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What Our Students have to Say....

Aman Mahajan (CA AIR 19)

I really liked your classes, especially the practical linkages explained with amazing graphics. The full subject test serieshelped a lot in improving my writing speed and presentation skills.

Sundar Sri Renganathan B (AIR 33)

I took Accounting from IndigoLearn and the classes were really good. They emphasized on conceptual clarity over getting things done quickly, which is really vital to score good marks in practical papers. Other resources like Notes, Quizzes and Forum was beneficial too.

Dwarakesh

Thank you IndigoLearn team for the guidance and support throughout the past few months. I had great conceptual clarity in all the subjects and the revision classes by Suraj Sir were very helpful. Study planner and Free resources were very useful. Thank you Team IndigoLearn.

Yug Manoj Kumar Bhattad

I have cleared my CA Foundation examination with the total of 286. And this was not possible without the efforts and support of IndigoLearn. The way of teaching with utmost conceptual clarity is the best thing at Indigolearn.

Prakash Bhatt

Superb, one stop solution for All CA and Accountancy students they serve real Education at very very reasonable price

Naveen Kumar S

Good experience, unlimited views helped a lot in last one month preparation. Looking forward for

Bhagyasree Chougule

It was only because of Indigolearn that my concepts became very clear, and I was able to crack the exam. I wasn't 100% prepared I needed more practice but luckily I got through. I'm definitely choosing IndigoLearn for group 2 preparation. A big thanks!

Mohd Thayyab

Theoretical subjects made easier through story based examples and charts. Concept clarity 100%. Fully exam+practical oriented classes will help not only to retain the concepts during exams but for the longer duration.

Lalit Chetan Sanpal

Indigolearn has been fantastic and brilliant. Helped me alot in my preparations. I cleared both the groups in first attempt with your brilliant classes and notes. Thanks to all the faculties, coordinators, forum admins and everyone at Indigolearn. Really grateful. Will go for CA Finals at Indigolearn For sure. Thank you so much Indigolearn.

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Abishek M

I'd like to thank IndigoLearn for all the support they've provided me with. Modules were great. They were time saving and straight to the point. I extensively used the materials provided before exams, they were so helpful. Also I'd appreciate them for providing unlimited views as I kept looking into the maths modules till the end.

Munnur Nandini Sree

Accounting classes I have taken from IndigoLearn. Now I feel that it's a great choice that I have made (after seeing my result) because only in Accounting I got exemption. Thank you IndigoLearn.

Harshita G

Thank u so much IndigoLearn for your guidance. This is only possible because of u people.... For my finals also my journey will continue with IndigoLearn.

Bharathsha PS

I purchased Economics, IT, FM, EIS and Audit from Indigolearn. All your classes are superb and anyone can easily crack the CA exams. What makes u special is your classes help us to understand the concepts very well.Special thanks to the FM faculty, I studied only 2 chapters in economics,and still managed to score excemption in the 8th paper.

Nayi Mihir kumar

This platform is very helpful in all activity like mcq practise, notes, teaching activities, revisions and the forum interaction with all students which I like the most. If anybody want to clear their exams in first attempt then IndigoLearn is the best platform for them. My all regards to IndigoLearn. Thank you so much.

Rajalaxmi
CA Inter

Can't believe I cleared.Sathya Sir, Suraj Sir, Yogita Mam ... thanks to all my faculties. Basically an Eng student with zero accounts knowledge. Thanks IndigoLearn for making me clear in first attempt.

Priyanka Udeshi

All the faculties have excellent knowledge of the subject and deliver it in very crisp & effective manner. Also, quick response at Forums never let any of my doubts go unresolved no matter how small they were. Thank you once again to all the teachers & staff at IndigoLearn!

Naveen Kumar T

It been a great journey with indigo learn team. Thanks to all the facilities and forum friends who support me a lot.

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FINANCIAL MANAGEMENT

CASE SCENARIO 1

Cost of Capital

M/s ARC Ltd is an established entity in the telecommunication industry with 49.95% market share. Most of its telecommunication lines are based on 2G, 3G and 4G spectrum. However now the market is foreseeing a technological disruption in the form of 5G technology. To maintain a competitive advantage, it needs to heavily invest in 5G equipments and deploy the same for users latest by the end of year 3 from now. The entire project is going to cost 9,000 crores. The management is wondering how such a huge amount is going to be raised.

