the *return on total assets* (ROA), and the *return on common equity* (ROE).
5. **Market value ratios**, which give an idea of what investors think about the firm and its future prospects. These include the *price/earnings ratio*, *price/cash flow ratio*, and the *market/book ratio.*

Liquidity, activity, and debt ratios primarily measure risk. Profitability ratios measure return. Market ratios capture both risk and return. Some examples follow.

Liquidity Ratios

Current Ratio = current assets/current liabilities = $1,223,000/$620,000 = 1.97 A higher current ratio indicates a greater degree of liquidity.

Quick (Acid Test) Ratio = (current assets – inventory)/current liabilities = ($1,223,000 - $289,000)/$620,000 = 1.51 The quick ratio is a better measure of overall liquidity.

Asset Management (Activity) Ratios

Inventory Turnover = sales/inventory = $2,088,000/$289,000 = 7.2 Useful when compared to other firms in the same industry or the firm's past inventory turnover.

Days Sales Outstanding = accounts receivable/average sales per day = accounts receivable/(annual sales/365) = $503,000/($3,074,000/365) = 59.7 days This is the number of days needed to collect an account receivable.

Debt Management Ratios

Debt Ratio = total liabilities/total assets = $1,643,000/$3,597,000 = 45.7% The company has financed close to half of its assets with debt. The higher the ratio, the greater the firm's degree of indebtedness and the more financial leverage it has.

Times-interest-earned Ratio = earnings before interest and taxes (EBIT)/interest expense = $418,000/$93,000 = 4.5 The firm's earnings before interest and taxes could decline by as much as 78% [(4.5-1.0)/4.5] and the firm would still be able to pay the $93,000 in interest it owes.

Profitability Ratios

Gross Profit Margin = (sales – cost of goods sold)/sales = ($3,074,000 - $2,088,000)/$3,074,000 = 32.1% The gross profit margin measure the percentage of each sales dollar remaining after the firm has paid for its goods.

Return on Total Assets (ROA) = earnings available for common stockholders (net income)/total assets = $221,000/$3,597,000 = 6.1% This value indicates that the company earned 6.1 cents on each dollar of asset investment.

Return on Common Equity (ROE) = earnings available for common stockholders (net income)/common stock equity = $221,000/$1,754,000 = 12.6% 12.6% indicates that the company earned 12.6 cents on each dollar of common stock equity.

Market Value Ratios

Price/Earnings (P/E) Ratio = market price per share of common stock/earnings per share = $32.25/$2.90 = 11.1 This figure indicates that investor were paying $11.10 for each $1.00 of earnings.

ETS Questions:

Write Up on Capital Budgeting

Long-term investments represent sizable outlays of funds that commit a firm to some course of action. Consequently, the firm needs procedures to analyze and select its long-term investments. Firms typically make a variety of long-term investments, but the most common is in fixed assets which include property (land), plant and equipment. These investments are consistent with the firm's goal of maximizing owners' wealth. A capital expenditure is an outlay of funds by the firm that is expected to produce benefits over a period of time greater than one year. The basic motives for capital expenditures are to expand operations, to replace or renew fixed assets, or to obtain some other less tangible benefit over a long period.

Most investments are either independent or mutually exclusive. Independent projects are those whose cash flows are unrelated to (or independent of) one another. Mutually exclusive projects are those that have the same function and therefore compete with one another. Acceptance of one eliminates from further consideration all other projects that serve a similar function.

Net present value (NPV) and the internal rate of return (IRR) are the generally preferred capital budgeting techniques. Both use the cost of capital as the required return and both indicate whether a proposed investment creates or destroys shareholder value. NPV clearly indicates the expected dollar amount of wealth creation from a proposed project, while IRR only provides the same accept-or-reject decision as NPV.

NPV

The NPV method is based upon the discounted cash flow (DCF) technique. The steps are as follows:

1. Find the present value of each cash flow, including the initial cash flow, discounted at the project's cost of capital, r.
2. Sum these discounted cash flows; this sum is defined as the project's NPV. For example, if the project outlay is -$1,000 and the cash flow at the end of years 1-4 are 500, 400, 300 and 100, respectively, and the cost of capital is 10%, the NPV should equal $78.82.

NPV Calculation in the calculator:

BA II Plus
CF_0 = -1,000
C_{01} = 500
F_{01} = 1
C_{02} = 400
F_{02} = 1
C_{03} = 300
F_{03} = 1
C_{04} = 100
F_{04} = 1
Then use the NPV button:
I = 10
NPV = $78.82

Scientific Calculator (TI-83, 84, 89, etc.)
npv(10, -1,000, {500,400,300,100})
NPV = $78.82

IRR

The internal rate of return (IRR) is similar to finding the yield to maturity, or rate of return, on a bond. The IRR is defined as the discount rate that forces the NPV to equal zero. If we have the same cash flows as above, we need to determine that rate of return that will sum the present value of the four cash flows to 1,000 which is equal to the outlay of -1,000. This brings the NPV to equal zero. In this example, the IRR is equal to 14.5%.

IRR Calculation in the calculator:

BA II Plus

CF_0 = -1,000
C_{01} = 500
F_{01} = 1
C_{02} = 400
F_{02} = 1
C_{03} = 300
F_{03} = 1
C_{04} = 100
F_{04} = 1
Then use the IRR button:
IRR = 14.5%

Scientific Calculator (TI-83, 84, 89, etc.)

irr(-1,000, {500,400,300,100})
IRR = 14.5%

1) Quigley Company's common stock is selling for $60 per share today. The price of the common stock is expected to increase to $64 share in one year. The company is expected to pay an annual dividend of $2 per share.

   What is the expected rate of return for Quigley stock?

   a. 8%
   b. 9%
   c. 10%
   d. 11%

(End number – Beginning number)/Beginning Number

((64+2) – 60)/60 = .10
.10 X 100 = 10%

2) If a country has a competitive advantage in producing a particular good, the country can produce the good at a lower

   a. Marginal cost
   b. Opportunity cost
   c. Average total cost
   d. Fixed cost

Competitive Advantage - a condition or circumstance that puts a company in a favorable or superior business position.

Marginal cost is the change in the total cost that arises when the quantity produced has an increment by unit. That is, it is the cost of producing one more unit of a good.[1] In general terms, marginal cost at each level of production includes any additional costs required to produce the next unit. For example, if producing additional vehicles requires building a new factory, the marginal cost of the *extra* vehicles includes the cost of the new factory. In practice, this analysis is segregated into short and long-run cases, so that over the longest run, all costs become marginal. At each level of production and time period being considered, marginal costs include all costs that vary with the level of production, whereas other costs that do not vary with production are considered fixed.

Opportunity Cost - In microeconomic theory, the opportunity cost of a choice is the value of the best alternative forgone, in a situation in which a choice needs to be made between several mutually exclusive alternatives given limited resources. Assuming the best choice is made, it is the "cost" incurred by not enjoying the *benefit* that would be had by taking the second best choice available

Average Total Cost – total cost per unit of output, includes all fixed costs and variable costs. Because average total cost is total cost per unit of output, it can be found by dividing total cost by the quantity of output. Alternatively, because total cost is the sum of total variable cost and total fixed cost, average total cost can be derived by summing average variable cost and average fixed cost.

Fixed Cost - A cost that does not change with an increase or decrease in the amount of goods or services produced. Fixed costs are expenses that have to be paid by a company, independent of any business activity. It is one of the two components of the total cost of a good or service, along with variable cost.

Opportunity Cost - is the value of the best alternative forgone, in a situation in which a choice needs to be made between several mutually exclusive alternatives given limited resources. Assuming the best choice is made, it is the "cost" incurred by not enjoying the *benefit* that would be had by taking the second best choice available.

1) The two methods that may be used for calculating cash flows from operating activities are
   a. Fixed and variable
   b. Direct and indirect
   c. Actual and estimated
   d. Working capital and cash

Under U.S. and ISA GAAP, the statement of cash flow can be presented by means of two ways:

1. The indirect method
2. The direct method

The Direct Method
The direct method is the preferred method under FASB 95 and presents cash flows from activities through a summary of cash outflows and inflows.

Indirect Method
The indirect method is preferred by most firms because is shows a reconciliation from reported net income to cash provided by operations.

Working Capital
Working capital (abbreviated WC) is a financial metric which represents operating liquidity available to a business, organization or other entity, including governmental entity. Along with fixed assets such as plant and equipment, working capital is considered a part of operating capital. Gross working capital equals to current assets.

Write up on Risk in a Portfolio Context

In contrast to assets held in isolation, when we create a portfolio of securities, in particular stocks, we are able to eliminate the company specific risk from the total risk. In that case, the relevant risk is market risk and the risk of a stock held in a portfolio is typically lower than the stock's risk when it is held alone. Because investors dislike risk and because risk can be reduced by holding portfolios, most stocks are held in portfolios. Banks, pension funds, insurance companies, mutual funds are required by law to hold diversified portfolios.

Although the expected return on a portfolio is simply the weighted average of the expected returns on its individual stocks, the portfolio risk, is not a weighted average of the individual stocks' standard deviation. The portfolio risk is generally smaller than the average of the stocks standard deviation because diversification lowers portfolio's risk.

Example:

		Stock Returns (%)	
Year	Stock W	Stock M	Stock WM
2011	40%	-10%	15%
2012	-10%	40%	15%
2013	40%	-10%	15%
2014	-10%	40%	15%
2015	15%	15%	15%
Average Return =	15%	15%	15%
Standard Dev. = (Risk)	25%	25%	0%

Correlation Coefficient between Stocks WM = -1.00

Therefore, the correlation coefficient indicates how returns of the two stocks move with respect to each other. In the above example, the returns move counter-cyclically to each other (if one goes up the other stocks return falls). This is the best case scenario when maximum risk reduction occurs. If two stocks move in the same direction, that is, if the two stocks are perfectly positively correlated, the diversification is completely useless. In reality most stocks are positively correlated, but not perfectly so. Under these conditions combining stocks in a portfolio reduces risk but does not completely eliminate it. Also, as a rule, on average, portfolio risk declines as stocks are added in a portfolio. But we have to keep following points in mind:

1) The portfolio risk declines as stocks are added, but at a decreasing rate, and once 40 – 50 stocks are added to the portfolio, additional stocks may do little to reduce risk further.
2) The portfolio risk can be divided into two parts, diversifiable risk, and market risk. Diversifiable or company specific risk can be eliminated by having sufficient number of stocks in a portfolio, however, market risk, is the risk that remains (risk that affects all stocks such as risk from economic factors, political risk, regulatory risk etc.). We use greek symbol beta (β) to represent market risk.
3) Most investors are rational in the sense that they dislike risk, other things held constant.

Relationship Between Risk and Rates of Return

Hence beta or market risk is the most appropriate measure of stock's relevant risk. Next we will study that for a given level of risk as measured by beta, what rate of return is required to compensate investors for bearing the risk.

Required Return on Stock L = Risk Free return + (Market Risk Premium)(Stock L's beta)

$R_L = R_{RF} + (R_M - R_{RF})\ \beta_L$

If R_{RF} (risk-free rate) is 6% and market return R_M is 11% and β_L is 0.5 then

Required rate of return $R_L = 5\% + (11\% - 6\%)\ (0.5) = 8.5\%$

Since β_M for the market is equal to 1, hence if a stocks $\beta = 1$, then its required rate of return will be equal to markets rate of return R_M.

The capital asset pricing model is widely used by analysts, investors, and corporations.

Federal Reserve Bank's (Fed) Monetary Policy, Money Supply and Federal Funds Rate
Federal Open Market Committee meets eight times a year to determine the monetary policy of the Federal Reserve. There are three methods that Federal Reserve can use to control the money supply (Money supply is equal to the sum of deposits inside banks and the currency in circulation outside of banks):

1) Control of Reserve Requirements
2) Open Market Operations
3) Discount Rate

Control of Reserve Requirements: If the Fed wants to increase supply of money, it creates more reserves (or decrease the reserve ratio), thereby freeing banks to create additional deposits by making more loans. If it wants to decrease the money supply, it reduces reserves.
Open Market Operations: Congress has authorized Federal Reserve to buy and sell U.S. government Securities for controlling money supply. In the open market. Out of the three methods, this is the most effective and commonly used to control money supply and in turn federal funds rate (inter bank borrowing rate). When the Fed purchases security, it pays for it by writing a check and that expands money supply (reduces federal funds rate). When the Fed sells bonds, institutions pay for it and this reduces money supply (increases discount rate).
The Discount Rate: Banks may borrow from the Fed. The interest rate they pay is the discount rate. When the banks increase their borrowings, the money supply increases

ETS Questions:

Write up on Risk in a Portfolio Context

In contrast to assets held in isolation, when we create a portfolio of securities, in particular stocks, we are able to eliminate the company specific risk from the total risk. In that case, the relevant risk is market risk and the risk of a stock held in a portfolio is typically lower than the stock's risk when it is held alone. Because investors dislike risk and because risk can be reduced by holding portfolios, most stocks are held in portfolios. Banks, pension funds, insurance companies, mutual funds are required by law to hold diversified portfolios.

