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Subject - Business Finance

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Exam- Final term

Question# 1 Part A

(i)(ii)

Q 1/- Part A

⇒ (i) Given

$$F_v = ?$$

$$P_v = 50,000 \text{ Rs}$$

$$i = 8\% = 0.08$$

$$n = 8 \text{ years}$$

Formulae

$$\begin{aligned} F_v &= P_v (1+i)^n \\ &= 50,000 (1+0.08)^8 \\ &= 50,000 (1.08)^8 \\ &= 50,000 (1.850) \\ &= 92500 \text{ Ans} \end{aligned}$$

(ii)

Given

$$F_v = ?$$

$$P_v = 60,000 \text{ Rs}$$

$$i = 65\% = .65$$

$$n = 10 \text{ years}$$

Formulae

$$\begin{aligned} F_v &= P_v (1+i)^n \\ &= 60,000 (1+.65)^{10} \\ &= 60,000 (1.65)^{10} \\ &= 60,000 (149.576) \\ &= 89,73600 \text{ Ans} \end{aligned}$$

(iii)

(iii) \Rightarrow Annuity.

$$FVA = A \left[\frac{(1+i)^n - 1}{i} \right]$$

$$= 80,000 \left[\frac{(1+8\%)^{10} - 1}{8\%} \right]$$

$$= 80,000 \left[\frac{(1+0.08)^{10} - 1}{0.08} \right]$$

$$= 80,000 \left[\frac{(2.158)^{10} - 1}{0.08} \right]$$

$$= 80,000 \left[\frac{1.158}{0.08} \right]$$

$$\Rightarrow 80,000 \times 14.47$$

$$\Rightarrow 1,157,600 \text{ A/-}$$

Question 1 Part B

Q1/- Part B

Given

$$F_v = ?$$

$$P_v = 80,000$$

$$i = 8\% = 0.08$$

$$n = 20 \text{ years}$$

Formulae

$$F_v = P_v (1 + i)^n$$

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

$$= 80,000 (1.08)^{20}$$

$$= 80,000 (4.66)$$

$$= 3,72,800 \text{ Ans/-}$$

Question#2 Part A

Gross profit margin is a metric analysts use to assess a company's financial health by calculating the amount of money left over from product sales after subtracting the cost of goods sold (COGS). Sometimes referred to as the gross margin ratio, gross profit margin is frequently expressed as a percentage of sales.

Operating Profit Margin is a profitability or performance ratio that reflects the percentage of profit a company produces from its operations, prior to subtracting taxes and interest charges. It is calculated by dividing the operating profit by total revenue and expressing as a percentage. The margin is also known as EBIT (Earnings Before Interest and Tax) Margin.

The net profit percentage is the ratio of after-tax profits to net sales. It reveals the remaining profit after all costs of production, administration, and financing have been deducted from sales, and income taxes recognized.

Part B

Liquidity ratio analysis

Liquidity ratio analysis is the use of several ratios to determine the ability of an organization to pay its bills in a timely manner. This analysis is important for lenders and creditors, who want to gain some idea of the financial situation of a borrower or customer before granting them credit. There are several ratios available for this analysis, all of which use the same concept of comparing liquid assets to short-term liabilities. These ratios are:

- **Cash ratio**
Compares the amount of cash and investments to short-term liabilities. This ratio excludes any assets that might not be immediately convertible into cash, especially inventory.
- **Quick ratio**
Same as the cash ratio, but includes accounts receivable as an asset. This ratio explicitly avoids inventory, which may be difficult to convert into cash.
- **Current ratio**
Compares all current assets to all current liabilities. This ratio includes inventory, which is not especially liquid, and which can therefore mis-represent the liquidity of a business.

Part C

$$\begin{aligned}\text{Average Inventory} &= \frac{\textit{Beginning inventory} + \textit{Ending Inventory}}{2} \\ &= \frac{50,000 + 45,000}{2}\end{aligned}$$

$$\text{Average Inventory} = 47,000$$

$$\begin{aligned}\text{Inventory turnover} &= \frac{\textit{cost of goods sold}}{\textit{Average Inventory}} \\ &= \frac{50,000}{47,000}\end{aligned}$$

$$\text{Inventory turnover} = 1.05$$

Question# 3 Part B

The firm finances a portion of its expected seasonal funds requirement, less payables and accruals, on a long-term basis. If the expected net cash flows do occur as forecast, it will pay interest on excess debt during seasonal troughs when these particular funds are not needed. In the extreme, peak requirements might be financed entirely on a long-term basis, as would be the case if we drew the long-term financing line across the seasonal humps at the top. The higher the long-term financing line, the more conservative the financing policy of the firm, and the higher the cost.

- **Risk**

IDLE FUNDS

Long term loans cannot be paid off when wished and if paid cannot be easily availed back. As we noted in the diagram, the long-term funds remain unutilised in the times when seasonal spurt in activity is not there. Idle funds have an opportunity cost of interest attached to it.

HIGHER CARRYING COST

A Higher level of inventory and debtors implies higher carrying and holding cost which has a direct impact on profitability.

- **Profitability**

SMOOTH OPERATIONS WITH NO STOPPAGES

In this strategy, the level of working capital and current assets (inventory, accounts receivables and most importantly liquid cash or bank balance) is high. A Higher level of inventory absorbs the sudden spurt in product sales, production plans, any abnormal delay in procurement time etc. This achieves the higher level of customer satisfaction and smooth operations of the company.

Higher levels of accounts receivables are due to relaxed credit terms which in turn attracts more customer and thereby higher sales and higher sales mean higher profits in normal circumstances. And avoiding refinancing risk of short-term financing.

Part C

When the firm follows matching approach, i.e., 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. As the level of fixed assets increases, the long-term financing level also increases. Under matching plan, no short-

term financing will be used if the firm has a fixed current asset need only. As the level of current assets increases, the short-term financing also increases. Short term financing may be preferred over long term financing for two reasons, i.e., the cost advantage and flexibility. Short term financing should generally be less costly than long term financing. The short term and long-term financing have a leveraging effect on shareholders' return. In India, the short-term loans cost more than long-term loans. Using short term financing to finance its current assets, a firm runs the risk of renewing borrowings again and again. There is always less risk of failure when the long-term finance is used.

Question 4 Part A

If the firm adopts a hedging (maturity matching) approach to financing, each asset would be offset with a financing instrument of the same approximate maturity. Short-term or seasonal variations in current assets would be financed with short-term debt; the permanent component of current assets and all fixed assets would be financed with long-term debt or with equity.

With a hedging approach to financing, the borrowing and payment schedule for short term financing would be arranged to correspond to the expected swings in current assets, less spontaneous financing. That some of the current assets are financed by payables and accruals, but that we deduct such spontaneous financing, and equivalent amounts of current assets.

A hedging (maturity matching) approach to financing suggests that apart from current instalments on long-term debt, a firm would show no current borrowings at the seasonal troughs for asset needs. As the firm moved into a period of seasonal asset needs, it would borrow on a short-term basis, paying off the borrowings with the cash released as the recently financed temporary assets were eventually reduced.

Part B

Assume initially that the firm cannot borrow on short notice to meet unexpected cash drains. As a result, it can provide a margin of safety only by (1) increasing the level of current assets (especially cash and marketable securities), or (2) lengthening the maturity schedule of financing. Both of these actions affect profitability. In the first choice, funds are committed to relatively low-yielding assets. In the second, the firm may pay interest on borrowings over periods of time when the funds are not needed. In addition, long-term debt has a higher expected interest cost than does short-term debt.