

Q.1. A. Compute the future values of; 1. An initial Rs. 50,000- compounded annually for 8 years at 8%; 2. An initial Rs. 60,000- for 10 years at 65; 3. An annuity of Rs. 80,000- for 10 years at 8%. (Marks-6).

ANSWER:

Solution :

(I) Formula:

$$FV = PV \times (1 + i)^n$$

$$FV_n = 50,000(1+0.08)^8$$

$$= 50000(1.08)^8$$

$$= 50000(1.850)$$

$$\text{Answer} = 92500$$

(II):

$$FV = PV \times (1 + i)^n$$

$$= 60000(1+65\%)^{10}$$

$$= 60000(1.65)^{10}$$

$$= 60000(149.56)$$

$$\text{Answer} = 8973600$$

(iii)

$$FV_{OA} = A \left[\frac{\left(1 + \frac{r}{m}\right)^{mT} - 1}{\frac{r}{m}} \right]$$

Where:

FV = Future value of Ordinary Annuity

r = Annual interest rate

T = Number of years

m = Number of periods based on compounding frequency

$$FVA = \frac{80,000 [1+i]-1}{8\%}$$

8%

Answer: 157600

Q#1B.

A 58 years executive is about to retire at the age of 60 and expects to live to age of 80.

Assuming a 8% rate of return, find the amount he must have at age 60 in order to receive Rs.

80,000- annually from retirement until his death.

(Marks-6)

Answer:

$$FV = PV \times (1 + i)^n$$

$$FV = 80,000 (1+8\%)^{20}$$

$$= 80,000(1+0.08)^{20}$$

$$= 80000(1.08)^{20}$$

$$=80000(4.66)$$

$$=372,800$$

Q No. 2 (Part-A)

Answer:-

Profit Margin:-

Profit margin are gross profit, PBIT [Profit Margin on Sales], Net profit margin. Profitability ratios measure a company's ability to use its capital or assets to generate profits. Improving profitability is a constant challenge for all companies and their management. Evaluating profitability ratios is a key component in determining the success of a company.

- **Gross Profit:** This ratio measures the gross profit earned on sales and reports how much of each sales dollar is available to cover operating expenses and contribute to profits.

This margin compares revenue to variable costs. It tells you how much profit each product creates without fixed costs. Variable costs are any costs incurred during a process that can vary with production rates (output). Firms use it to compare product lines, such as auto models or cell phones.

- **Net profit margin:** The net profit margin measures that how much profit out of each sale rupees has left after all expenses subtracted

- **Operating profit margin**

This margin includes both costs of goods sold, costs associated with selling and administration, and overhead. The COGS formula is the same across most industries, but what is included in each of the elements can vary for each.

Q No. 2 (Part-B)

Answer:-

Liquidity ratios are an important class of financial metrics used to determine a debtor's ability to pay off current debt obligations without raising external capital. Common liquidity ratios include the quick ratio, current ratio, and days sales outstanding.

Liquidity ratios determine a company's ability to cover short-term obligations and cash flows, while solvency ratios are concerned with a longer-term ability to pay ongoing debts.

Ratios that measure Liquidity of firm are as follow:-

- **Quick Ratio:**

The quick ratio indicates a company's capacity to pay its current liabilities without needing to sell its inventory or get additional financing. The quick ratio is considered a more conservative measure than the current ratio, which includes all current assets as coverage for current liabilities. The higher the ratio result, the better a company's liquidity and financial health; the lower the ratio, the more likely the company will struggle with paying debts.

The Formula for Quick Ratio Is:-

$$\text{Current asset-inventory/current liabilities}$$

- **Current Ratio:**

This ratio reflects the number of times short-term assets cover short-term liabilities and is a fairly accurate indication of a company's ability to service its current obligations. A higher number is preferred because it indicates a strong ability to service short-term obligations

The Formula for current Ratio Is:-

$$\text{Current Assets / Current Liabilities}$$

- **Operating Cash flow ration:-**

The operating cash flow ratio is a measure of how well current liabilities are covered by the cash flows generated from a company's operations. The ratio can help gauge a company's [liquidity](#) in the short term. Using cash flow as opposed to net income is considered a cleaner or more accurate measure since earnings are more easily manipulated.

The Formula for Operating Cash Flow Ratio Is:-

$$\frac{\text{Operating cash flow}}{\text{Current Liabilities}}$$

Q No. 2 (Part-C)

Answer:-

Average Inventory = $\frac{\text{Beginning Inventory} + \text{Ending inventory}}{2}$

$$= \frac{50,000 + 45,000}{2}$$

Average inventory = 47,500

Inventory Turnover = $\frac{\text{Cost of goods sold}}{\text{Average inventory}}$

$$= \frac{50,000}{47,500}$$

Inventory Turnover = 1.05

Q3 C

C: the firm following **matching approach** (also known as **hedging approach**), long-term financing will be used to finance fixed assets and permanent current assets and short-term financing to finance temporary or variable current assets. However, it should be realized that exact matching is not possible because of the uncertainty about the expected lives of assets. However, it should be realized that exact matching is not possible because of the uncertainty about the expected lives of assets.

The firm's fixed assets and permanent current assets are financed with long-term funds and as the level of these assets increases, the long-term financing level also increases. The temporary or variable current assets are financed with short-term funds and their level increases. The level of short-term financing also increases. Under matching plan, no short-term financing will be used if the firm has a fixed current assets need only.

Q No.4 (Part-A)

Answer:-

The firm can adopt a financial plan which matches the expected life of assets with the expected life of the source of funds raised to finance assets. Thus, a ten-year loan may be raised to finance a plant with an expected life of ten years; stock of goods to be sold in thirty days may be financed with a thirty day commercial paper or a bank loan. The justification for the exact matching is that, since the purpose of financing is to pay for assets, the source of financing and the asset should be relinquished simultaneously. Using long-term financing for short-term assets is expensive as funds will not be utilized for the full period. Similarly, financing long-term assets with short-term financing is costly as well as inconvenient as arrangement for the new short-term financing will have to be made on a continuing basis.

When the firm following **matching approach** (also known as **hedging approach**), long-term financing will be used to finance fixed assets and permanent current assets and short-term

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Figure 3 is used to illustrate the matching plan over time. The firm's fixed assets and permanent current assets are financed with long-term funds and as the level of these assets increases, the long-term financing level also increases. The temporary or variable current assets are financed with short-term funds and their level increases. The level of short-term financing also increases. Under matching plan, no short-term financing will be used if the firm has a fixed current assets need only.