REVIEW FOR FINAL EXAM, ACCT-2302 (SAC)

CHAPTER 14

1. Types of Cost Classification

   a. By Behavior:
      (1) Variable Cost - constant per unit, changes proportionally with volume.
      (2) Fixed Cost - fixed in total over all levels of production
      (3) Mixed Cost - has both a component of variable and fixed cost.

   b. By Traceability:
      (1) Direct - traceable to a cost object
      (2) Indirect - costs that cannot be traced to a single cost object.

   c. By Relevance:
      (1) Sunk Cost - a cost that has been incurred and cannot be avoided or changed.
      (2) Opportunity Cost - cost of a potential benefit lost or forgone.

   d. By Function:
      (1) Product - cost that become an integral part of a finished product.
      (2) Period - costs associated with a time period vs a product.

2. Elements of Manufacturing Costs.
   a. Direct Material (material that becomes part of the product)
   b. Direct Labor (applied to material to convert to a finished product)
   c. Factory Overhead (all manufacturing costs other than direct material and direct labor)

3. Manufacturing Costs.
   a. Product (direct material, direct labor, overhead)
   b. Conversion (direct labor and overhead)
   d. Period (other costs identified within a time period - not the product being produced). Includes Selling and Administrative costs.

4. Manufacturing Statement Report Format:

Direct Materials.....	$ xx,xxx
Direct Labor.....	xx,xxx
Factory Overhead	xx,xxx
Total manufacturing costs.....	$ xx,xxx
Add: Beginning goods in process.....	xx,xxx
Total goods in process.....	$ xx,xxx
Less: Ending goods in process.....	(xx xxx)
Cost of goods manufactured (*).....	$ xx,xxx

(*) (equivalent to Cost of Goods Purchases for a merchandising company)

5. Manufacturing Inventories.
   a. Raw Materials
   b. Work-In-Process (WIP) (partially completed units)
   c. Finished Goods (completed units of product)

CHAPTER 15

1. Cost Accounting Systems.
   a. Job Order Cost
   b. Process Cost

2. Job Costing Elements.
   a. Material
   b. Labor
   c. Factory Overhead

3. Job Costing.

   a. Job - Special order for a specific customer.
   b. Job Cost Sheet - Total costs of producing a job (includes direct material, direct labor, overhead)

4. Factory Overhead.

   a. Applied on an estimated basis through a predetermined rate (established prior to the beginning of a period).

   b. Formula = $\dfrac{\text{Estimated Annual Overhead Costs}}{\text{Estimated Annual Activity Base}}$

   c. Overhead is applied using the computed rate and the activity base cost or units applied to each job.

      Journal entry: Work-in-Process Inventory.....$xxxxxx
      Factory Overhead.....$xxxxxx

   d. Disposal of Overhead Balance.
      (1) Adjusting entries to dispose of the account balance.
         (a) Under-applied (debit balance)
         (b) Over-applied (credit balance)

CHAPTER 16

1. Process Cost Characteristics.
   a. Continuous process.
   b. All units processed in the same manner.
   c. Separate Work-In-Process (WIP) is maintained for each department/process.
   d. Total costs are determined at the end of each period.

2. Equivalent Units. (Material & Conversion)
   a. Defined as the number of units that could have been completed if all effort had been applied.
   b. Have all or part of direct material added, and some labor and overhead applied.
   c. Used to assign operating costs for each period to the products worked on and/or completed.

3. Equivalent Unit Costs.

   a. Total material costs for the department are allocated equally to the equivalent finished units for material. Materials are usually added at the beginning of the production process.

   b. Conversion costs (labor and overhead) are allocated equally to the equivalent finished units for conversion. Labor and overhead are usually added uniformly throughout the production process.

4. End of Period Processes (Process Cost Summary):
   a. Determine physical units to be assigned costs.
   b. Compute equivalent units of production.
   c. Compute unit costs of production (cost per equivalent unit).
   d. Assign and reconcile costs.

5. Equivalent Unit Cost Methods.

   a. FIFO (First-In, First-Out)
   b. Weighted-Average

6. Equivalent Unit Computation.

   The following data are available for a company's manufacturing activities:
   a. 8,000 units were (25%) complete when the period began.
   b. 25,000 units were started into production during the period.
   c. The department finished and transferred -- 27,000 units to Finished Goods.
   d. 6,000 units (60% complete) were on hand at the end of the period.

   Compute Equivalent Units for Conversion (Labor/Overhead) - (Added evenly throughout the process)

	Physical Units	Factor Added	Equivalent Units
Beginning WIP Inventory.....	8,000	75%	6,000
Units Started & Finished.....	19,000	100%	19,000
Ending WIP Inventory.....	6,000	60%	3,600
Equivalent Finished Units for Conversion.....			28,600

CHAPTER 17

1. Plant-wide Overhead Rate Method.

   a. Traditional Costing:
      (1) Single pre-determined overhead rate for allocating all overhead costs.

   b. Single Plant-wide Overhead Rate.
      (1) Formula: $\text{Overhead Rate} = \frac{\text{Estimated overhead costs}}{\text{Estimated activity base}}$
      (2) Activity Base - can be any appropriate cost driver such as, direct labor hours, machine hours, direct labor cost, material costs, etc..

