Cost Accounting

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1. **Define cost accounting and explain its purpose in business.**
   Cost accounting is the process of classifying, recording, allocating, and analyzing expenditures to determine the cost of products, processes, departments, services, or operations. It developed because financial accounts are limited for internal planning needs. Its purpose is to give management the cost information needed for *planning*, *pricing*, *cost control*, and *decision-making*, so the business can operate efficiently at the lowest cost.

2. **Three key differences between cost and financial accounting.**

Cost Accounting	Financial Accounting
Ascertainment of the cost of goods/services (by product, job, process, department) for *internal* management.	Reports overall operational results and financial position for both *internal and external* users.
Uses tools like cost sheets, classification by material/labour/overhead and by behaviour; enables variance analysis and control.	Records actual transactions in debit/credit terms; focuses on formal reports (Trading A/c, P&L, Balance Sheet).
Presented at regular intervals as needed; effective device for managerial control.	Typically annual presentation; subject to statutory/audit requirements; not primarily a control device.

3. **Three main elements of cost (with examples).**
   - **Direct Materials:** Materials directly allocable to the cost unit. *Example:* Raw steel used in fabrication.
   - **Direct Labour:** Wages of workers directly identified with the cost centre. *Example:* Assembly-line operators.
   - **Overheads (Indirect Costs):** Indirect materials, indirect labour, and indirect expenses not traceable per unit. *Example:* Factory rent, machine depreciation, utilities.

4. **Break-Even Point (BEP) and its significance.**
   The BEP is the sales level at which total revenue equals total cost (no profit, no loss). It shows the minimum activity level to avoid losses and supports pricing, capacity, and risk decisions. With selling price per unit p, variable cost per unit v, and fixed cost F:

$$\text{UCM} = p - v, \quad Q_{\text{BEP}} = \frac{F}{\text{UCM}}, \quad \text{CM ratio} = \frac{\text{UCM}}{p}, \quad \text{BEP}_{\$} = \frac{F}{\text{CM ratio}}.$$

5. **How cost accounting helps in cost control and reduction.**
   Through cost records and analysis, budgetary control, standard costing, variance

analysis, and break-even analysis, management can compare actual vs. expected performance, identify inefficiencies, utilize resources better, and reduce costs.

6. **Numerical Computations.**
   Given: Fixed Costs F = \$50,000, Variable Cost per Unit v = \$30, Selling Price per Unit p = \$80.

   a) **Unit Contribution Margin (UCM):**

   $$\text{UCM} = p - v = 80 - 30 = \boxed{\$50}.$$

   b) **BEP in units:**

   $$Q_{\text{BEP}} = \frac{F}{\text{UCM}} = \frac{50{,}000}{50} = \boxed{1{,}000 \text{ units}}.$$

   c) **BEP in dollars:**

   $$\text{CM ratio} = \frac{\text{UCM}}{p} = \frac{50}{80} = 0.625, \qquad \text{BEP}_{\$} = \frac{F}{\text{CM ratio}} = \frac{50{,}000}{0.625} = \boxed{\$80{,}000}.$$

   d) **Units for a \$20,000 target profit:**

   $$Q_{\text{target}} = \frac{F + \text{Profit}}{\text{UCM}} = \frac{50{,}000 + 20{,}000}{50} = \frac{70{,}000}{50} = \boxed{1{,}400 \text{ units}}.$$