A financial consultant has recently been hired by ARC to evaluate the various ways to raise capital. On the basis of his experience and knowledge, the consultant is of the view that telecom industry should not deploy fixed cost funds in excess of 40% of total capital. Also, preference share capital should not exceed 10% of total capital. ARC currently has 2000 crores in the form of reserves represented by short term money market instruments. It can raise money by way of debentures by issuing them at a premium of 5% with redemption value of Rs. 110 after 5 years. The debentures would require an annual interest payment of Rs.8 p.a. The preference shares will be issued at a discount of 10% and redeemed at premium of 10% after 10 years requiring an annual dividend of 10%.The company is sceptical of cash flows in near term after deployment of 5G and therefore would issue the above stated debentures only to the extent of 50% of total debt funds and balance will be raised by zero coupon bonds, which will be issued at a discount of 40% and redeemed at par after 5 years. Current price of share od ARC stands at an average of Rs. 147. The company has recently paid dividend of Rs. 11 per share and considering the 5G deployment and other technological requirements in long run, it is likely to continue retaining 56% of its earnings. The reinvested retained earnings are likely to offer a return of 15% to the shareholders. It is planning to raise a part of additional equity by way of rights offering to its shareholders. The rights entitle the existing shareholders to buy shares at a discount of 15% to current average market price. However only 40% of the required fresh equity can be raised by way of right issue. The balance equity portion will be raised by way of new series of equity shares with differential voting rights They will be promised a dividend of 1.25x of ordinary equity shareholder and due to lower voting rights their cost of capital will require a premium of 50% over ordinary equity shares

Question:1

What will be the amount (in Rs. Crores)of differential voting rights shares to be issued assuming that maximum limits are to be adhered to

a) **2040**
b) 1360
c) 2000
d) 900

Feedback:

Capital Structure		Amount (Rs.)
Rights issue	4:6	1,360
DVR Equity Issue		**2,040**
Retained earnings	Fixed	2,000
Preference Shares	10%	900
Debentures	30% (1:1)	1,350
Zero Coupon Bonds		1,350
Total		**9,000**

Question:2

Calculate the cost of debenture using YTM method

a) 10.76%

b) 8.43%

c) 12.37%

d) 16.51%

Feedback:

Calculation of Kd of debentures

Approx Kd = 8.37%

year	Cashflows	PVF @ 8%	PV @ 8%	PVF @ 9%	PV @ 9%
1 to 5	8	3.9927	31.94	3.8897	31.12
5	110	0.6806	74.87	0.6499	71.49
cash outflow			106.81		102.61
cash inflow	90	1	105		105
NPV			-1.81		2.39

Kd = 8.43%

Question:3.

Calculate the cost of preference shares using YTM method

a) 10.76%

b) 8.43%

c) 12.37%

d) 16.51%

Feedback:

Calculation of Kp of preference shares

Approx Kp = 12%

year	Cashflows	PVF @ 12%	PV @ 12%	PVF @ 13%	PV @ 13%
1 to 10	10	5.6502	56.5	5.4262	54.26
10	110	0.322	35.42	0.2946	32.4
cash outflow			91.92		86.67
cash inflow	90	1	90		90
NPV			-1.92		3.33

Kp = 12.37%

Question: 4

What will be the share price of shares with differential voting rights?

a) **91.07**
b) 100
c) 124.95
d) 147

Feedback:

Calculation of Cost of Equity

Existing Share holders

P0 = 147

Do = 11

b = 15%

r = 15%

Growth rate (g) = b X r = 8.40%

D1 = 11 X (1 + 8.4%) = 11.924

Ke = 11.924 / 147 + 8.4%

= 16.51%

Rights Shares

Po = 147 x 85%=124.95

Do =11

Ь =56%

r =15%.