2. Activity-Based Costing (ABC) Method.

   a. Activity-Based Costing.
      (1) Multiple pre-determined overhead rates for related activities.

   b. Cost Allocation Process:
      (1) Identify specific activities consuming costs.
      (2) Determine activity cost pools.
      (3) Identify cost driver (factor that causes costs to go up and down).
      (4) Compute predetermined overhead cost rate for each cost pool.
      (5) Assign costs to jobs based on cost pool rates.

CHAPTER 18

1. Cost Behavior Classifications.
   a. Fixed Costs (total remains constant over all levels of production)
   b. Variable Costs (unit cost is constant, total variable cost changes in proportion to changes in production)
   c. Mixed Costs (has an element of fixed and variable cost)

2. High-Low Method of Cost Separation.
   a. A cost estimation technique used to divide a mixed cost into its' fixed and variable components.

   b. Four-step process to determine fixed costs.
      (1) From a set of data, identify the highest level of production and cost, and identify the lowest level of production and cost.
      (2) Calculate the difference in production units and cost between the high and low levels.
      (3) Compute the variable cost per unit by dividing the cost difference by the production units difference.
      (4) Determine the fixed cost by substituting the applicable data (either the highest level or the lowest level) in the following formula:

Fixed Cost = Total Cost - (Units of Production x Variable Cost per Unit)

3. Break-Even Analysis.
   a. Contribution Margin: Formula: **CM** = SP - VC

   b. Contribution Ratio: Formula: $\mathbf{CR} = \frac{CM}{SP}$

4. Break-Even Points.

   a. Units = $\frac{\text{Fixed Costs}}{\text{Contribution Margin}} = \frac{FC}{CM} =$ **BEP(U)**

   b. Dollars = $\frac{\text{Fixed Costs}}{\text{Contribution Ratio}} = \frac{FC}{CR} =$ **BEP($)**

5. Target Net Income.

   a. Determines the level of sales and units required to achieve a specific level of net income.

   b. Dollars of Sales Formula: $\frac{\text{FC + Target Profit}}{\text{CR}}$

   c. Units Formula: $\frac{\text{FC + Target Profit}}{\text{CM}}$

CHAPTER 19

1. Variable Cost Assignment Purposes.

   a. Product costing and pricing.
   b. Valuing inventories and cost of goods sold.
   c. Decision making.

2. Costing Method Comparisons.

   a. Absorption (Full) Costing.
      (1) All manufacturing costs are treated as product costs.
      (2) Includes direct material, direct labor, and both variable and fixed overhead.

   b. Variable Costing.
      (1) Only variable manufacturing costs are treated as product costs, along with direct material and direct labor.
      (2) Fixed manufacturing costs are treated as period costs.
      (3) Inventory cost of a unit of product contains no fixed overhead costs.

   c. The Contribution Margin is derived by subtracting total variable costs from total revenues.

   d. Selling and Administrative expenses are considered period costs under both methods.

3. Reporting/Income Taxes.

   a. Contribution margin income statement (variable costing) is limited to *internal* use by management.
   b. Traditional income statement format. Companies are *required to use absorption costing* for both external reporting and tax preparation.

CHAPTER 20

1. Budget Process.

   a. Budget period is an annual period, separated into quarterly and monthly budgets.
   b. Continuous Budget - Budget for several future periods, where a completed period is dropped and a new period is added.

2. Master Budget.

   a. Operating Budgets.
      (1) Sales budget (starting point for budgeting process - data used for remaining budgets)
      (2) Production budget (number of units to be manufactured)
      (3) Selling expense budget
      (4) General and administrative expense budget

   b. Capital Expenditures Budget. (Planned plant asset acquisitions for the out-years)

   c. Financial Budgets.
      (1) Cash budget (cash inflows and outflows for the budget year)
      (2) Budgeted income statement
      (3) Budgeted balance sheet

CHAPTER 21

1. Definitions of Standards.

   a. Ideal (Theoretical)
   b. Normal or Practical (Currently Attainable)
   c. Standards are pre-set costs for delivering a product or service under normal conditions.

2. Benefits of Standards.

   a. Aids in setting selling prices.
   b. Useful in preparing budgets.
   c. Used to evaluate performance.
   d. Used to control operations.

3. Cost Variance Analysis.

   a. The process of examining the differences between actual and budgeted costs.
   b. Cost variance is the difference between actual price and standard price.
   c. Efficiency variance is the difference between actual quantity and standard quantity.

4. Formulas - Variance Analysis:

   a. Cost (Price) Variance..... AQ (AC-SC)
   b. Efficiency (Quantity) Variance..... SC (AQ-SQ)

5. Analysis. (Variances are computed for each category)
   a. Materials
   b. Labor
   c. Overhead

6. Budget Types.

   a. Fixed (Static) Budget
      (1) Shows the expected results of a responsibility center for only one level of activity.

   b. Flexible Budget
      (1) Shows the expected results of a responsibility center for several levels of activity.
      (2) Essentially a series of budgets at the various levels of activity.

