

CA Nitin Guru

Subject- **Financial Management - By CA NITIN GURU**

Mock Test – 3 - SOLUTIONS

Ratios & Cost of Capital

Time: 40 Minutes

M.M. – 25 Marks

Instructions-

1. This is a self paced test series, where you can do the test anytime after you complete your chapter and attempt the test and email it to us for checking or self evaluation with help of the solution set provided. For video solutions and test paper to be checked please email us at email id provided below.
2. Answer Sheet is in a single pdf format.
3. First Sheet contains all the information- Name, Registered Email id, Registered Mobile No., Test Number with Subject, website name through which you are watching our class..
4. NO late submission will be entertained.
5. NO answer sheet will be accepted over a chat box or telegram or any other mode other than email.
6. Test solutions should be emailed to test.canitinguru@gmail.com
7. Please give us at least 10 working days time to check and send back your test copy.
8. Sir, will record test paper discussion video as well, which you can watch and clarify your doubts if you have any. Solution videos will be available on youtube and please join our telegram channel [@canitinguru](https://t.me/canitinguru) to be updated with any announcement about test discussion.

Solution 1.

[10 Marks]

(i) Determination of Sales and Cost of goods sold:

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit} \times 100}{\text{Sales}}$$

$$\text{Or, } \frac{25}{100} = \frac{\text{Rs } 12,00,000}{\text{Sales}}$$

$$\text{Or, Sales} = \frac{\text{Rs } 12,00,000 \times 100}{25} = \text{Rs } 48,00,000$$

$$\begin{aligned} \text{Cost of Goods Sold} &= \text{Sales} - \text{Gross Profit} \\ &= \text{Rs } 48,00,000 - \text{Rs } 12,00,000 = \text{Rs } 36,00,000 \end{aligned}$$

(ii) Determination of Sundry Debtors:

Debtors' velocity is 3 months or Debtors' collection period is 3 months,

$$\text{So, debtors' turnover ratio} = \frac{12 \text{ months}}{3 \text{ months}} = 4$$

Debtors' turnover ratio = Credit Sales

Average Accounts Receivable

$$= \frac{\text{Rs } 48,00,000}{\text{Bills Receivable} + \text{Sundry Debtors}} = 4$$

$$\text{Or, Sundry Debtors} + \text{Bills receivable} = \text{Rs } 12,00,000$$

$$\text{Sundry Debtors} = \text{Rs } 12,00,000 - \text{Rs } 75,000 = \text{Rs } 11,25,000$$

(iii) Determination of Closing Stock

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of Goods sold}}{\text{Average Stock}} = \frac{\text{Rs } 36,00,000}{\text{Average Stock}} = 1.5$$

$$\text{So, Average Stock} = \text{Rs } 24,00,000$$

$$\text{Now Average Stock} = \frac{\text{Opening stock} + \text{Closing stock}}{2}$$

$$\text{Or, } \frac{\text{Opening Stock} + (\text{Opening Stock} + \text{Rs } 30,000)}{2} = \text{Rs } 24,00,000$$

$$\text{Or } 2 \text{ Opening Stock} + \text{Rs } 30,000 = \text{Rs } 48,00,000$$

$$\text{Or } 2 \text{ Opening Stock} = \text{Rs } 47,70,000$$

$$\text{Or, Opening Stock} = \text{Rs } 23,85,000$$

$$\text{So, Closing Stock} = \text{Rs } 23,85,000 + \text{Rs } 30,000 = \text{Rs } 24,15,000$$

(iv) Determination of Sundry Creditors:

Creditors' velocity of 2 months or credit period is 2 months.