Growth rate (g)=b x r=8.40%

D1= 11 x (1+8.4%) =11.924

Ke =11.924/124.95+8.4%

=17.94%

Differential Voting rights

Ke =16.51% x 1.5=24.77%

D1 = 11.924 x 1.25=14.905

G =8.40%

Po =14.905/(24.77%-8.40%)

=91.07

Question:5

A. What will be the minimum required return from 5G deployment to breakeven the cost of capital?

a) 10.76%
b) 8.43%
c) 16.11%
d) 16.51%

Feedback:

Capital Structure		Amount(Rs.)	Weight	Cost	W x C
Rights issue	4:6	1360	0.1511	17.94%	0.0271
DVR Equity Issue		2040	0.2267	24.77%	0.0561
Retained earnings	Fixed	2000	0.2222	16.51%	0.0367
Preference Shares	10%	900	0.1	12.37%	0.0124
Debentures	30% (1:1)	1350	0.15	8.43%	0.0126
Zero Coupon Bonds		1350	0.15	10.76%	0.0161
Total		**9000**	1		**16.11%**

CASE SCENARIO 2

Investment Decisions

XYZ Ltd.is a company involved in manufacturing of toys and it is presently all equity financed. The directors of the company have been evaluating investment in a project which will require 400 lakhs capital expenditure on new machinery. They expect the capital investment to provide annual cash flows of 60 lakhs indefinitely which is net of all tax adjustments. The discount rate which it applies to such investment decisions is 12% net.

The directors of the company believe that the current capital structure fails to take advantage of tax benefits of debt and propose to finance the new project with undated perpetual debt secured on the company's assets. The company intends to issue sufficient debt to cover the cost of capital expenditure and the after tax cost of issue.

The current annual gross rate of interest required by the market on corporate undated debt of similar risk is 9%. The after tax costs of issue are expected to be 5% of the investment amount required. Company's tax rate is 30%.

Based on above information, answer the following:

Question:1

What is the value of tax relief on interest payment in perpetuity?

a) Rs.12.6 lakhs
b) Rs.126 lakhs
c) Rs. 10 lakhs
d) Rs.100 lakhs

Feedback:
1. tax relief on interest payment in perpetuity
Issue costs = Rs.400 lakhs x 5%= Rs.20 lakhs
Thus, the amount to be raised = Rs.400 lakhs + Rs.20 lakhs
= Rs.420 lakhs
Annual tax relief on interest payment = Rs.420 x 0.1x0.3
= Rs.12.6 lakhs in perpetuity
The value of tax relief in perpetuity = Rs.12.6 lakhs/0.1
= Rs.126 lakhs

Question:2
What is the adjusted present value of the investment?

a) Rs.126 lakhs
b) Rs.208 lakhs
c) Rs.206 lakhs
d) Rs.104 lakhs

Feedback:
Calculation of Adjusted Present Value of Investment (APV)
Adjusted PV = Base Case PV + PV of financing decisions associated with the project
Base Case NPV for the project:
(Rs.60 lakhs/0.12) - Rs.400 lakhs = Rs.500 lakhs- Rs.400 lakhs
= Rs.100 lakhs
Therefore, APV = Base case PV- Issue Costs + PV of Tax Relief on debt interest
= Rs.100 lakhs- Rs.20 lakhs + 126 lakhs = Rs.206 lakhs

Question: 3
Annual income required to make NPV to zero

a) **Rs.25.68 lakhs**
b) Rs.24.64 lakhs
c) Rs.28.64 lakhs
d) Rs.22.52 lakh

Feedback:
Annual Income / Savings required to allow an NPV to zero
Let the annual income be x.
Rs.420 lakhs-(Annual Income/0.12) =206 lakhs
Annual Income /0.12 = = Rs.420 lakhs-Rs.206
Therefore, Annual income = Rs.214 x 0.12= Rs.25.68 lakhs

Question: 4
What is the adjusted discount rate?

a) 8.80%
b) 7.65%
c) 6.32%
d) 6.11%

Feedback:
Calculation of Adjusted Discount Rate (ADR)
Adjusted discount rate-(Rs.25.68 lakhs /Rs.420 lakhs) x 100 =6.11%

Question: 5
Circumstances in which ADR may be used to evaluate future investments
i. Business risk of ihe new venture is identical to the one being evaluated
ii. The project is to be financed by the same method
iii. The project is lo be financed by the same method on the same terms.
iv. Can be used in any situation.
Select the correct option:

a) (i) only
b) (i) and (ii) only
c) (i) and (iii)only
d) (i), (ii), (iii) and (iv)

Feedback:
Useable circumstances
This ADR may be used to evaluate future investments only if the business risk of the new venture is identical to the one being evaluated here and the project is to be financed by the same method on the same term.