Although the expected return on a portfolio is simply the weighted average of the expected returns on its individual stocks, the portfolio risk, is not a weighted average of the individual stocks' standard deviation. The portfolio risk is generally smaller than the average of the stocks standard deviation because diversification lowers portfolio's risk.

Example:

		Stock Returns (%)	
Year	Stock W	Stock M	Stock WM
2011	40%	-10%	15%
2012	-10%	40%	15%
2013	40%	-10%	15%
2014	-10%	40%	15%
2015	15%	15%	15%
Average Return =	15%	15%	15%
Standard Dev. = (Risk)	25%	25%	0%

Correlation Coefficient between Stocks WM = -1.00

Therefore, the correlation coefficient indicates how returns of the two stocks move with respect to each other. In the above example, the returns move counter-cyclically to each other (if one goes up the other stocks return falls). This is the best case scenario when maximum risk reduction occurs. If two stocks move in the same direction, that is, if the two stocks are perfectly positively correlated, the diversification is completely useless. In reality most stocks are positively correlated, but not perfectly so. Under these conditions combining stocks in a portfolio reduces risk but does not completely eliminate it. Also, as a rule, on average, portfolio risk declines as stocks are added in a portfolio. But we have to keep following points in mind:

1) The portfolio risk declines as stocks are added, but at a decreasing rate, and once 40 – 50 stocks are added to the portfolio, additional stocks may do little to reduce risk further.
2) The portfolio risk can be divided into two parts, diversifiable risk, and market risk. Diversifiable or company specific risk can be eliminated by having sufficient number of stocks in a portfolio, however, market risk, is the risk that

remains (risk that affects all stocks such as risk from economic factors, political risk, regulatory risk etc.). We use greek symbol beta (β) to represent market risk.

3) Most investors are rational in the sense that they dislike risk, other things held constant.

Relationship Between Risk and Rates of Return

Hence beta or market risk is the most appropriate measure of stock's relevant risk. Next we will study that for a given level of risk as measured by beta, what rate of return is required to compensate investors for bearing the risk.

Required Return on Stock L = Risk Free return + (Market Risk Premium)(Stock L's beta)

$R_L = R_{RF} + (R_M - R_{RF})\ \beta_L$

If R_{RF} (risk-free rate) is 6% and market return R_M is 11% and $\beta_L$is 0.5 then

Required rate of return R_L= 5% + (11% - 6%) (0.5) = 8.5%

Since β_M for the market is equal to 1, hence if a stocks β= 1, then its required rate of return will be equal to markets rate of return R_M.

The capital asset pricing model is widely used by analysts, investors, and corporations.

Federal Reserve Bank's (Fed) Monetary Policy, Money Supply and Federal Funds Rate
Federal Open Market Committee meets eight times a year to determine the monetary policy of the Federal Reserve. There are three methods that Federal Reserve can use to control the money supply (Money supply is equal to the sum of deposits inside banks and the currency in circulation outside of banks):

1) Control of Reserve Requirements
2) Open Market Operations
3) Discount Rate

Control of Reserve Requirements: If the Fed wants to increase supply of money, it creates more reserves (or decrease the reserve ratio), thereby freeing banks to create additional deposits by making more loans. If it wants to decrease the money supply, it reduces reserves.

Open Market Operations: Congress has authorized Federal Reserve to buy and sell U.S. government Securities for controlling money supply. In the open market. Out of the three methods, this is the most effective and commonly used to control money supply and in turn federal funds rate (inter bank borrowing rate). When the Fed purchases security, it pays for it by writing a check and that expands money supply (reduces federal funds rate). When the Fed sells bonds, institutions pay for it and this reduces money supply (increases discount rate).

The Discount Rate: Banks may borrow from the Fed. The interest rate they pay is the discount rate. When the banks increase their borrowings, the money supply increases.

1-2 Why Firms Pursue International Business

Three commonly held theories to explain why firms become motivated to expand their business internationally are (1) the theory of comparative advantage, (2) the imperfect markets theory, and (3) the product cycle theory. These theories overlap to some extent and can complement each other in developing a rationale for the evolution of international business.

1-2a Theory of Comparative Advantage

Multinational business has generally increased over time. Part of this growth is due to firms' increased realization that specialization by countries can increase production efficiency. Some countries, such as Japan and the United States, have a technology advantage whereas others, such as China and Malaysia, have an advantage in the cost of basic labor. Because these advantages cannot be easily transported, countries tend to use their advantages to specialize in the production of goods that can be produced with relative efficiency. This explains why countries such as Japan and the United States are large producers of computer components while countries such as Jamaica and Mexico are large producers of agricultural and handmade goods. Multinational corporations like Oracle, Intel, and IBM have grown substantially in foreign countries because of their technology advantage.

A country that specializes in some products may not produce other products, so trade between countries is essential. This is the argument made by the classical theory of comparative advantage. **Comparative advantages** allow firms to penetrate foreign markets. Many of the Virgin Islands, for example, specialize in tourism and rely completely on international trade for most products. Although these islands could produce some goods, it is more efficient for them to specialize in tourism. That is, the islands are better-off using some revenues earned from tourism to import products than attempting to produce all the products they need.

1-2b Imperfect Markets Theory

If each country's markets were closed to all other countries, then there would be no international business. At the other extreme, if markets were perfect and so the factors of production (such as labor) were easily transferable, then labor and other resources would flow wherever they were in demand. Such unrestricted mobility of factors would create equality in both costs and returns and thus would remove the comparative cost advantage, which is the rationale for international trade and investment. However, the real world suffers from **imperfect market** conditions where factors of production are somewhat immobile. There are costs and often restrictions related to the transfer of labor and other resources used for production. There may also be restrictions on transferring funds and other resources among countries. Because markets for the various resources used in production are "imperfect," MNCs such as the Gap and Nike often capitalize on a foreign country's particular resources. Imperfect markets provide an incentive for firms to seek out foreign opportunities.

1-2c Product Cycle Theory

One of the more popular explanations as to why firms evolve into MNCs is the **product cycle theory**. According to this theory, firms become established in the home market as a result of some perceived advantage over existing competitors, such as a need by the market for at least one more supplier of the product. Because information about markets and competition is more readily available at home, a firm is likely to establish itself first in its home country. Foreign demand for the firm's product will initially be accommodated by exporting. As time passes, the firm may feel the only way to retain its advantage over competition in foreign countries is to produce the product in foreign markets, thereby reducing its transportation costs. The competition in those foreign markets may increase as other producers become more familiar with the firm's product. The firm may develop strategies to prolong the foreign demand for its product. One frequently used approach is to differentiate the product so that competitors cannot duplicate it exactly. These phases of the product cycle are illustrated in Exhibit 1.2. For instance, 3M Co. uses one new product to enter a foreign market, after which it expands the product line there.

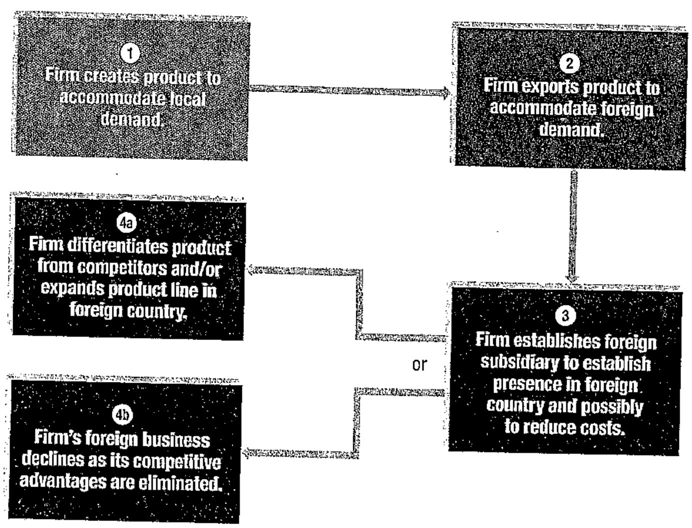
There is, of course, more to the product cycle theory than summarized here. This discussion merely suggests that, as a firm matures, it may recognize additional opportunities outside its home country. Whether the firm's foreign business diminishes or expands over time will depend on how successful it is at maintaining some advantage over its competition. That advantage could be an edge in its production or financing approach that reduces costs or an edge in its marketing approach that generates and maintains a strong demand for its product.

1-3 How Firms Engage in International Business

Firms use several methods to conduct international business. The most common methods are:

- international trade,
- licensing,
- franchising,

Exhibit 1.2 International Product Life Cycle



- joint ventures,
- acquisitions of existing operations, and
- establishment of new foreign subsidiaries.

Each method will be discussed in turn, with particular attention paid to the respective risk and return characteristics.

1-3a International Trade

International trade is a relatively conservative approach that can be used by firms to penetrate markets (by exporting) or to obtain supplies at a low cost (by importing). This approach entails minimal risk because the firm does not place any of its capital at risk. If the firm experiences a decline in its exporting or importing, it can normally reduce or discontinue that part of its business at a low cost.

WEB
www.trade.gov/mas/ian
Outlook of international trade conditions for each of several industries.

Many large U.S.-based MNCs, including Boeing, DuPont, General Electric, and IBM, generate more than $4 billion in annual sales from exporting. Nonetheless, small businesses account for more than 20 percent of the value of all U.S. exports.

How the Internet Facilitates International Trade Many firms use their websites to list the products they sell along with the price for each product. This makes it easy for them to advertise their products to potential importers anywhere in the world without mailing brochures to various countries. Furthermore, a firm can add to its product line or change prices simply by revising its website. Thus, importers need only check an exporter's website periodically in order to keep abreast of its product information.

Firms can also use their websites to accept orders online. Some products, such as software, can be delivered directly to the importer over the Internet in the form of a file on the importer's computer. Other products must be shipped, but even in that case the Internet makes it easier to track the shipping process. An importer can transmit its order for products via e-mail to the exporter, and when the warehouse ships the products it can send an e-mail message to the importer and to the exporter's headquarters. The warehouse may also use technology to monitor its inventory of products so that suppliers are automatically notified to send more supplies once the inventory falls below a specified level. If the exporter has multiple warehouses, the Internet allows them to operate as a network; hence if one warehouse cannot fill an order, another warehouse will.

1-3b Licensing

Licensing is an arrangement whereby one firm provides its technology (copyrights, patents, trademarks, or trade names) in exchange for fees or other considerations. Starbucks has licensing agreements with SSP (an operator of food and beverage concessions in Europe) to sell Starbucks products in train stations and airports throughout Europe. Sprint Nextel Corp. has a licensing agreement to develop telecommunications services in the United Kingdom. Eli Lilly & Co. has a licensing agreement to produce drugs for foreign countries, and IGA, Inc., which operates more than 1,700 supermarkets in the United States, has a licensing agreement to operate markets in China and Singapore. Licensing allows firms to use their technology in foreign markets without a major investment in foreign countries and without the transportation costs that result from exporting. A major disadvantage of licensing is that it is difficult for the firm providing the technology to ensure quality control in the foreign production process.

1-3c Franchising

Under a **franchising** arrangement, one firm provides a specialized sales or service strategy, support assistance, and possibly an initial investment in the franchise in exchange for periodic fees. For example, McDonald's, Pizza Hut, Subway Sandwiches, Blockbuster, and Dairy Queen have franchises that are owned and managed by local residents in many foreign countries. As in the case of licensing, franchising allows firms to penetrate foreign markets without a major investment in foreign countries. The recent relaxation of barriers in countries throughout Eastern Europe and South America has resulted in numerous franchising arrangements.

1-3d Joint Ventures

A **joint venture** is a venture that is jointly owned and operated by two or more firms. Many firms enter foreign markets by engaging in a joint venture with firms that already reside in those markets. Most joint ventures allow two firms to apply their respective comparative advantages in a given project. For instance, General Mills, Inc., joined in a venture with Nestlé SA so that the cereals produced by General Mills could be sold through the overseas sales distribution network established by Nestlé.

Xerox Corp. and Fuji Co. (of Japan) engaged in a joint venture that allowed Xerox to penetrate the Japanese market while allowing Fuji to enter the photocopying business. Sara Lee Corp. and AT&T have engaged in joint ventures with Mexican firms to gain entry to Mexico's markets. Joint ventures between automobile manufacturers are numerous, since each manufacturer can offer its own technological advantages. General Motors has ongoing joint ventures with automobile manufacturers in several different countries, including the former Soviet states.

1-3e Acquisitions of Existing Operations

Firms frequently acquire other firms in foreign countries as a means of penetrating foreign markets. Such acquisitions give firms full control over their foreign businesses and enable the MNC to quickly obtain a large portion of foreign market share.