$$\text{So, Creditors' turnover ratio} = \frac{12 \text{ months}}{2 \text{ months}} = 6$$

$$\text{Creditors turnover ratio} = \frac{\text{Credit Purchases}^*}{\text{Average Accounts Payables}}$$

$$= \frac{\text{Rs } 36,30,000}{\text{Sundry Creditors} + \text{Bills Payables}} = 6$$

$$\text{Sundry Creditors} + \text{Bills Payables}$$

$$\text{So Sundry Creditors} + \text{Bills Payable} = \text{Rs } 6,05,000$$

$$\text{Or, Sundry Creditors} + \text{Rs } 30,000 = \text{Rs } 6,05,000$$

$$\text{Or, Sundry Creditors} = \text{Rs } 5,75,000$$

(v) Determination of Fixed Assets

$$\text{Fixed Assets Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Fixed Assets}} = 4$$

$$\text{Or, } \frac{\text{Rs } 36,00,000}{\text{Fixed Assets}} = 4$$

Fixed Assets

Or, Fixed Asset = Rs 9,00,000

Workings:

***Calculations of Credit Purchases:**

Cost of goods sold = Opening Stock + Purchases – Closing Stock

Rs 36,00,000 = Rs 23,85,000 + Purchases – Rs 24,15,000

Purchases (credit) = Rs 36,30,000

Calculation of credit purchase also can be done as below:

Or Credit Purchases = Cost of goods sold + Difference in Opening Stock

Or Credit Purchases = 36,00,000 + 30,000 = Rs 36,30,000

Solution 2:

[10 Marks]

Workings :

$$1) \text{ Cost of Equity (Ke)} = \frac{D_1}{P_0 - F} + g = \frac{\text{Rs } 2}{\text{Rs } 25 - \text{Rs } 4} + 0.05 = 0.145 \text{ (approx.)}$$

$$2) \text{ Cost of Debt (Kd)} = I (1-t) + \frac{RV - NP}{\frac{n}{2}}$$

$$= 10 (1 - 0.3) + \frac{(100 - 98)}{\frac{10}{2}} = 7 + 0.2 = 0.073 \text{ (approx.)}$$

$$3) \text{ Cost of Preference shares (Kp)} = PD + \frac{RV - NP}{\frac{n}{2}}$$

$$= 12 + \frac{(100 - 97)}{\frac{10}{2}} = 12 + 0.3 = 0.125 \text{ (approx.)}$$

Calculation of WACC using market value weights

Source of capital	Market Value	Weights	After tax cost of capital	WACC (Ko)
	(Rs)	(a)	(b)	(c) = (a) × (b)
10% Debentures (Rs 110 × 3,000)	3,30,000	0.178	0.073	0.013
12% Preference shares (Rs 108 × 2,500)	2,70,000	0.146	0.125	0.018
Equity shares (Rs 25 × 50,000)	12,50,000	0.676	0.145	0.098
	18,50,000	1.00		0.129

WACC (Ko) = 0.129 or 12.9% (approx.)

Solution 3:

[05 Marks]

(i) **Cost of Equity Capital (K_e):**

$$(K_e) = D_1/P_0 + g$$

$$= \frac{\text{Rs } 2 \times 1.06}{\text{Rs } 25} + 0.06 = 0.1448\% \text{ or } 14.48\%$$

(ii) **Cost of Debentures (K_d):**

Using Present Value method or YTM)

Identification of relevant cash flows

Year	Cash Flows (Rs)
0	Current market price (P_0) = Rs 96
1 to 12	Interest net of tax $[I(1-t)] = 10\% \text{ of Rs } 100 (1 - 0.5) = \text{Rs } 5$
12	Redemption value (RV) = Rs 100 (1.12) = Rs 112

Calculation of Net Present Values (NPV) at two discount rates

Year	Cash Flows (Rs)	Discount Factor @ 5%(L)	Present Value	Discount Factor @ 10%(H)	Present Value (Rs)
0	(96)	1.000	(96.00)	1.000	(96.00)
1 to 12	5	8.863	44.32	6.814	34.07
12	112	0.557	62.38	0.319	35.73
NPV			+ 10.7		-26.2

Calculation of IRR

$$\text{IRR} = L + \frac{\text{NPV}_L}{\text{NPV}_L - \text{NPV}_H} (H-L)$$

$$= 5\% + \frac{10.7}{10.7 - (-26.2)} (10\% - 5\%) = 5\% + \frac{53.5}{36.9} = 6.45\%$$

Therefore, $K_d = 6.45\%$