CHAPTER 22

1. Responsibility Accounting

   a. Levels of Responsibility.
      (1) Cost Center - Accountable for costs only.
      (2) Profit Center - Control over revenues and costs.
      (3) Investment Center - Incurs costs, generates revenue and responsible for effective use of center invested assets.
   b. Cost Classifications.
      (1) Direct costs - traceable to a specific department.
      (2) Indirect costs - all expenses other than direct costs, not traceable to a single department.

   c. Responsibility Center Reporting.
      (1) Performance Report - shows all costs incurred by a center or business segment.
      (2) Responsibility Report - contains only those costs that are controllable by the center segment manager. (not held responsible for uncontrollable variances)

2. Investment Center Evaluation.

   a. Return on Investment (ROI).
      (1) Used to evaluate the performance of investment centers.
      (2) Formula for calculation of ROI:

$$\text{ROI} = \frac{\text{Operating Income}}{\text{Average Total Assets}}$$

   b. Residual Income (RI).
      (1) A measure of profitability and efficiency, with an added factor of a target return.
      (2) Formula for calculation of RI:
         RI = Operating income - Minimum acceptable operating income
         RI = Operating income - (Target rate of return x Average total assets)

3. Transfer Pricing.
   a. The transaction amount of one unit of goods, when the transaction occurs between divisions within the same company or business.

   b. Common Approaches to Transfer Pricing.
      (1) Market-based price
      (2) Cost-based price
      (3) Negotiated price

CHAPTER 23

1. Relevant Costs.

   a. Costs that are applicable to a particular decision.
   b. Costs that should have a bearing on which alternative a manager selects.
   c. Costs that are avoidable.
   d. Future costs that differ between alternatives.

2. Keys to Analysis.

   a. Focus on relevant revenues, costs, and profits.
   b. Require an investment rate of return greater than the organization's current required rate of return.
   c. In analysis, use only relevant costs, not total costs or complete income statement approach.
      (1) Differential Revenue
      (2) Incremental Cost

3. Dropping Products and Segments.

   a. A candidate for elimination only if revenues are less than avoidable expenses.
   b. Drop if avoidable fixed costs are greater than its contribution margin.

4. Product Mix.

   a. Determine if any constraints exist to limit production and sale of all products.
   b. Produce products that provide the highest contribution margin per unit of the constraint.

5. Sell or Process Further.

   a. Process further only if incremental revenues exceed incremental costs.
   b. Ignore costs to produce basic product.

CHAPTER 24

1. Capital Budgeting/Analysis.
   a. Process by which management plans, evaluates, and controls long-term investment decisions.

2. Relevant Costs.

   a. Future costs that differ between the alternatives.

   b. In analysis, use only relevant costs, not total costs or complete income statement approach.
      (1) Differential Revenue - additional revenue generated if an alternate action is taken.
      (2) Incremental Cost - additional cost incurred if a specific action is taken.

   c. Opportunity Costs - Economic benefit "*forgone*" as a result of pursuing a particular course of action (alternative).

   d. Sunk Costs - A cost that arises from a past decision and cannot be avoided or changed, and is always irrelevant.

3. Evaluation Methods/Indicators.

   a. Methods that do not use Present Value.
      (1) Cash Payback
      (2) Accounting Rate of Return

   b. Methods that use Present Value.
      (1) Net Present Value
      (2) Internal Rate of Return

4. Pay Back Period.

   a. Length of time it takes to recover original investment, in terms of annual net cash flows.

   b. Net cash flow is excess of revenue cash inflows over cash outflows for expenses.

   c. Types of Net Cash Flows:
      (1) Even Cash Flow formula:

$$\frac{\text{Total Investment}}{\text{Annual Net Cash Flow}} = \text{Payback Period}$$

      (2) Uneven Cash Flow
      Accumulate uneven cash flows until the investment amount is reached (recovered).

5. Accounting Rate of Return.

   a. Measures the average return over the life of an asset.

   b. Formula:

$$\text{ARR} = \frac{\text{Average Annual Operating Income}}{\text{Average Amount Invested}}$$

6. Net Present Value.

   a. The (NPV) method computes the expected net monetary gain or loss from a project.
   b. Discounts the expected cash flows to the present.
   c. Formula: NPV = (Present value of cash flows) - (Investment cost)
   d. A project with a positive NPV is an acceptable investment opportunity.

   e. NPV Example:

Present value of annuity of $1:

Period	8%	9%	10%
1	0.926	0.917	0.909
2	1.783	1.759	1.736
3	2.577	2.531	2.487
4	3.312	3.240	3.170
5	3.993	3.890	3.791

A company is considering an investment of $60,000 in a project that will yield cash flows of $20,000 for 4 years. The company uses a discount rate of 9%. What is the net present value of the investment?

Years		Net Cash Inflow	Annuity Factor	Present Value
1 - 4	Present value of annuity.....	$20,000	3.240	$ 64,800
0	Initial investment.....			(60,000)
	Net present value.....			$ 4,800