EXAMPLE

Google, Inc., has made major international acquisitions to expand its business and improve its technology. It has acquired businesses in Australia (search engines), Brazil (search engines), Canada (mobile browser), China (search engines), Finland (micro-blogging), Germany (mobile software), Russia (online advertising), South Korea (weblog software), Spain (photo sharing), and Sweden (videoconferencing). ●

However, the acquisition of an existing corporation could lead to large losses because of the large investment required. In addition, if the foreign operations perform poorly then it may be difficult to sell the operations at a reasonable price.

Some firms engage in partial international acquisitions in order to obtain a toehold or stake in foreign operations. This approach requires a smaller investment than that of a full international acquisition and so exposes the firm to less risk. On the other hand, the firm will not have complete control over foreign operations that are only partially acquired.

1-3f Establishment of New Foreign Subsidiaries

Firms can also penetrate foreign markets by establishing new operations in foreign countries to produce and sell their products. Like a foreign acquisition, this method requires a large investment. Establishing new subsidiaries may be preferred to foreign acquisitions because the operations can be tailored exactly to the firm's needs. In addition, a smaller investment may be required than would be needed to purchase existing operations. However, the firm will not reap any rewards from the investment until the subsidiary is built and a customer base established.

1-3g Summary of Methods

The methods of increasing international business extend from the relatively simple approach of international trade to the more complex approach of acquiring foreign firms or establishing new subsidiaries. Any method of increasing international business that requires a direct investment in foreign operations normally is referred to as a **direct foreign investment (DFI)**. International trade and licensing are usually not viewed as examples of DFI because they do not involve direct investment in foreign operations. Franchising and joint ventures tend to require some investment in foreign operations but only to a limited degree. Foreign acquisitions and the establishment of new foreign subsidiaries require substantial investment in foreign operations and account for the largest portion of DFI.

Many MNCs use a combination of methods to increase international business. For example, IBM and PepsiCo engage in substantial direct foreign investment yet also derive some of their foreign revenue from various licensing agreements, which require less DFI to generate revenue.

Arbitrage

- Locational arbitrage may occur if foreign exchange quotations differ among banks. The act of locational arbitrage should force the foreign exchange quotations of banks to become realigned, after which locational arbitrage will no longer be possible.
- Triangular arbitrage is related to cross exchange rates. A cross exchange rate between two currencies is determined by the values of these two currencies with respect to a third currency. If the actual cross exchange rate of these two currencies differs from the rate that should exist, triangular arbitrage is possible. The act of triangular arbitrage should force cross exchange rates to become realigned, at which time triangular arbitrage will no longer be possible.
- Covered interest arbitrage is based on the relationship between the forward rate premium and the interest rate differential. The size of the premium or discount exhibited by the forward rate of a currency should be about the same as the differential between the interest rates of the two countries of concern. In general terms, the forward rate of the foreign currency will contain a discount if its interest rate is higher than the U.S. interest rate.
- If the forward premium deviates substantially from the interest rate differential, then covered interest arbitrage is possible. In this type of arbitrage, a short-term investment in some foreign currency is covered by a forward sale of that foreign currency in the future. In this manner, the investor is not exposed to fluctuation in the foreign currency's value.
- According to the theory of interest rate parity (IRP), the size of the forward premium (or discount) should be equal to the interest rate differential between the two countries of concern. If IRP holds then covered interest arbitrage is not feasible, because any interest rate advantage in the foreign country will be offset by the discount on the forward rate. Thus, covered interest arbitrage would not generate higher returns than would be generated by a domestic investment.
- Since the forward premium of a currency (from a U.S. perspective) is influenced both by the interest rate of that currency and by the U.S. interest rate, and since those interest rates change over time, it follows that the forward premium changes over time. Thus a forward premium that is large and positive in one period, when the interest rate of that currency is relatively low, could become negative (reflecting a discount) if its interest rate rises above the U.S. level.

Exchange Rate Systems

- Exchange rate systems can be classified as fixed rate, freely floating, managed float, or pegged. In a fixed exchange rate system, exchange rates are either held constant or allowed to fluctuate only within very narrow boundaries. In a freely floating exchange rate system, exchange rate values are determined by market forces without intervention. In a managed float system, exchange rates are not restricted by boundaries but are subject to government intervention. In a pegged exchange rate system, a currency's value is pegged to a foreign currency (or unit of account) and moves in line with that currency (or unit) against other currencies.
- Numerous European countries use the euro as their home currency. The single currency allows international trade among firms in the eurozone without foreign exchange expenses and without concerns about future exchange rate movements. However, countries that participate in the euro do not have complete control of their monetary policy because a single policy is applied to all countries in the eurozone. In addition, being part of the eurozone may render some countries more susceptible to a crisis occurring in some other eurozone country.
- Governments can use direct intervention by purchasing or selling currencies in the foreign exchange market, thereby altering demand and supply conditions and hence the currencies' equilibrium values. When a government purchases a currency in the foreign exchange market, it puts upward pressure on that currency's equilibrium value. When a government sells a currency in the foreign exchange market, it puts downward pressure on the currency's equilibrium value.

  Governments can use indirect intervention by influencing the economic factors that affect equilibrium exchange rates. A common form of indirect intervention is to increase interest rates in order to attract more international capital flows, which may cause the local currency to appreciate. However, indirect intervention is not always effective.
- When the Fed intervenes to weaken the U.S. dollar, the weaker dollar stimulates the U.S. economy by reducing U.S. demand for imports and increasing foreign demand for U.S. exports. Thus, the weak dollar tends to increase U.S. employment but can also increase U.S. inflation. When government intervention strengthens the U.S. dollar, the stronger dollar increases the U.S. demand for imports and so intensifies foreign competition. The strong dollar can reduce U.S. inflation but may lead to higher levels of U.S. unemployment.

FINAL EXAM STUDY GUIDE
IFMG 300
Dr. Hyde

1. Secondary storage stores data and programs for future use.

2. The correct order of the computer hierarchy, from smallest to largest is as follows:
   microcomputers, midrange computers, mainframe computers, supercomputers

3. An example of an output technology is a printer, monitor, and/or plotter.

4. An example of an input technology is a monitor, joystick, keyboard, and/or RFID scanner.

5. An example of source-data automation is the UPC scanner.

6. Registers are high-speed storage areas that store very small amounts of data and instructions for short periods of time.

7. The hierarchy of memory capacity from largest to smallest is as follows:
   ZB, EB, PB, TB, GB, MB, KB

8. RAM is primary storage that is volatile. A hard disk is secondary storage that is not volatile.

9. A hard drive, a floppy disk, CDs, DVDs, and/or flash drives are examples of secondary storage.

10. Magnetic tape is the cheapest storage medium.

11. Application software is a set of computer instructions that provide more specific functionality to a user. [Remember: computer instructions = software = code]

12. Open Source software is available at no cost to developers or users.

13. The Operating System is the main system control program, which supervises the overall operations of the computer, allocates CPU time and main memory to programs, and provides an interface between the user and the hardware.

14. Linux is an open source, operating system and is the most widely used operating system in the world at this time. Windows is not open source—it is licensed and sold by a manufacturer, but it is another operating system program.

15. Examples of application software include desktop publishing, personal finance programs, spreadsheet programs, databases, games, and presentation programs.

16. Personal application software is a general-purpose, off-the-shelf application program designed to help individual users increase their productivity.

17. A Supply Chain refers to the flow of materials, information, money, and services from raw material suppliers, through factories and warehouses to the end customers.

18. A company's suppliers, suppliers' suppliers, and the processes for managing them is the upstream portion of the supply chain.

19. Supply Chain Visibility is the ability for all organizations in a supply chain to access or view relevant data on purchased materials as these materials move through their suppliers' production processes and transportation networks to their receiving docks.

20. Interorganizational information systems result in all of the following: Reduced costs of routine business transactions, Improved quality of information flow, reduced errors, and eliminated paper processing.

21. Sales force automation is the component of an operational CRM system that automatically records all the aspects in a sales transaction process.

22. Over time, the customer relationship with vendors has become more impersonal because the Internet grew rapidly; people moved from farms to cities; supermarkets and department stores proliferated; consumers became mobile.

23. Customer touch points include telephone contact, email, web sites, and customer visits to a store.

24. Customer facing CRM includes those areas where customers directly interact with the company.

25. Operational CRM systems support the front-office business processes which directly interact with customers.

26. The complete data on a customer is called a 360-degree view.

27. Organizational transactions are typically high volume, repetitive, and therefore easy to computerize.

28. Business transactions that are processed as they occur is an example of OLTP (online transaction processing) whereas business transactions in which several transactions are processes at one time is called batch processing.

29. The most fundamental information systems in an organization are transaction processing systems.

30. Enterprise resource planning systems take a Business Process view of the overall organization.

31. Enterprise resource planning systems integrate the planning, management, and use of all of an organization's resources and integrate the functional areas of the organization.

32. The characteristics of ERP systems include all of the following:

- integrating the planning, management, and use of all resources of the organization
- providing information necessary to control the business processes of the organization
- including a set of interdependent software modules
- they are expensive and time-consuming

33) The Utilitarian ethical standard states that an ethical action is the one that provides the most good or does the least harm.

34) The Rights ethical standard states that an ethical action is the one that best protects and respects the moral rights of the affected parties.

35) The Fairness ethical standard states that ethical actions treat all human beings equally.

36) The Common Good ethical standard states that respect and compassion for all others is the basis for ethical actions.

37) The following are steps in ethical decision making:

- Recognize the ethical issue.
- Get the facts.
- Evaluate alternative actions.
- Make a decision and test it.

38) Various organizations that promote fair and responsible use of information systems often develop a Code of Ethics.

39) ***<u>What is Unethical is not necessarily Illegal.</u>*** However, a case can be made for the following.
What is unethical is not necessarily illegal. What is illegal is not necessarily unethical. What is ethical is not necessarily illegal. What is unethical is not necessarily legal. What is ethical is not necessarily legal.

40) Privacy issues involve collecting, storing, and disseminating information about individuals.

41) Accuracy issues involve the authenticity and fidelity of information that is collected and processed.

42) Accessibility issues involve who may obtain information and how much they should pay for this information.

43) Responsibility means accepting the consequences of your decisions and actions.

44) Accountability determines who is responsible for the actions taken.

45) Privacy, accuracy, property (such as intellectual property and copyrights) and accessibility to information are ethical issues related to IT.

46) Liability is a legal concept that gives individuals the right to recover the damages done to them by other individuals, organizations, or systems.

47) An individual's right to privacy is NOT absolute. Determining and enforcing privacy regulations can be difficult. Advances in information technologies have affected individual privacy. The Internet has not increased individuals' privacy. An individual's right to privacy might or might not supersede the needs of society.

48) Web 2.0 sites can harness collective intelligence; can deliver functionality as services; can feature remixable applications and data; can encourage user participation; and can be used to start a business.

49) Tag categories are NOT created by software developers.
Tagging software does NOT have built-in rules.
Tagging can be performed NOT only on Web pages.
Tags are not given only to text.
Folksonomies are a version of tagging.

50) Tags do NOT fall into categories.
Users can pick their own tags.
Tags can be given to any piece of information or file.
Tags can be used to retrieve Web content.
Each user designs a personal set of tagging rules.

51) Blogs cannot be part of an RSS feed.

52) RSS feeds transmit a link to the full text of new content to subscribers.

53) With Web 1.0 sites, users passively receive information, whereas with Web 2.0 sites, users participate with the site.

54) An advantage of tagging is that despite the variation in individual rules, the Web collection is rather organized.

55) You sign up for an RSS feed from CNN.com. You can expect that you will be notified of updates in the content areas you selected.

56) Blogs, wikis, netcasting, and crowdsourcing are examples of Web 2.0 applications. AJAX is not an example of Web 2.0 applications.

57) Many traditional media companies are using blogs to provide a richer version of the stores they cover.

58) Many companies are using wikis to capture updated product features and specifications.

59) You cannot trust that the details in a blog are true. Anyone can blog. A company can maintain an internal blog site. Blogging can be used in marketing. Tweets are replacing blogging.

60) You just started to work on a project with three other people. You realize that everyone has their own notes, which makes it hard for you to keep track of what has been done and what still needs to be done. Wikis are applications that the team could use.

61) The comments of consumers in the blogosphere concerning a company's products are called Consumer-generated media.

62) The reliability of the content in Wikipedia, the online encyclopedia, is questionable because it is difficult to test the authenticity of the content due to the fact that anyone can contribute content.

63) Universities are using netcasts to provide students with access to lectures.

64) Printing-on-demand as a Web 2.0 application provides the following:

- New small-book printing machines reduce printing costs.
- Free software can be used to edit and typeset text.
- Printing-on-demand companies also offer distribution.
- Printing-on-demand companies market books for their authors.