CASE SCENARIO 3
Working Capital Management
NV Industries Ltd. is a manufacturing industry which manages its accounts receivables internally by its sales and credit department. It supplies small articles to different industries. The total sales ledger of the company stands at Rs. 200 lakhs of which 80% is credit sales. The company has a credit policy of 2/40, net 120. Past experience of the company has been that on average out of the total,50% of customers avail of discount and the balance of the receivables are collected on average in 120 days. The finance controller estimated, bad deb# losses are around 1% of credit sales.
With escalating cost associated with the in-house management of the debtors coupled with the need to unburden the management with the task so as to focus on sales promotion, the CFO is examining the possibility of outsourcing its factoring service for managing its receivables. Currently, the firm spends about Rs. 2,40,000 per annum to administer its credit sales. These are avoidable as a factoring firm is prepared to buy the firm's receivables. The main elements of the proposal are:

(i) It will charge 2% commission
(ii) It will pay advance against receivables to the firm at an interest rate of 18% after withholding 10% as reserve.

Also, company has option to take long term loan at 15% interest or may take bank finance for working capital at 14% interest
You were also present at the meeting; being a financial consultant, the CFO has asked you to be ready with the following questions:
Consider year as 360 days.

Question:1

What is average level of receivables of the company?

a) Rs.53,33,333
b) **Rs. 35,55,556**
c) Rs. 44,44,444
d) Rs. 71,11,111

Feedback:

Working Note

Particulars	(Rs.)
Total Sales	Rs. 200 lakhs
Credit Sales (80%)	Rs. 160 lakhs
Receivables for 40 days	Rs. 80 lakhs
Receivables for 120 days	Rs. 80 lakhs
Average collection period [(40 x 0.5) + (120 x 0.5)]	80 days
Average level of Receivables (Rs. 1,60,00,000 x 80/360)	Rs. 35,55,556
Factoring Commission (Rs. 35,55,556 x 2/100)	Rs. 71,111
Factoring Reserve (Rs. 35,55,556 x 10/100)	Rs. 3,55,556
Amount available for advance {Rs. 35,55,556 - (3,55,556 + 71,111)}	Rs. 31,28,889

Question: 2

How much advance factor will pay against receivables?

a) Rs. 31,28,889
b) Rs. 39,11,111
c) **Rs. 30,03,733**
d) Rs, 46,93,333

Feedback:

Working Note

Particulars	(Rs.)
Total Sales	Rs. 200 lakhs
Credit Sales (80%)	Rs. 160 lakhs
Receivables for 40 days	Rs. 80 lakhs
Receivables for 120 days	Rs. 80 lakhs
Average collection period [(40 x 0.5) + (120 x 0.5)]	80 days
Average level of Receivables (Rs. 1,60,00,000 x 80/360)	Rs. 35,55,556
Factoring Commission (Rs. 35,55,556 x 2/100)	Rs. 71,111
Factoring Reserve (Rs. 35,55,556 x 10/100)	Rs. 3,55,556
Amount available for advance {Rs. 35,55,556 - (3,55,556 + 71,111)}	Rs. 31,28,889
Factor will deduct his interest @ 18%: Interest =	Rs. 1,25,156
Advance to be paid (Rs. 31,28,889 – Rs. 1,25,156)	Rs. 30,03,733

Question:3

What is the annual cost of factoring to the company?

a) **Rs. 8,83,200**
b) Rs. 4,26,667
c) Rs.5,51,823
d) Rs. 4,00,000

Feedback:

Working Note

Particulars	(Rs.)
Total Sales	Rs. 200 lakhs
Credit Sales (80%)	**Rs. 160 lakhs**
Receivables for 40 days	Rs. 80 lakhs
Receivables for 120 days	Rs. 80 lakhs
Average collection period [(40 x 0.5) + (120 x 0.5)]	80 days
Average level of Receivables (Rs. 1,60,00,000 x 80/360)	Rs. 35,55,556
Factoring Commission (Rs. 35,55,556 x 2/100)	Rs. 71,111
Factoring Reserve (Rs. 35,55,556 x 10/100)	Rs. 3,55,556
Amount available for advance {Rs. 35,55,556 - (3,55,556 + 71,111)}	Rs. 31,28,889
Factor will deduct his interest @ 18%: Interest =	Rs. 1,25,156
Advance to be paid (Rs. 31,28,889 – Rs. 1,25,156)	Rs. 30,03,733

Statement Showing Evaluation of Factoring Proposal

		Rs.
A.	**Annual Cost of Factoring to the Company:**	
	Factoring commission (Rs. 71,111 x 360/80)	3,20,000
	Interest charges (Rs. 1,25,156 x 360/80)	5,63,200
	Total	8,83,200

Question:4

What is the net cost to the company on taking factoring service?

a) Rs. 4,00,000
b) Rs. 4,26,667
c) Rs. 3,50,000
d) Rs. 4,83,200

Feedback:

Working Note

Particulars	(Rs.)
Total Sales	Rs. 200 lakhs
Credit Sales (80%)	Rs. 160 lakhs
Receivables for 40 days	Rs. 80 lakhs
Receivables for 120 days	Rs. 80 lakhs
Average collection period [(40 x 0.5) + (120 x 0.5)]	80 days
Average level of Receivables (Rs. 1,60,00,000 x 80/360)	Rs. 35,55,556
Factoring Commission (Rs. 35,55,556 x 2/100)	Rs. 71,111
Factoring Reserve (Rs. 35,55,556 x 10/100)	Rs. 3,55,556
Amount available for advance {Rs. 35,55,556 - (3,55,556 + 71,111)}	Rs. 31,28,889
Factor will deduct his interest @ 18%: Interest =	Rs. 1,25,156
Advance to be paid (Rs. 31,28,889 – Rs. 1,25,156)	Rs. 30,03,733

Statement Showing Evaluation of Factoring Proposal

		Rs.
A.	**Annual Cost of Factoring to the Company:**	
	Factoring commission (Rs. 71,111 x 360/80)	3,20,000
	Interest charges (Rs. 1,25,156 x 360/80)	5,63,200
	Total	8,83,200
B.	**Company's Savings on taking Factoring Service:**	Rs.
	Cost of credit administration saved	2,40,000
	Bad Debts (Rs. 160,00,000 x 1/100) avoided	1,60,000
	Total	4,00,000
C.	Net Cost to the company (A – B) (Rs. 8,83,200 – Rs. 4,00,000)	4,83,200

Question:5

What is the effective cost of factoring on advance received?

a) **16.09%**
b) 13.31%
c) 12.78%
d) 15.89%

Feedback:

Working Note

Particulars	(Rs.)
Total Sales	Rs. 200 lakhs
Credit Sales (80%)	**Rs. 160 lakhs**
Receivables for 40 days	Rs. 80 lakhs
Receivables for 120 days	Rs. 80 lakhs
Average collection period [(40 x 0.5) + (120 x 0.5)]	80 days
Average level of Receivables (Rs. 1,60,00,000 x 80/360)	Rs. 35,55,556
Factoring Commission (Rs. 35,55,556 x 2/100)	Rs. 71,111
Factoring Reserve (Rs. 35,55,556 x 10/100)	Rs. 3,55,556
Amount available for advance {Rs. 35,55,556 - (3,55,556 + 71,111)}	Rs. 31,28,889
Factor will deduct his interest @ 18%: Interest =	Rs. 1,25,156
Advance to be paid (Rs. 31,28,889 – Rs. 1,25,156)	Rs. 30,03,733

