

Assignment

① (D)

② (A)

③ (D)

④ 100000

⑤ (i)

cashflow at date 1 is

$$2500 - 1500 = 1000$$

$$\begin{aligned} \text{tax rate} &= 1000 - (1000 \times 40\%) \\ &= \underline{600} \end{aligned}$$

$$\begin{aligned} \text{(iii) Net Present value} &= 2500(1-20\%)^1 - 1500(1-20\%)^2 \\ &= \underline{1040} \end{aligned}$$

$$\begin{aligned} \text{ii) Net Present Value} &= 2500(1-20\%)^1 - 1500(1-20\%)^1 \\ &= \underline{800} \end{aligned}$$

$$\text{⑥ Inventory T/O period} = \frac{\text{Inventory}}{\text{cost of sale}} \times 365$$

$$\text{Trade credit T/O period} = \frac{\text{Trade receivable}}{\text{credit sale}} \times 365$$

- Efficiency ratios, also known as activity ratios, used for measure the performance of a company's short term.

⑦ Limitations of ratio analysis:

- If the company has changed its accounting policies and procedures, this may significantly affect financial statements.
- If inflation hits in between period then the real prices are not reflected in financial statements.
- The inability to adjust the ratio analysis to the seasonality effects may lead to false interpretations of the results.
- Information used in analysis is based on real past results that are released by the company. Ratio analysis metrics do not necessarily represent future company performance.

⑧

i) $B < 1$, Risk rate $<$ market risk premium

x $B > 1$, Risk rate $>$ market risk premium

$B = 1$, Average Business.

$$ii) \beta_{gear} = \beta_{ungeared} \left[1 + \frac{1}{2} (1 - 0.3) \right]$$

$$\beta_{ungeared} = 0.8148$$

$$\beta_{gear} = \beta_{ungeared} [1 + 0.7]$$

$$\beta_{gear} = 1.38516$$

9) (D)

10) i) Lack of information would be a main problem.

ii) People working in company would collect more data to maximize wealth.

$$ii) R_{ue} = R_f + MRP \times \beta$$

$$22.285 = 6 + 5 \times \beta (250 - 1)10 = 6 + 5\beta$$

$$\beta = 3.257$$

$$\text{New } \beta = \text{old } \beta + 80\% \text{ of old } \beta$$

$$= 3.257 + (0.8 \times 3.257)$$

$$= 5.8626$$

$$R_e = 6 + (5 + 5.8626) = 35.313\%$$

$$10/\text{mps} \times 100 = 27.81426$$

$$\text{mps} = 1000 / 27.81426 = 36.6109$$

(11) Beta is measure of systematic risk.

$$\beta = \frac{\sigma_i \times \rho_{im}}{\sigma_m}$$

ii) Yes, I would.

iii) cash.

(12) i) $\text{WACC} = (r_d \times w_d) + (r_e \times w_e)$

$$r_d = 9(1 - 0.25) = 6.75$$

$$r_e = R_f + MRP \times \beta$$

$$= 7 + 5 \times 1.508 = 14.5\%$$

$$\text{WACC} = \left(14.5 \times \frac{1}{2} \right) + \left(6.75 \times \frac{1}{2} \right)$$

$$= 10.625\%$$

$$ii) B_g = \text{Ungearer} [1 + P/E (1-t)]$$

$$1.5 = B_{\text{gear}} [1 + 1/1 (1 - 0.25)]$$

$$B_{\text{ungearer}} = 0.8571$$

$$R_e = 7\% + 5\% \times 0.8571$$

$$= \underline{\underline{11.285\%}}$$

(13)

i) cost of project = x

$$IRR = 15\% ; 40000 \times a_{\frac{15}{4}} - x = 0$$

$$40000 \left[1 - \frac{(1.15)^4}{0.15} \right]$$

$$= x = \underline{\underline{114199.13}}$$

$$\Rightarrow \text{cost of project} = 114199.13 \text{ Rs}$$

$$\text{cost of capital} = 114199.13 \times 1.064$$

$$= 3.03772$$

$$3.037697 = 1 - (1+i)^{-4} / (i)$$

$$3.037697 + (1+i)^{-1} - 1 = 0$$

$$i = 11.9 \approx 12\%$$

$$NPV = 121507.8 - 114199.1 = 7308.7$$

$$\text{Payback} = \frac{114199.1}{40069} = 2.8$$

(14)

i) a) Current ratio is liquidity ratio that measures whether a firm has enough resources to meet its short term term obligations.