65) Examples of crowdsourcing include the following:

- Posting a task that needs to be completed with a price for completion
- Posting personal pictures that can be licensed by interested parties
- Asking for feedback on products and make it publically available
- Asking for new product ideas and reward those used

66) Any type of content can be loaded on social networking web sites. The goal of social networking web sites is to help people collaborate. Social networks can be a valuable business tool. Social network software provide tools for finding other people online.

ETS Study Guide: Principles of Management

CLASSICAL PRINCIPLES OF MANAGEMENT: Henri Fayol
Division of labor - Work specialization as the best way to use the human resources of the organization.
Authority - Managers must be able to give orders. Authority gives them this right
Discipline - Employees must obey and respect the rules that govern the organization.
Unity of command - Every employee should receive orders from only one superior.
Unity of direction - Activities that have the same objective should be directed by one manager using one plan for achievement of one common goal.
Subordination - The interests of any one employee or group of employees should not take precedence over the interests of the organization as a whole.
Remuneration - Workers must be paid a fair wage for their services.
Centralization - Decision responsibility that ultimately comes from the top
Scalar chain - The line of authority from top management to the lowest ranks represents the scalar chain. Communications should follow this chain.
Initiative - Employees who are allowed to originate and carry out plans will exert high levels of effort.
Esprit de corps - Promoting team spirit will build harmony and unity within the organization.

APPROACHES TO ETHICAL DECISION MAKING:

Utilitarian - The utilitarian approach focuses on taking the action that will result in the greatest good for the greatest number of people.

Moral Rights - The moral rights approach concerns itself with moral principles, regardless of the consequences.

Universalism - The universalist approach is similar to the Golden Rule. Specifically: a particular action should apply to all people under all circumstances.

Cost-Benefit - Under the cost-benefit approach, you balance the costs and benefits of taking versus not taking a particular action.

HOFSTEDE DIMENSIONS OF CULTURE:

•Power/Distance (PD) This refers to the degree of inequality that exists – and is accepted – among people with and without power.
•Individualism (IDV) This refers to the strength of the ties people have to others within the community.
•Masculinity (MAS) ...
•Uncertainty/Avoidance Index (UAI)
•Long Term Orientation (LTO)

INTERNATIONAL MARKET ENTRY STRATEGIES:

No one market entry strategy works for all international markets. Direct exporting may be the most appropriate strategy in one market while in another you may need to set up a joint venture and in another you may well license your manufacturing.

Methods: from lowest to highest risk and asset investment in the foreign market:
EXPORTING • COUNTER TRADE• LICENSING • TURNKEY CONTRACTS• FRANCHISING • THIRD COUNTRY LOCATION• JOINT VENTURING• CONTRACT MANUFACTURING• MERGERS & ACQUSITIONS• FULLY OWNED MANUFACTURING FACILITIES • GREENFIELD INVESTMENT

APPROACHES TO ETHICAL DECISION MAKING:

Utilitarian - The utilitarian approach focuses on taking the action that will result in the greatest good for the greatest number of people.

Moral Rights - The moral rights approach concerns itself with moral principles, regardless of the consequences.

Universalism - The universalist approach is similar to the Golden Rule. Specifically: a particular action should apply to all people under all circumstances.

Cost-Benefit - Under the cost-benefit approach, you balance the costs and benefits of taking versus not taking a particular action.

GLOBAL PERSPECTIVES:

1. PAROCHIALISM : One who sees the world only through their own eyes. Example: American. Speaks only one language. Does not recognize others' values and cultures: "ours is better."

2. ETHNOCENTRIC ORIENTATION : The ethnocentric orientation values the home country the highest and prefers to staff with expatriates. In such a firm, all foreign marketing operations are planned and carried out from home base.

3. POLYCENTRIC ORIENTATION: The firm attempts to organize its international activities on a country to country basis. Each country is treated as a separate entity and individual strategies are worked out accordingly. Local workers are used as much as possible.
4. REGIOCENTRIC ORIENTATION : In regiocentric approach, the firm accepts a regional marketing policy covering a group of countries which have comparable market and/or cultural characteristics. The operational strategies are formulated on the basis of the entire region rather than individual countries. Staffing would focus on getting workers from the overall region of interest.

5. GEOCENTRIC ORIENTATION : Firms with a geocentric orientation take a world wide approach as operations become global. They would establish manufacturing and processing facilities around the world in order to serve the various regional and national

markets through a complicated but well co-ordinated system of distribution network. Managers would be selected on their talent, irrespective of their country of origin.

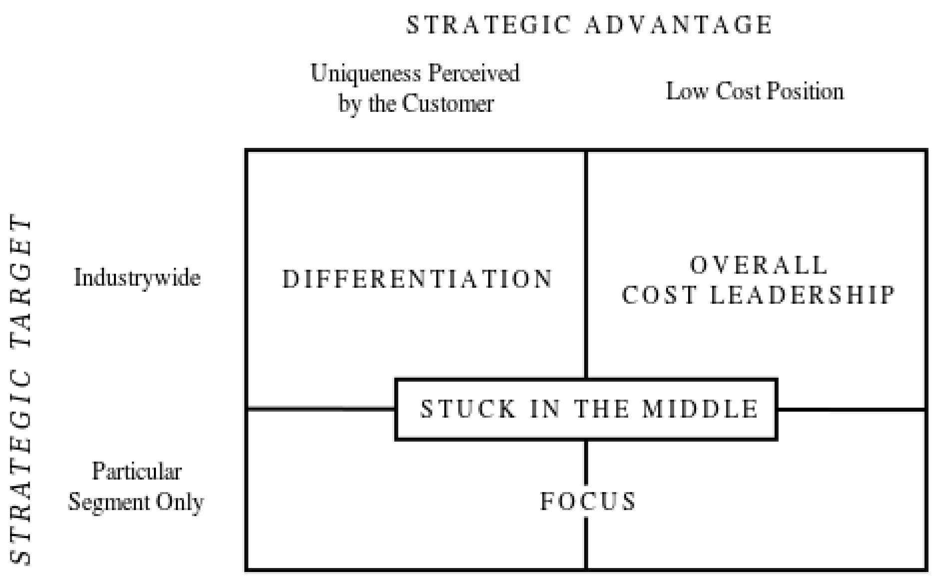
There are similarities between geocentric and regiocentric approaches in the international market except that the geocentric approach calls for a much greater scale of operation.

<u>EXPATRIATE FAILURE:</u>

Reasons for failure of expatriate job assignments in descending order of importance:

1. Inability of spouse to adjust to the new environment
2. The worker's inability to adjust to the new environment
3. Other family related problems
4. Worker's personality or emotional immaturity
5. Worker's lack of technical competence

<u>PORTER'S GENERIC STRATEGIES:</u>



<u>Frequently used Strategic management tool</u>:

Strengths, Weaknesses, Opportunities, Threats (Swot Analysis)

-

ETS Test
Operations Management Study Guide—IUP (Fall 2014)

9. Management of Quality

Quality and Quality Management are associated with the Japanese philosophy of *Kaizen*, the continuous improvement of oneself through all one does. In business, it applies to the never-ending analysis of processes, products, and methods to make them more efficient and more reliable.

Total Quality Management (TQM) developed out of the belief that in order to have lasting quality improvement, the entire organization had to be involved, not just the quality control department.

However, the most important ingredients to make TQM, *Kaizen*, or any quality improvement program successful are a decentralized and supportive management style and employee empowerment.

Quality circles are one way of supporting employee empowerment. Quality circles consist of a small group of people who normally work together in the organization. They meet frequently to uncover and solve problems concerning quality in their work area.

Quality circles usually meet and work on a part-time basis. On the other hand, a *kaizen event* (also known as a *kaizen blitz*) is when a team or department focuses all its attention and resources on generating a significant, rapid improvement to the process.

Processes are improved by identifying and eliminating waste. Waste consists of those process activities, product features, business procedures, etc., that add cost but not value to the good or service *in the eyes of the customer*. This is the primary focus of another *Kaizen*-associated philosophy, Just-in-Time, pioneered by Toyota.

Control charts are tools used to monitor processes to determine whether corrective action is needed. Samples are collected over time from the process and the numerical results are plotted on the control chart. If the process is “in control,” the values on the control chart will not display a discernible pattern. When the control chart values form a non-random pattern, such as a value falling more than 3 standard deviations from the mean, the process is said to be “out of control” and the cause should be investigated. The 3 standard deviation standard guards against “false alarms.” The probability of a value beyond 3 standard deviations when the process is in control is less than 1%.

Benchmarking is a procedure for establishing goals for continuous improvement. Costs, products, or services are compared to those of another company thought to have superior performance. The benchmarked company is not necessarily a competitor in the same industry.

While Six Sigma makes use of many of the ideas of TQM, it differs in several ways. TQM is based on empowering workers to find and solve quality problems, usually within a functional area or department. Six Sigma involves forming a team of quality experts within the organization whose sole purpose is to oversee and lead strategic, cross-functional quality improvement projects with verifiable financial results.

10. Inventory Balance Equation

In operations, the inventory balance equation is very similar to balancing a checking account each month. The amount of money you will have at the end of January (ending inventory) will be the amount you had on January 1 or December 31 (beginning inventory) plus the amount you earned in January (production) minus the amount you spent in January (demand/requirement)

If we use the terminology, I_0 = beginning inventory; I_1= ending inventory; D = Demand or sales and P = Production, $I_1 = I_0 + P – D$

Example: I started with an inventory of 1000 units in January and want to end the month with at least 500 units. I expect demand to be 3500 in Jan. What should I plan to produce? 500 = 1000 + P – 3500; Solving for P, I need to produce 3000.

11. Economic Order Quantity (EOQ) and Reorder Point

EOQ is the optimal quantity to order given the demand (D), the holding cost (H) and the ordering cost (S). It is given by the simple formula

$$EOQ = \sqrt{\frac{2DS}{H}}$$

Observe that if holding cost is lowered, the EOQ goes up. Mathematically, H is in the denominator and if it is lowered, the EOQ has to go up. Logically, if it costs less to hold in inventory, I would order a larger quantity each time. The opposite effect is observed if H goes up.

Similarly if the Ordering cost is lowered, the EOQ goes down. Mathematically, S is in the numerator and if it is lowered, the EOQ also goes down. Logically, if it costs very less to place an order each time, I would order smaller quantities more often to save on space and money to hold inventory.

EOQ is directly proportional to the ordering cost (and the demand) and is inversely proportional to the holding cost.

Reorder Point (ROP) means exactly what the term says—the inventory level at which a manufacturer or a retailer would place an order to replenish the product. A simple example: if Giant Eagle knows that it sells 3 bottles of Heinz ketchup per day (demand) and it takes 4 days to receive the ketchup once it is ordered (lead time), it would be logical to place the order when the inventory is 3 x 4 = 12 units. In those 4 days between placing an order and receiving it, the retailer would have sold 12 bottles, theoretically. In reality, it may be a little less (ideally, not more since it will result in empty shelves or stockouts or negative inventory).

ROP = Demand/day x Lead Time = 3 * 4 = 12 bottles

In some cases, you add a safety stock to the ROP calculation. For example, in the above example, you want to have one day of demand in safety stock (or buffer), your ROP = 3 *(4+1) = 15 bottles. Sometimes, safety stock may just be expressed as units as opposed to days of demand. So, if safety stock = 5 bottles in the above example, the ROP = (3*4) + 5 = 17 bottles.

So, ROP is directly proportional to demand, lead time, and safety stock.

12. Derived or Dependent Demand

In a supply chain, customers drive the demand for the retailers, retailers for the distributors, distributors for manufacturers, and manufacturers for suppliers and so on.

So, when the suppliers are trying to forecast their demand, they are <u>dependent</u> on the demand of the manufacturer and hence <u>derive</u> their demand from that of the manufacturer. This is referred to as derived or dependent demand. Same relationship holds good between distributors and retailers or any two adjacent entities in a supply chain.

This concept of dependent or derived demand is also found in Materials Requirement Planning (MRP) in production planning of parts. For example, demand for engines in a car is dependent or is derived from that of the demand for cars. The demand for the valves in the engine is derived from that of the demand for engines and so on.

13. Time Series:

A simple definition of time series is “chronologically arranged data.” Dow Jones Industrial Average (DJIA) is a great example of time series that you come across every day. More examples: Fall enrollment data for IUP over the last 15 years; number of cars sold during each quarter for the last 5 years arranged by date.

Time series may comprise of several components:
Trend: Long-term upward, downward or side-way movement. Example: Over last 100+ years, DJIA has moved upward.
Cycle: Medium-term up and down (undulating) movement with somewhat less predictable amplitude or cycle length. Recession or business boom/bust cycle.
Seasonality: Short-term (one year or shorter period) repetitive pattern that is quite predictable. Examples: Restaurant sales go up every Friday/Saturday. Retail sales peak in Nov/Dec. Traffic in Indiana, PA goes down every summer (when students go home).
Irregular/Assignable: Variation caused by an unusual but known circumstance. Example: Sale of milk, bread and egg goes up just before an impending snow storm. Number of students missing class on Friday just before a long vacation.
Random/Noise: Purely by chance without any possible explanation. Example: number of students missing class on any given day (sometime 2 or 4 or 3 or 1)

14. Value Analysis

A systematic approach to question if a process, method, material, feature, or design is really adding value to a physical product or service. The goal is to eliminate non-value-added activities, features, steps or material without impacting the quality and effectiveness of the product or service. Basically, question everything while not losing focus on **quality and cost effectiveness**. Value analysis looks out how to economically create a better quality product.

- Is the step really necessary? Can we eliminate or combine it with some other step?
- Can we use cheaper material? Can we use cheaper process?
- Are the tight tolerances as designed by engineers really necessary?
- Can we design it to require less future maintenances (value over the life of the product)
- Can we subcontract to cut cost? Can we use a different component?

15. Critical Path

Critical Path Method (CPM) and Program Evaluation and Review Technique (PERT) are two very similar techniques for managing projects. There are some difference in these two techniques: for example, CPM uses activity oriented network diagrams and deterministic time estimates for activities vs. PERT uses event oriented network diagram and probabilistic time estimate for activities. However, it is not uncommon to find people using the terms CPM and PERT in the same breath as CPM/PERT.

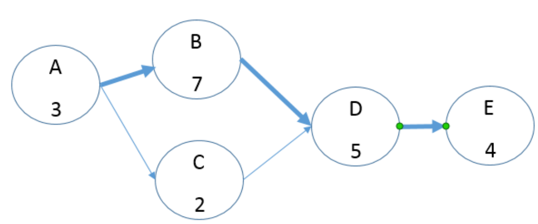
CPM, the easier of the two techniques, can be used managing complex projects. It utilizes the network approach, popularly known as Activity on Node (AON), for creating a network diagram. As the name suggests. Nodes represent activities and arrows represent precedence relationships among various activities required for the project.

Critical path is an important concept. According to businessDictionary.com, critical path is defined as the "Longest sequence of activities in a project plan which must be completed on time." Project manager must focus on all the activities on the critical path (also known as critical activities) to complete the project on time. If a critical activity is delayed, the entire project will be delayed. This because critical activities have no slack (or leeway). On the other hand, if the project need to be expedited or crashed (that is, completed in shorter duration), it will be required to cut down the time taken by one or more critical activities. Be cautious: when you expedite one or more activities on a critical path, a new critical path may emerge.

A Simple Example

Task	Time	Follows
A	3	-
B	7	A
C	2	A
D	5	B,C
E	4	D

Simple AON Diagram



CRITICAL PATH

Path	Length
ABDE	3+7+5+4 = **19**
ACDE	3+2+5+4 = 14

ABDE, the longer path, is the critical path.

MKTG 320 Principles of Marketing Study Guide
MARKETING STRATEGY

Strategic Planning – the process of developing and maintaining a strategic fit between the organization's goals and capabilities and its changing marketing opportunities.
Business Portfolio – The collection of businesses and products that make up the company.
Portfolio Analysis – The process by which management evaluates the products and businesses that make up the company.
Market Penetration – A strategy for company growth by increasing sales of current products to current market segments without changing the product.
Market Development – A strategy for company growth by identifying and developing new market segments for current company products.
Product Development – A strategy for company growth by offering modified or new products to current market segments.
Diversification – A strategy for company growth through starting up or acquiring businesses outside the company's current products and markets.
Downsizing – Reducing the business portfolio by eliminating products of business units that are not profitable or that no longer fit the company's overall strategy.
Marketing Strategy – The marketing logic by which the business unit hopes to create customer value and achieve profitable customer relationships.
Positioning – Arranging for a product to occupy a clear, distinctive, and desirable place relative to competing products in the minds of target consumers.
Benchmarking – The process of comparing the company's products and processes to those of competitors or leading forms in other industries to identify "best practices" and find ways to improve quality and performance.
Competitive Advantage – An advantage over competitors gained by offering greater customer value, either through lower price or by providing more benefits that justify higher prices.
Differentiated (Segmented) Marketing – A market-coverage strategy in which a firm decides to target several market segments and designs separate offers for each.
Marketing Myopia – The mistake of paying more attention to the specific products a company offers than to the benefits and experiences produced by these products.
Marketing strategy – The marketing logic by which the business unit hopes to create customer value and achieve profitable customer relationships.
Marketing Strategy Development – Designing an initial marketing strategy for a new product based on the product concept.
Pull Strategy – A promotion strategy that calls for spending a lot on advertising and consumer promotion to induce final consumers to buy the product, creating a demand vacuum that "pulls" the product through the channel.
Push Strategy – A promotion strategy that calls for using the sales force and trade promotion to push the product through channels. The producer promotes the product to channel members who in turn promote it to final consumers.
Standardized Global Marketing – An international marketing strategy for using basically the same marketing strategy and mix in all the company's international markets.
Strategic Group – A group of firms in an industry following the same or a similar strategy.
Strategic Planning – The process of developing and maintaining a strategic fit between the organization's goals and capabilities and its changing marketing opportunities.

MARKETING ENVIRONMENT

Economic Environment – Factors that affect consumer buying power and spending patterns.
Natural Environment – Natural resources that are needed as inputs by marketers or that are affected by marketing activities.
Technological Environment – Forces that create new technologies, creating new product and market opportunities.
Political Environment – Laws, government agencies, and pressure groups that influence and limit various organizations and individuals in a given society.
Cultural Environment – Institutions and other forces that affect society's basic values, perceptions, preferences, and behaviors.
Economic Community – A group of nations organized to work toward common goals in the regulation of international trade.
Engel's Laws – Differences noted over a century ago by Ernst Engel in how people shift their spending across food, housing, transportation, health care, and other goods and services categories as family income rises.
Environmental Sustainability – A management approach that involves developing strategies that both sustain the environment and produce profits for the company.
Environmentalism – An organized movement of concerned citizens and government agencies to protect and improve people's current and future living environment.
Ethnographic Research – A form of observational research that involves sending trained observers to watch and interact with consumers in their "natural habitat."
Marketing Environment – The actors and forces outside marketing that affect marketing management's ability to build and maintain successful relationships with target customers.
Sustainable Marketing – Marketing that meets the present needs of consumers and businesses while also preserving or enhancing the ability of future generations to meet their needs.

MARKETING RESEARCH

Marketing research is the systematic design, collection, analysis, and reporting of data relevant to a specific marketing situation facing an organization.
Marketing Research process has 4 ***steps***: Problem Definition, Research Plan, Data Collection, Conclusions & Reporting.
Defining the Problem and Research Objectives:
Defining the problem and research objectives is often the hardest step in the research process.

1. A marketing research project might have one of three types of objectives.
   Exploratory research: to gather preliminary information that will help define the problem and suggest hypotheses.
2. **Descriptive research:** to describe things, such as the market potential for a product.
3. **Causal research:** to test hypotheses about cause-and-effect relationships.

Developing the Research Plan:
The research plan outlines sources of existing data and spells out the specific research approaches, contact methods, sampling plans, and instruments that researchers will use to gather new data.
Secondary data consist of information that already exists somewhere, having been collected for another purpose. Quick, less expensive but may be less impartial or relevant. **Primary data** consist of information collected for the specific purpose at hand. More current, accurate and relevant but expensive.
Research Approaches:
Observational Research involves gathering primary data by observing relevant people, actions, and situations; Ethnographic research involves sending trained observers to watch and

interact with consumers in their "natural habitat"; **Survey Research,** the most widely used method for primary data collection, is the approach best suited for gathering ***descriptive*** information;

Experimental Research is best suited for gathering ***causal*** information.

Contact Methods:

Mail questionnaires can be used to collect large amounts of information at a low cost per respondent. Respondents give more honest answers to more personal questions. No interviewer is involved to bias the respondent's answers. Disadvantages: takes longer to complete, low response rate, non-response problems. ***Telephone interviewing*** is the one of the best methods for gathering information quickly, and it provides greater flexibility than mail questionnaires. ***Personal interviewing*** takes two forms – individual and group interviewing/focus groups.

Online Marketing Research increasingly being sought by researchers for collecting primary data using **online tools.**

Sampling Plan:

A S**ample** is a segment of the population selected for marketing research to represent the population as a whole. ***Probability samples*** – random sample, for more accurate scientific results.

Nonprobability sample – for more convenient use, using judgment methods for selection of appropriate respondents.

Research Instruments:

The ***questionnaire*** is the most common data collection instrument. ***Closed-end questions*** include all the possible answers, and subjects make choices among them. ***Open-end questions*** allow respondents to answer in their own words. Care should be given to the ***wording*** and ***ordering*** of questions. Researchers also use ***mechanical instruments*** to monitor consumer behavior. *People meters* and *checkout scanners* are examples.

Customer relationship management (CRM) is used to manage detailed information about individual customers and carefully manage customer touch points in order to maximize customer loyalty. A **data warehouse** is a companywide electronic database of finely detailed customer information that needs to be sifted through for gems.

Data mining is the use of high-powered techniques to sift through the mounds of data and dig out interesting findings about customers.

CONSUMER BEHAVIOR

Consumer behavior is the study of how individuals, groups, and organizations, select, buy, use, and dispose of goods, services, ideas, or experiences to satisfy their needs and wants.

Marketers must fully understand both the theory and reality of consumer behavior.

Cultural Factors Subcultures include nationalities, religions, racial groups, and geographic regions. Virtually all human societies exhibit social stratification.

Most often, it takes the form of social classes, relatively homogeneous and enduring divisions in a society, hierarchically ordered and with members who share similar values, interests, and behavior. One class depiction of social classes in the United States defined seven ascending levels:

Lower lowers; Upper lowers; Working class; Middle class; Upper Middles; Lower uppers; Upper uppers

Social classes members show distinct product and brand preferences in many areas, including clothing, home furnishings, leisure activities, and automobiles.

Social Factors

Reference Groups A person's reference groups are all the groups that have a direct (face-to-face) or indirect influence on their attitudes or behavior. Groups having a direct influence are called membership groups. Some membership groups are primary groups such as family, friends, neighbors, and co-workers with whom the person interacts fairly continuously and informally. Some membership groups are secondary groups such as religious, professional groups that tend to be more formal.

Family The family is the most important consumer-buying organization in society, and family members constitute the most influential primary reference group. The makeup of the American family has changed dramatically. For expensive products and services, the vast majority of husbands and wives engage in joint decision making.

Roles and Status We each participate in many groups. We can define a person's position in each group in terms of role and status. Each role connotes a status.

Personal Factors Personal characteristics that influence a buyer's decision include age and stage in the life cycle; occupation and economic circumstances; personality and self-concept; and lifestyle and values.

Occupation and Economic Circumstances Occupation influences consumption patterns and economic circumstances influence product. Product choice is greatly affected by economic circumstances including: Spendable income (level, stability, and time pattern), Savings and assets, Debts, Borrowing power, and Attitudes toward spending and saving.

Personality and Self-Concept Each person has personality characteristics that influence his or her buying behavior. Personality: A set of distinguishing human psychological traits that lead to relatively consistent and enduring responses to environmental stimuli. Consumers often choose and use brands with a brand personality consistent with their actual self-concept (how we view ourselves). Although in some cases, the match may instead be based on the consumer's ideal self-concept (how we would like to view ourselves). Others self-concept (how we think others see us).

Lifestyles and Value A lifestyle is a person's pattern of living in the world as expressed in activities, interests, and opinions. It portrays the "whole person" interacting with his or her environment.

THE BUYING DECISION PROCESS: THE FIVE-STAGE MODEL

Marketing scholars have developed a "stage model" of the buying-decision process.

Problem Recognition The buying process starts when the buyer recognizes a problem or need.

Information Search Surprisingly, consumers often search for limited amounts of information. An aroused consumer will be inclined to search for more information. We can distinguish between two types of arousal.

Search Dynamics By gathering information, the consumer learns about competing brands and their features.

Evaluation of Alternatives No single process is used by all consumers, or by one consumer in all buying situations. The most current models see the consumer forming judgments largely on a conscious and rational basis.

Purchase Decision: In the evaluation stage, the consumer forms preferences among the brands in the choice set and may also form an intention to buy the most preferred brand.

Post-Purchase Behavior After the purchase, the consumer might experience dissonance about their purchase and be alert to information that supports their decision. Marketing communications should supply beliefs and evaluations that reinforce the consumer's choice and help him or her feel good about the brand.

Post-Purchase Satisfaction is a function of the closeness between expectations and the product's perceived performance. If the performance falls short of expectations the consumer is disappointed. If the performance meets expectations the consumer is satisfied. If the performance exceeds expectations the consumer is delighted.

Post-Purchase Actions Satisfaction or dissatisfaction with the product will influence subsequent behavior. A dissatisfied consumer may abandon or return the product.