~~It is used to evaluate;~~

$$\text{current ratio} = \frac{\text{current asset}}{\text{current liability}}$$

b) Debtors turnover ratio period =

$$\frac{\text{Net credit sales}}{\text{Avg. receivables accounts}} \times 365$$

It is used to measure the efficiency of the company to collect money from its creditors.

ii) To track one can use quick ratio / super quick ratio. It tells whether company has enough cash to repay its

Liabilities.

$$\text{Quick ratio} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$$

(15)

v)

$$\text{a) } R_p = 6 \quad ; \quad MRP = 5 \\ \beta = 1.4$$

$$\text{Cost of equity} = 6 + (5 \times 1.4) \\ = 13\%$$

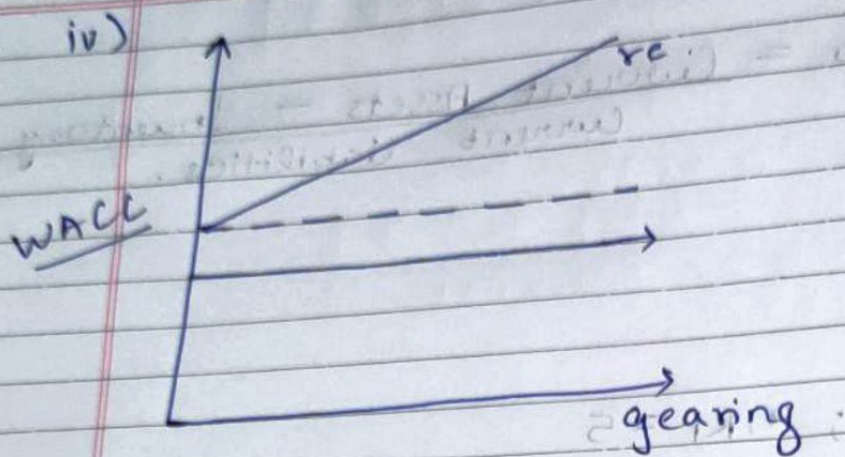
$$\text{b) } t = 30\%$$

$$\beta_{\text{geared}} = \beta_{\text{ungeared}} \left[1 + \frac{D}{E} (1 - t) \right]$$

$$1.4 = \beta_{\text{ungeared}} \left[1 + \frac{1}{1} (1 - 0.3) \right]$$

$$\beta_{\text{geared}} = 1.4 \times 1.7 = 2.38$$

$$\text{c) Cost of equity} = 6 + (5 \times 2.38) \\ = 17.9\%$$



iii) Assumptions:

- i) Debt + equity
- ii) No tax.
- iii) No agency cost.
- iv) constant interest.
- v) loan available to all.

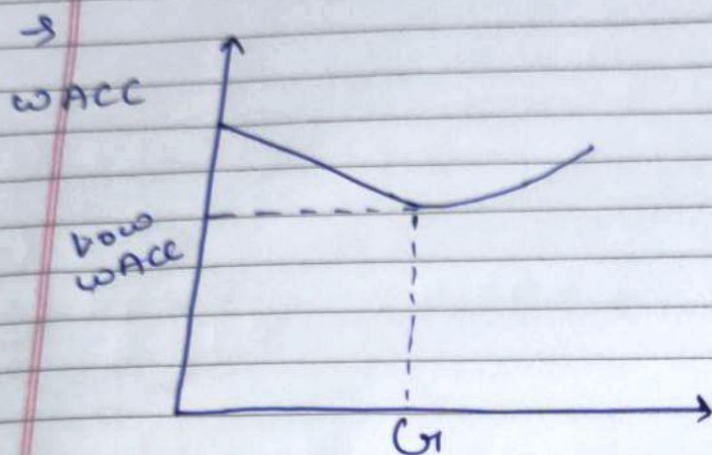
→ This model tells that capital structure is irrelevant and it would not have any effect on WACC and valuation.

$$\begin{aligned}
 \text{ii) } WACC &= \left[\text{Net cost of debt} \times \frac{\text{market value of debt}}{\text{market value of debt and equity}} \right] \\
 &+ \left[\text{Net cost of equity} \times \frac{\text{market value of equity}}{\text{market value of debt + value of equity}} \right]
 \end{aligned}$$

* P/K enter.



→ cost of debt increases faster than cost of equity.



→ $WACC \propto \frac{1}{\text{gearing}}$

$$\begin{aligned} \text{Cost of capital} &= \left(8 \times \frac{1}{2} \right) + \left(4 \times \frac{1}{2} \right) \\ &= \frac{12}{2} = 6\% \end{aligned}$$

Shareholder should buy by seeing that the company's equity and debt are of same size.