Post-Purchase Use and Disposal Marketers should also monitor how buyers use and dispose of the product. A key driver of sales frequency is product consumption rate. One potential opportunity to increase frequency of product use is when consumers' perceptions of their usage differ from reality. Marketers also need to know how the consumer disposes of the product once it is used.

BUSINESS CUSTOMERS --- Business-to-Business Marketing

Business organizations do not only sell; they also buy vast quantities of raw materials, manufactured components, plant and equipment, supplies, and business services. According to the Census Bureau, there are roughly 6 million businesses with paid employees in the United States alone. To create and capture value, sellers need to understand these organizations' needs, resources, policies, and buying procedures.

Many principles of basic marketing also apply to business marketers. They need to embrace holistic marketing principles, such as building strong relationships with their customers, just like any marketer. But they also face some unique considerations in selling to other businesses.

WHAT IS ORGANIZATIONAL BUYING?

Webster and Wind define organizational buying as the decision-making process by which formal organizations establish the need for purchased products and services and identify, evaluate, and choose among alternative brands and suppliers.

Buying Situations: The business buyer faces many decisions in making a purchase. How many depends on the complexity of the problem being solved, newness of the buying requirement, number of people involved, and time required. Three types of buying situations are the straight rebuy, modified rebuy, and new task. Straight rebuy is when the purchasing department reorders on a routine basis and chooses from suppliers on an "approved list." Modified rebuy is when the buyer wants to change product specifications, prices, delivery requirements, or other terms. New task is when the purchaser buys a product or service for the first time.

PARTICIPANTS IN THE BUSINESS BUYING PROCESS

The Buying Center: Webster and Wind call the decision-making unit of a buying organization the buying center. It consists of "all those individuals and groups who participate in the purchasing decision-making process, who share some common goals and the risks arising from the decisions."

The buying center includes all members of the organization who play any of seven roles in the purchase decision process: Initiators—requests the product, Users—will use the product, Influencers—influences the buying decision, Deciders—makes the decision of what to purchase, Approvers—authorizes the proposal, Buyers—have the formal authority to purchase, Gatekeepers—have the power to prevent seller information from reaching members of the buying center. Several people can occupy a given role such as user or influencer, and one person may play multiple roles.

THE PURCHASING/PROCUREMENT PROCESS

Business buyers seek to obtain the highest benefit package (economic, technical, services, and social) in relation to a market offering's costs. A business buyer's incentive to purchase will be a function of the difference between perceived benefits and perceived costs. Today's purchasing departments are more strategically orientated and have a mission to seek the best value from fewer and better suppliers. Recent competitive pressures have led many companies to upgrade their purchasing departments and elevate administrators to vice presidential rank. These new, more strategically oriented purchasing departments have a mission to seek the best value from fewer and better suppliers.

STAGES IN THE BUYING PROCESS:

Problem Recognition

The buying process begins when someone in the company recognizes a problem or need. The recognition can be triggered by internal or external stimuli.

General Need Description and Product Specification

Next, the buyer determines the needed item's general characteristics and required quantity. The buying organization now develops the item's technical specifications. Suppliers can use product value analysis as a tool for positioning themselves to win an account.

Supplier Search: The buyer next tries to identify the most appropriate suppliers through trade directories, contacts with other companies, trade advertisements, trade shows, and the Internet.

E-Procurement: Web sites are organized around two types of e-hubs: vertical hubs centered on industries and functional hubs.

Lead Generation: The supplier's task is to ensure it is considered when customers are in the market searching for a supplier.

Proposal Solicitation: The buyer invites qualified suppliers to submit proposals. If the item is complex or expensive, the proposal will be written and detailed.

Supplier Selection: Before selecting a supplier, the buying center will specify and rank desired supplier attributes, often using a supplier-evaluation model.

Order-Routine Specifications: After selecting suppliers, the buyer negotiates the final order, listing the technical specifications, the quantity needed, the expected time of delivery, return policies, warranties, and so on.

Performance Review: The buyer periodically reviews the performance of the chosen supplier(s). Many companies have set up incentive systems to reward purchasing managers for good buying performance, in much the same way sales personnel receive bonuses for good selling performance.

INSTITUTIONAL AND GOVERNMENT MARKETS

The institutional market consists of schools, hospitals, nursing homes, prisons, and other institutions that must provide goods and services to people in their care.

MARKET SEGMENTATION

Market Segmentation involves aggregating prospective buyers into groups that have common needs and will respond similarly to a marketing action. Thus, the created **Market Segments** are the relatively homogeneous groups of prospective buyers who are relatively similar to each other in terms of their consumption behavior. (B2C and B2B)

Market segments cause firms to use **product differentiation**, a strategy that involves a firm's using different marketing mix activities, to help consumers perceive the product as being different and better than competing products.
The **process of segmenting a market** (using appropriate segmentation variables for grouping people or organizations in a market according to the similarity of their needs and the benefits they are looking for in making a purchase) and selecting specific segments as targets (toward whom the organization can take specific, tangible marketing actions) is the link between the various buyers' needs and the organization's marketing program.

Criteria to Use in Forming the Segments:
Potential for increased profit & ROI for expended operations & marketing costs in targeting and reaching buyers of the segments; Similarity of needs of potential buyers within a segment; Difference of needs of buyers among segments; Potential of a marketing action to reach a segment; Simplicity and cost of assigning potential buyers to segments.

Ways to Segment Consumer Markets:
Customer characteristics-based variables – Geographic; Demographic; Psychographic
Buying situations-based variables – Benefits Sought, & Usage Rate (consumption and patronage trends)

Ways to Segment Organizational Markets:
Customer characteristics-based variables – Geographic; Demographic (NAICS data)
Buying situations-based variables – Benefits Sought; Nature of Goods; Procurement Conditions (location, features)

Criteria to Use in Picking the Target Segments:
Market size (substantive enough to generate sales/revenues); Expected growth (for sustainability); Competitive position; Cost of reaching the segment (economies in operations & marketing); Compatibility with firm's objectives and resources.
Marketing Synergies - If a firm can focus on just few target market segments with a wide range products/services, its marketing efforts could be streamlined but pressure would be exerted on the production operations.
Production Synergies - If a firm can focus on making just few products/services to target multiple market segments, it could generate efficiency in production operations but pressure would be exerted on its marketing functions.
Hence, Marketing Synergies and Production Synergies must be managed as a 'balancing act' to achieve 'optimal' results.

Product Positioning - the place an offering occupies in consumers' minds on important attributes relative to competitor.
Head-to-head positioning - competing directly with competitors on similar product attributes in the same target market.
Differentiation positioning - seeking a less competitive, smaller market niche in which to locate a brand.
- Companies also follow a differentiation positioning strategy among brands within their own product line to try to minimize cannibalization of a brand's sales or shares.
Product Repositioning - changing the place an offering occupies in a consumer's mind relative to competitive products.

Market Potential or **Industry Potential**, refers to the maximum total sales of a product by all firms to a segment during a specified time period under specified environmental conditions and

marketing efforts of the firms, assuming past consumption patterns and levels of marketing effort continue relate to other product substitutes.
Sales Forecast or **Company's Demand Forecast** refers to the total sales of a product that a firm expects to sell during a specified time period under specified environmental conditions and its own marketing efforts, assuming consumers' preferences remain constant and competitors don't change prices.

Forecasting Techniques: Judgments of Decision Makers (direct, lost-horse type forecasting, etc.); Surveys of Connected Knowledgeable Stakeholders (buyers, consumers, salesforce, distributors, vendors, suppliers, channel intermediaries, etc.); Statistical Methods (regressions, trend extrapolations, etc.).

PRODUCT STRATEGY

Product: Definition: Any market offering that satisfies a want or a need. Includes tangible goods, services, events, persons, places, organizations, or ideas (such as social causes).
Products **classified** as Consumer Products (end-user is the consumer) and Industrial Products (used by companies to make other products; also called business-to-business products).
Consumer Products are classified into Convenience (bought frequently, immediately, with minimum comparison and buying effort), Shopping (bought less frequently after comparing quality, price and style), Specialty (bought for its unique characteristics such as brand or design with extra purchasing effort), and Unsought (consumers do not perceive a need for or think of buying).
Industrial Products are classified into Material (raw material; manufactured material) and parts; Capital items (plant and machinery); and Supplies and Business Services.
Product Attributes: characteristics include Product Quality, Style & Design, Branding, Packaging, and Labelling.
Brand is a name, term, sign, symbol, or design that identifies the maker or seller of a product or service. A brand name should suggest product's benefits and qualities; easy to pronounce, recognize and remember; should be distinctive; and translatable in other languages.
Packaging should not just hold and protect the product but differentiate the product to make it attractive at the point-of-sale and prevent wrongful use of the product ("child-proof"; tampering).
Labeling identifies, describes the contents, explains proper use, and promotes the brand.
Product line is a group of closely-related products in terms or usage, benefits, type of customers or channel outlets. Product line length refers to the number of products in a product line. Product lines can be stretched by extending to more expensive or less expensive products with respective increase or decrease of features/services.
Product mix (or product portfolio) is the organization of a company's products into multiple product lines (width) and, within each product line, the number of products (length) and the variations within each product (depth). For example, Gap Inc. Men's division may have four product lines (khakis, shorts, sweaters, shirts) [width=4], khaki's coming in three styles (pleated; flat-front; cargo), [length=3], and each style comes in 8 sizes [depth=8].
Brand Equity: the differential effect that knowing a brand name has on customer response in terms of preference and loyalty – higher the brand equity, higher the value of the brand as an asset. Brand valuation estimates the financial value of a brand on the balance sheet. Brand positioning is the perception of the brand in the target customer's mind. Positioning could be at the tangible product attribute level, benefit level, or beliefs and values level making an emotional connection which is difficult to break (or establish).
Brand name strategy may be a line extension (an existing brand name in an existing product category – e.g. Tide detergent capsules), brand extension (existing brand name in a new product category – e.g. Febreeze car deodorizer), multibrands (new brand name in an existing

product category – e.g. Scion cars made by Toyota) or new brands (new brand in a new category - e.g. Zune music player from Microsoft).

New Product Development and Product Life-Cycle

New products may be original products with minor or major improvements, product modifications and extensions, products that are new to the company or new-to-the-world products.

New product development process may be an eight-step process: 1. Idea generation (the systematic search for new-product ideas using brainstorming, internal idea sources or external sources such as customers, distributors and suppliers); 2. Idea Screening (spot good ideas based on design constraints or feasibility criteria); 3. Concept Development (product concept is a detailed version of the idea stated in meaningful consumer terms) and Testing (using marketing research techniques such as focus group interviewing or likelihood-of-purchase surveys); 4. Marketing Strategy Development (describe the target market, the value proposition, and the sales and profit goals for the near future); 5. Business Analysis (a more thorough review of sales, costs, profit projections, risk assessment and what-if sales forecasting); 6. Product Development (R&D and engineering make the product design feasible and within budget); 7. Test Marketing (the success of the product concept is tested in a realistic market setting, typically to a target market in a specific representative geographical market, with the planned marketing communication (e.g. advertising) support; 8. Commercialization (manufacturing the product to its final specifications and launching the product to the market).

Product Life-Cycle (PLC) represents the stages a product goes through before it is withdrawn from the market. 1. Product Development stage (when profits are negative since new product development costs are not recovered yet and sales are non-existent),

2. Introduction stage (sales are low, profits are still negative since breakeven not achieved, few, if any, competitors, advertising to create product awareness, and pricing may be either market-skimming [when no competitors may exist] or market-penetration [when competitors are expected to enter soon and capturing a good market share with a lower entry price would be better],

3. Growth stage (rising sales, rising market demand, rising competition, competitive pricing, greater product reach through broader distribution and build preference and loyalty through marketing communication),

4. Maturity stage (peak sales, few competitors survive as market leader defends position, low cost per customer, intensive distribution and marketing communication stresses differences and benefits), and

5. Decline stage (declining sales and profits, cut costs and decide to withdraw product or retain with minimal marketing support).

Adoption Process: A consumer goes through the following five stages before adopting a new product: 1. Awareness (consumer aware of the new product but lacks information), 2. Interest (seeks information about the new product), 3. Evaluation (consumer considers the new product to see if it meets need), 4. Trial (consumer tries product on a small scale [testdrive a car; sample a product in store]), and 5. Adoption (consumer decides to make full and regular use of the new product).

Product Adopter Categories classifies consumers into five groups depending on their propensity to adopt an innovation (new product): 1. Innovators (2.5% of the population; venturesome, risk-takers), 2. Early Adopters (13.5 % of the population; opinion-leaders in their community), 3. Early Majority (34% of the population; deliberate but adopt new product before an average person), 4. Late Majority (34% of the population; skeptics), and 5. Laggards (16% of the population; these may or may not ever adopt the new product).

SERVICES

Defined as deeds, processes and performances that one party can offer another; essentially intangible - their production may or may not be tied to a physical product

CHARACTERISTICS of SERVICES and their IMPLICATIONS

INTANGIBILITY: cannot by seen, tasted, felt, heard or smelled before they are bought.
- Services cannot be inventoried, patented, readily displayed or communicated.
- Pricing is difficult.

INSEPARABILITY: typically produced and consumed at the same time.
- Customers participate in and affect the transaction; Customers affect each other.
- Employees affect the service outcome; employee-service relationship connected.
- Decentralization may be essential; Mass production is difficult.

VARIABILITY & HETEROGENIETY: Services vary from producer to producer, as well as from time to time with the same producer; quality depends on many uncontrollable factors.
- Service delivery and customer satisfaction depend on employee actions.

PERISHABILITY: generally, Services cannot be stored, returned or resold.
- It is difficult to synchronize supply and demand with services.

EXPANDED MARKETING MIX FOR SERVICES:
Product, Price, Place, Promotion, People ('Employees'), Process ('Service'), Physical Evidence ('Servicescape')

Expectations are beliefs about service delivery that serve as standards or reference points against which performance is judged --- **Expectations** can either represent what we believe will occur (prediction) or what we want to occur (desires).

Service Quality is the customer's judgment of overall excellence of the service provided in relation to the quality that was expected; also defined as the difference between customer expectations and perceptions.
Both the process and outcome quality are evaluated by the consumer.

The **SERVQUAL model of Service Quality**, lists five dimensions of quality on which consumers judge quality:
RELIABILITY - Ability to perform the promised service dependably and accurately.
ASSURANCE - Knowledge and courtesy of employees and their ability to convey trust and confidence.
TANGIBLES - Physical facilities, equipment, and appearance of personnel.
EMPATHY - Caring, individualized attention the firm provides its customers.
RESPONSIVENESS - Willingness to help customers and provide prompt service.
- When customers perceive less than expected service quality in a service organization, focus on the deficiencies within the organization that contribute to this perception.

The GAP Model (as per SERVQUAL) **-** moves from understanding service quality evaluations of consumers to understanding the deficiencies, or gaps, within the organization that may cause service quality shortfalls.

GAP 1: The discrepancy between customers' expectations and managements' perception of customers' expectations.
GAP 2 : The discrepancy between managements' perceptions of customers' expectations and managements' ability to translate these expectations into service quality specifications.
GAP 3: The discrepancy between the service quality specifications and the service delivery act.

GAP 4: The discrepancy between the external communication from the provider and the actual service delivery act.
GAP 5: The potential discrepancy between the expected and perceived service from the customers' standpoint.

PRICING

Price serves as indicator of 'Value' - Price compared with "Perceived Benefits" of the product/service purchased.

Pricing Objectives - the role of price in an organization's marketing and strategic plans: Sales Revenue, Market Share, Volume of Product outbound, Profitability (long/short-term), Survival, Growth, Social Responsibility.
Pricing Constraints - factors that limit the range of prices a firm may set: Demand for the Product-Class/Product/Brand, Stage in its Life Cycle, Product Line, Costs of Producing & Marketing, Time changes, Type of Competition in Market.

Demand Curve relates Quantity and Price - shows the maximum number of units that will be sold at a given price.
- Demand Estimation impacted by Price, Offerings of Competitors, as well as demographic/psychographic factors of Consumers like their ability/willingness to pay, income, tastes, preferences, lifestyles, culture, technology…
- 'Movement along demand curve' occurs when the price is lowered and quantity demanded increases, assuming that other demand factors remain unchanged.
- If some of these factors do change (eg. increase of advertising or distribution, or if consumer incomes rise), a 'Shift in the demand curve' results – more of the product is wanted for a given price, so the demand curve shifts to the right.

Price Elasticity of demand: the % change in quantity demanded for a product relative to a % change in its price.
- shows how sensitive consumer demand and the firm's revenues are to changes in the product's price.

Total Revenue: the total money received from the sale of product – unit price multiplied by quantity sold.
Marginal Revenue: the change in total revenue that results from producing and marketing one additional unit.
Fixed Cost: expenses of the firm that are stable and do not change with quantity of a product that is produced and sold.
Variable Cost: expenses of the firm that vary directly with the quantity of a product that is produced and sold.
Total Cost: the total expense incurred by a firm in producing and marketing a product (add fixed costs & variable costs).
Marginal Cost: the change in total cost that results from producing and marketing one additional unit of a product.
Break-Even Point/Volume is the quantity of sales (sales revenue) at which total revenue and total cost are equal.

Pricing Strategies: Setting the Selling Price - based on orientations of Demand, Costs, Profit, Competition.

Skimming Pricing - setting high initial price (on new product) so customers really desiring the product are willing to pay.
Penetration Pricing - setting a low initial price (on new product) to appeal immediately to the mass market.
Price Lining - setting the prices of a line of products at a number of different specific 'pricing points'.
Target Pricing - estimating the product's price that the ultimate consumer would be willing to pay, & working backward through the marketing channel to adjust for all markups, costs, features, etc. to achieve the target price to consumers.
Bundle Pricing - marketing of two or more products in one 'package' price; 'package' valued more than individual items.
Yield Management Pricing - the charging of different prices to maximize revenue for a set amount of capacity at any given time; prices fluctuating with time, based on capacity management and servicing to match supply and demand.
Standard Mark-Up Pricing - entails adding a fixed % to the cost of all items in a specific product class.
Cost-Plus Pricing - involves summing the total unit cost of providing a product or service and adding a specific amount (like a 'fixed fee' or a '% of cost') to that cost to arrive at a selling price.
Target Profit Pricing - involves setting an annual target of a specific dollar volume of profit.
Target Return-on-Sales Pricing - involves setting the price to achieve a profit that is a specified % of the sales volume.
Target Return-on-Investment Pricing - involves setting the price to achieve an annual target return-on-investment.

Customary Pricing - setting the price that is dictated by the standardized channel of distribution in the market.
Above-, At-, or Below-Market Pricing - depending on consumers' perception of the brand, competition, market-price.
Loss-Leader Pricing - deliberately selling a product below its customary price, not to increase sales, but to attract customers' attention, in hopes that they will buy other products as well, such as discretionary items with larger markups.

Price Flexibility – practiced by offering Discounts (on quantity & frequency of purchases, trade in the channels, buyer-seller relationships, seasonal effects, inventory stocks), Trade-Ins, Allowances, Sales Promotions, etc. for price reduction.

MARKETING CHANNELS

Marketing Channel (Distribution functions) consists of individuals and firms ("Channel Intermediaries") involved in the process of making products &/or services available for use/consumption by consumers or industrial users.
Channel Intermediaries (eg. wholesalers, retailers, agents, brokers, vendors, suppliers, merchants, distributors, warehousers, transporters, shippers/handlers, firm itself) perform any/all of the following functions:
- **Transactional functions** involving buying, selling, and risk-taking as they stock merchandise in anticipation of sales, and manage processing of orders and associated inventory.
- **Logistical functions** like assorting, sorting, storing, warehousing and transportation of goods.

- **Facilitating functions** like marketing research, financing options, marketing communications, product development, packaging, value-added processes that assist producers in making goods and services more attractive to buyers.

Direct Channel is a marketing channel where a producer and ultimate customers (consumers &/or businesses) deal directly with each other – no external intermediaries; the producer must perform all those channel functions.

Multi-Channel Distribution system – firm employs more than one vertical channel to reach its target market.

Dual-Channel Distribution – firm uses different channels for its consumer markets & its business markets.

Electronic Marketing Channels – using interactive electronic technology & transacting firms' information systems which employ the Internet to make goods and services available for consumption or use by consumers and business buyers.

Vertical Marketing Systems are professionally managed and centrally coordinated marketing channels designed to achieve channel economies and maximize impacts of the firm's distribution network of assisting intermediaries.

Vertical Integration Strategies – pursued when Companies are seeking to reduce distribution costs and gain greater control over their 'inbound' supply sources or 'outbound' resale & distribution of products in the channels.

- **Backward Channel Integration**: a firm owns a supplier/vendor/raw-material provider... upward in the channel.
- **Forward Channel Integration**: a firm owns retailers/stores/distributors…. at levels downward in the channel.

Contractual Channels – consist of independent production and distribution firms that integrate their efforts on a contractual basis to obtain greater functional economies and marketing impact than they could achieve alone.

Strategic Channel Alliances – whereby one firm's marketing channel is used to sell another firm's product.

Factors affecting Channel Choice, Design, and Management:

- Characteristics of the Firm (reach, resources…), nature of Product, the Target Customers, Market Environment.
- Target Market Coverage: Intensive, Exclusive, Selective (depending on the categories of firm's offerings).
- Satisfy Buyer Requirements: Information, Variety/Scale of Offerings, Convenience/Access, Attendant Services.

Channel Conflicts – discord among channels' members at same/varied levels: Horizontal/Vertical Conflicts.

- **Disintermediation**: conflict arises when a channel member bypasses another member and sells or buys products direct.

INTEGRATED MARKETING COMMUNICATIONS (IMC)

<u>IMC</u> – Designing marketing communications that coordinate all promotion activities including advertising, personal selling, sales promotion, public relations, and direct marketing

Advertising – Any paid form of persuasive non-personal communication about an organization, product, or service paid for by an identified sponsor. Examples include manufacturer brand, institutional, business-to-business, retail, and direct-response advertisements.

Personal Selling - Interpersonal (Face-to-face) communication or two-way communication between a buyer and seller.

Sales Promotion – A short-term inducement or incentive to arouse interest about a product or service. Examples include coupons, free samples, sweepstakes, contests, point-of-purchase displays, premiums, in-store demonstrations, and product placement.
May include sales promotions directed at the consumer, trade personnel, and company's sales staff.

Public Relations – A form of communication that influences the feelings, opinions, or beliefs held by customers, stakeholders, employees, and other publics about a company and its products or services. Examples include special events, lobbying, annual reports, social media, sponsorships, news releases, and publicity which is not paid for by the sponsor. May include public service announcements (PSAs) and social cause advertising.
Social media may include Facebook, Twitter, Email, Youtube, LinkedIn, blogs, Instagram, Snapchat, text messaging, etc.

Direct Marketing – Direct interactive communication with a consumer without the use of a wholesaler or retailer. Examples include face-to-face selling, direct mail, catalogs, telemarketing, direct-response advertising, and online marketing.

STEPS FOR DEVELOPING AN IMC PLAN

I. Identify the target audience (Segmentation profile --Geographic, Demographic, Psychographic, and Product-Related)

II. Specify Communication Objectives
Hierarchy of Effects Model (Awareness, Interest, Evaluation, Trial, and Adoption)
Examples: Create awareness, provide information, induce trial, increase brand loyalty, increase amount and frequency of use, etc.

III. Setting Promotion Budget
Budget Methods (Percentage of Sales, Competitive Parity, All-you-Can-Afford, and Objective & Task)
Note: Objective & Task is the most preferred budget method. May consider the stage the product is in its product life-cycle.

IV. Creative Plan – Designing the message content.
Message appeal strategies include humor, fear, sex, music, and logic.
Designing the actual message includes size, length, celebrities, endorsers, slogans, jingles, etc.

V. Media Plan – Placing the marketing communication messages includes decisions regarding Media Type and Media Vehicle.
Media Type – Selection regarding television, magazines, radio, newspapers, radio, and the Internet

Media Vehicle – Selection regarding the specific television show, magazine, radio station, website, etc.
Reach – Number of different people exposed to a message
Frequency – The number of times and individual is exposed to a message
GRPs (Gross Rating Points) – Equals Reach times Frequency
Goal of the media plan is to maximize GRPs within the constraints of a budget allocation.

VI. Execution \ Implementation of the Advertising Plan

Determine whether the advertisement communicates the intended message or select among alternatives of the advertisements and are desired results achieved. May conduct pretests, portfolio tests, jury tests, theater tests, posttests, etc.

<u>STEPS IN THE PERSONAL SELLING PROCESS</u>

1. Prospecting – Searching for qualified prospects \ customers
2. Pre-approach – Gathering information about company, prospect, product, competitors prior to approaching the prospect
3. Approach – Introducing yourself to the prospect and gaining their attention with the ultimate goal of them becoming a customer
4. Presentation – Actually presenting the product or service to the customer resulting in a desire to purchase the offering
5. Close – Obtain an agreement from the customer to purchase the product or service
6. Follow-up – Contact customer and maintain an ongoing relationship to ensure your satisfaction, repeat purchase, future referrals, etc.

<u>STEPS IN THE SALES MANAGEMENT PROCESS</u>

1. Setting objectives and organizing salesforce (geographic, customer, product, and hybrid structures)
2. Salesforce recruitment, selection, and training (job analysis and description, emotional intelligence
3. Salesforce leadership styles, motivation, and compensation plans (straight salary, straight commission, and combination compensation)
4. Salesforce evaluation with quantitative and behavioral assessments (sales quotas, communication skills, professionalism)
5.

NON-PROFIT and SOCIAL CAUSE MARKETING

Marketing is needed by nonprofits to influence donors to give, volunteers to come forward, clients to seek help, staff to be client friendly, board members to serve
Social marketing applies generic marketing specifically to problems where the objective is to change social behavior to benefit both the target audience and society as a whole.
Nonprofit marketing differs from for-profit marketing in the following ways:

- Good secondary data about consumer behavior is not readily available
- Consumers often indifferent about sacrifices they are asked to make
- Consumers asked to shift attitudes or behaviors
- Difficult to modify the offering
- Benefits from a consumer sacrifice not always evident
- Benefits accrue mainly to others not to the individual making the sacrifice

- Intangible social and psychological benefits difficult to portray in media presentations

It is harder to manage the exchanges in nonprofit marketing than those in profit marketing for several reasons: good secondary data are not usually available; the sacrifices consumers make often involve controversial or taboo issues; consumers are often indifferent about the issues; consumers are asked to make radical shifts in attitudes; the offer cannot easily be modified; large amounts of information must be communicated due to the complexity of the issues; the benefits are not always evident; and, the benefits are intangible and difficult to portray in media presentations.

The type of marketing exchanges a nonprofit's activities entail. Target customers "pay" economic costs; sacrifice old ideas, values, and attitudes; give up old patterns of behavior or time and energy. In return, they expect to receive goods and services or social or psychological benefits. Like their for-profit counterparts, nonprofits influence exchanges of goods and services for money. However, the uniqueness of the nonprofit exchange is the focus on nonmonetary exchanges and social and psychological benefits. To influence these exchanges, different perspectives and techniques are required, and ethical issues come into play.
Social cause marketing may aim to change attitudes and thoughts, but only as a means to achieving the end result of behavior change
In order to receive a benefit from a nonprofit organization, consumers may offer the following in exchange:

- Give up money or goods to a charity to buy a product or service
- Give up old ideas, values, or attitudes
- Give up old patterns of behavior
- Give up time and energy

Behavior is driven by a vast complex of factors that are discussed through the BCOS model which categorizes the factors into four key drivers: ***benefits, costs, others, and self-efficacy***. The first two drivers are at the heart of the exchange process that nonprofit managers seek to influence. When a customer believes that the ratio of benefits to costs is better than alternative actions, behavior changes. Nonprofit managers seek to amplify benefits and reduce costs in order to get target publics to behave in certain ways, such as to donate funds or serve as volunteers. The third driver, "others," refers to the impact of interpersonal influence on a person. It can cause a person to ignore his or her own benefit-cost calculations and behave contrary to personal beliefs or attitudes. The fourth driver is self-efficacy, which refers to a person's belief in personally being able to make the behavior happen. Many times people have social support and a belief in the beneficial effects of a behavior, such as stopping smoking, but are unable to adopt it because they think they actually cannot succeed.

High involvement and complex decisions do not come about quickly, but evolve over time. The process can be broken down into four stages of change, based on research by Prochaska and DiClemente: (1) pre-contemplation, where a person is not thinking about the behavior of interest; (2) contemplation, during which the person thinks about behavior and calculates its costs, benefits, what others think, and his or her ability to do it; (3) preparation and action, in which the person has moved to a willingness to act; and (4) maintenance, where the person tries the behavior and the challenge is to permanently adopt it.
Campaigns can be more effective if marketers tailor their interventions to the stage at which the customer is found. For people in Pre-contemplation, they need to focus on creating awareness, knowledge, and interest in the targeted behavior through actions aimed at need arousal. During

the Contemplation Stage, marketers must influence the consumer's information gathering and ensure that the targeted behavior is in the set of choices being considered, is evaluated as preferable over other options, and then becomes the intended behavior to perform. This model suggests five approaches marketers can use to influence behavior change when the consumer makes complex, highly involved decisions: (1) change beliefs about the consequences of the behavior, (2) change beliefs about the consequences of alternative behaviors, (3) change the evaluative weightings given the consequences of the behavior, (4) increase the importance weightings of neglected favorable consequences, and (5) add new favorable consequences.

The stages of change involved in making a highly complex decision

- Pre-contemplation, where the person is unaware of the issue
- Contemplation, where the person thinks about the costs, benefits, social influence, and efficacy of the behaviors proposed
- Preparation and action, where the person is ready to act
- Maintenance, where the person has begun to act and faces keeping it up

The Fishbein-Azjen model of behavior suggests five approaches marketers can use to influence behavior change when the consumer makes complex, highly involved decisions: (1) change beliefs about the consequences of the behavior, (2) change beliefs about the consequences of alternative behaviors, (3) change the evaluative weightings given the consequences of the behavior, (4) increase the importance weightings of neglected favorable consequences, and (5) add new favorable consequences.

INTERNATIONAL MARKETING

Today, almost every firm, large or small, faces international marketing issues. A company's major decisions in international marketing are stated as below.

ASSESSING THE GLOBAL MARKETING ENVIRONMENT

The International Trade System: Some factors that restrict international trade include tariffs, quotas, exchange controls, and excessive regulations. Some forces that facilitate trade between nations are the WTO, GATT, EU, NAFTA, etc.

Economic Environment: Two economic factors that reflect a country's attractiveness are its industrial structure and income distribution.

Political Environment: Some nations are very receptive to foreign firms; others are less accommodating. A global firm must assess political risk before entering into a new market.

Cultural Environment: Cultural practices, and business customs and norms vary from country to country, and must be considered before developing an international marketing program.

DECIDING WHETHER TO GO GLOBAL

There are several factors that draw a company into the international arena. **Global competitors** might offer better products or lower prices. The company might discover foreign markets that present **higher profit** opportunities than the domestic market does. The **company's customers** might be expanding abroad and require international servicing.

DECIDING HOW TO ENTER THE MARKET

Exporting (indirect or direct) is the simplest way to enter a foreign market.

Licensing: For a fee or royalty, the licensee buys from the licensor the right to use the company's manufacturing process, trademark, patent, trade secret, etc.

Contract manufacturing occurs when the company contracts with manufacturers in the foreign market to produce its product or provide its service.
Management contracting takes place when the domestic firm supplies management know-how to a foreign company that supplies the capital.
Joint ownership ventures consist of one company joining forces with foreign investors to create a local business in which they share joint ownership and control.
Direct investment is the development of foreign-based assembly or manufacturing facilities.

DECIDING ON THE GLOBAL MARKETING PROGRAM

Standardized global marketing is using largely the same marketing strategy worldwide.
Adapted global marketing is adjusting the marketing strategy to each target market, bearing more costs but hoping for a larger market share and return.
Price escalation: A company must add the cost of transportation, tariffs, importer margin, wholesaler margin, and retailer margin to its factory price. *Dumping* occurs when a company either charges less than its costs. or less than it charges in its home market.
Distribution Channels: To compete well internationally, the company must effectively design and manage an entire *global value delivery network.*

DECIDING ON THE GLOBAL MARKETING ORGANIZATION

For international marketing, a company can organize an export department**, create and** international division**, or become a** global organization**.**

ETS Test
Business Communications Study Guide—IUP (Spring 2015)

16. **Communication as a process -** Communicating strategically can offer a competitive advantage for individuals as well as businesses. The communication process involves a sender that distributes a message through a channel/medium to an intended receiver. A successful communication process is when the message reaches the receiver with the same shared meaning that was intended by the sender. Communication in business generally has 3 purposes: 1. to inform or explain something; 2. to persuade or invoke an action; or 3. to build goodwill for the company or individual. Barriers to successful communication processes involve distractions (noise), language, culture, coding/decoding differences, and poor communication skills, overall. Poor communication can cost the company time, money, wasted efforts, and loss of goodwill.

17. **Group and team communication-** Work teams have several disadvantages, including groupthink, which occurs when members feel pressure to conform to group norms of behavior. In this instance, peer pressure causes individual team members to keep contrary or unpopular opinions to themselves. This effect may result in poor team decision-making.

18. Intercultural communication

Power and Distance -- Power is "the ability to influence others" (Intercultural Business Communication, 2011, p. 233). Cultures have symbols to convey power and status. Power distance is one of four dimensions of cultural variability (Hofstede, 1980), and power distance is the extent to which society accepts the fact that power is distributed unequally in institutions and organizations. Power distance impacts organizational and personal functioning within organizations (Schuler & Rogovsky, 1998). Hierarchical cultures emphasize the chain of authority and rely on a strict hierarchical structure and feature an unequal distribution of power. Employees are expected to comply with management's directives without question. In contrast, open cultures encourage employees to view each other as moral equals. Leaders motivate employees using participative management techniques, encourage them to act on behalf of the entire organization, give employees input into decision-making, and share in goal-setting activities in the organization. Cultures with large differences in power typically have more organizational layers and the chain of command is more important. There is a clear connection between power distance and leadership. Lower-status employees in high power distance countries are more reluctant to challenge supervisors and are fearful to express disagreement with managers. They are less likely to provide negative feedback to superiors, and feedback would most likely be rejected by managers in high power distance countries, as upward communication might be perceived as a threat to authority. According to the Globe Study, "the Anglo cluster (which includes the United Kingdom, the United States, Canada, and Australia), the Nordic cluster (which comprises the Scandinavian countries), and the Germanic cluster (which includes Germany, Austria, Switzerland and the Netherlands) all were particularly attuned to participative leadership. By contrast, the Middle Eastern, Eastern European, Confucian Asian, and Southern Asian clusters did not endorse participative leadership as strongly." (Encyclopedia of Leadership, "Being Seen as a Leader: The GLOBE Study", para. 6). For more information on culture, power and distance, visit the following link: http://www.sagepub.com/northouse6e/study/materials/reference/reference15.2.pdf ; Encyclopedia of Leadership. (2012). "Power Distance." (In Hartog, D & Deanne, N, Eds.). Sage Publications: Thousand Oaks, CA, 1225-30.; Hofstede, G. (1980). **Culture's Consequences: International Differences in Work-Related Values.** Beverly Hills CA: Sage Publications; Schuler, R.S., & Rogovsky, N. (1988). Understanding compensation practice variations across firms: The impact of national culture. *Journal of International Business Studies, 29*(1): 159-177.

Chromatics (color) – Color affects mood, emotions and impressions about others. In the U.S. and Europe, black may either represent mourning or sophistication. In some cultures, white is associated with mourning or weddings, while in India brides wear red or gold. Purple is the color of royalty, but in some Latin American cultures, it is associated with death. Red may be associated with romance in some cultures, but is an inappropriate color for giftwrapping in Japan. In many cultures, blue is considered masculine, but in France and the U.K., red is a more masculine color. In Iran, blue is an undesirable color. Studies on color preferences found that blue is ranked highest by Austrians, Chinese and in the U.S. Packaging color may affect purchasing decisions. In China, red is appealing, while in South Korea it is not as appealing because it is associated with communism.

19. **Support business messaging with reliable information** - If you have a question about an industry, a company, a market, a new technology, or a financial topic, chances are somebody else has already researched the topic. Someone in your own company, in fact, might have already looked into the problem. Research materials previously created for another purpose are considered **secondary research**. Examples include: magazines, newspapers, public websites, books, and other reports. By contrast, **primary research** is new research done specifically for your current project. Examples include: surveys, interviews, observations, and experiments.

20. **Communicating ethically -** There are two categories of ethical challenges in business situations. An ethical dilemma involves choosing among two or more alternatives that are not clear-cut, unambiguous decisions (e.g., the proverbial "grey area"). By contrast, an ethical lapse is clearly unethical. The pressure to produce results or justify decisions can result in ethical lapses.

21. **Non-verbal communication / listening skills - -** Effective listeners adapt their listening approaches to different situations:

a. The goal of **content listening** is to understand and retain the speaker's message. You may ask questions, but generally, information flows from the speaker (communicator) to you. It does not matter whether you agree or disagree, approve or disapprove—only that you understand.

b. The goal of **critical listening** is to understand and evaluate the meaning of the communicator's message on several levels, including the argument's logic, the strength of the evidence, the validity of conclusions, the communicator's intentions and motives, and the omission of important or relevant points. Critical listening involves interaction as you try to uncover the communicator's point of view and credibility.

c. The goal of **empathic listening** is to understand the communicator's feelings, needs, and wants to appreciate his/her point of view, regardless of whether you share that perspective. Listening with empathy, you help the individual vent emotions that prevent a dispassionate approach to the issue. Avoid the temptation to give advice or judge the individual's feelings.

d. Effective listeners engage in **active listening,** which involves making a conscious effort to turn off filters (human or technological interventions between sender and receiver) and biases (one-sided, lacking a neutral viewpoint, not having an open mind) to hear and understand the other party's communication. They ask questions, summarize the communicator's message to verify key points, and encourage the communicator through positive body language and supportive feedback. *Source: Merriam-Webster.com.*