Statement Showing Evaluation of Factoring Proposal

		Rs.
A.	**Annual Cost of Factoring to the Company:**	
	Factoring commission (Rs. 71,111 x 360/80)	3,20,000
	Interest charges (Rs. 1,25,156 x 360/80)	5,63,200
	Total	8,83,200
B.	**Company's Savings on taking Factoring Service:**	Rs.
	Cost of credit administration saved	2,40,000
	Bad Debts (Rs. 160,00,000 x 1/100) avoided	1,60,000
	Total	4,00,000
C.	Net Cost to the company (A – B) (Rs. 8,83,200 – Rs. 4,00,000)	4,83,200

Effective cost of factoring = 16.09%

CASE SCENARIO 4

Cost of Capital

Tiago Ltd is an all-equity company engaged in manufacturing of batteries for electric vehicles There has been a surge in demand for their products due to rising oil prices. The company was established 5 years ago with an initial capital of Rs. 10,00,000 and since then it has raised funds by IPO taking the total paid up capital to Rs. 1 crore comprising of fully paid-up equity shares of face value Rs. 10 each. The company currently has undistributed reserves of Rs. 60,00,000. The company has been following constant dividend payout policy of 40% of earnings. The retained earnings by company are going to provide a return on equity of 20%. The current EPS is estimated as Rs 20 and prevailing PE ratio on the share of company is 15x. The company wants to expand its capital base by raising additional funds by way of debt, preference and equity mix. The company requires an additional fund of Rs. 1,20,00,000. The target ratio of owned to borrowed funds is 4:1 post the fund-raising activity. Capital gearing is to be kept at 0.4x.

The existing debt markets are under pressure due to ongoing RBI action on NPAS of the commercial bank. Due to challenges in raising the debt funds, the company will have to offer Rs. 100 face value debentures at an attractive yield of 9.5% and a coupon rate of 8% to the investors., Issue expenses will amount to 4% of the proceeds.

The preference shares will have a face value of Rs. 1000 each offering a dividend rate of 10%. The preference shares will be issued at a premium of 5% and redeemed at a premium of 10% after 10 years at the same time at which debentures will be redeemed.

The CFO of the company is evaluating a new battery technology to invest the above raised money. The technology is expected to have a life of 7 years. It will generate a after tax marginal operating cash flow of Rs. 25,00,000 p.a. Assume marginal tax rate to be 27%

Question: 1

Which of the following is best estimate of cost of equity for Tiago Ltd?

a) 12.99%
b) 11.99%
c) 13.99%
d) 14.99%

Feedback:

B= retention ratio=0.6, r=return on equity=20%, DPS-DO=20 x 0.4=8,

MPS = P0 = EPS x PE = 20 x 15 = 300

G = b.r = 0.6 x 20%=12%

D1= D0(1+g)=8(1.12)=8.96

Ke =D1/P0+g=8.96/300+0.12=14.99%

Question: 2

Which of the following is the most accurate measure of issue price of debentures?

a) 100
b) 96
c) **90.58**
d) 95.88

Feedback:
Price of debentures= PV of future cash flows for investor discounted at their yield
=8x PVAF(9.5%,10 years)+100 x PVF(9.5%,10 years)
=8x 6.2788+100 xO.4035
=50.2304+40.35
=90.58

Question: 3
Which of the following is the best estimate of cost of debentures to be issued by the company? (Using approximation method)

a) **7.64%**
b) 6.74%
c) 4.64%
d) 5.78%

Feedback:
NP=90.58 x 96%-86.96, RV= 100, Interest=8,t=0.27, n=10
Kd= =7.64%

Question: 4
Calculate the cost of preference shares using approximation method

a) 10.23%
b) 9.77%
c) 12.12%
d) 12.22%

Feedback:
Kp = 9.77%

Question:5
Which of the following best represents the overall cost of marginal capital to be raised?
10.52%
17.16%
16.17%
16.71%
Feedback:

	Existing	Total	Additional	
Equity Funds	1,60,00,000	2,00,00,000	40,00,000	
Preference Shares		24,00,000	24,00,000	
Debt		56,00,000	56,00,000	
	1,60,00,000	2,80,00,000	1,20,00,000	
Capital gearing =	0.4			
(PSC + Debt)/Equity =	0.4			
(Total Funds -Equity)/ Equity = 0.4				
(2.8 crores-Equity)/ equity = 0.4				
Equity =	2 crores			
Weighted avg cost of marginal capital		**Weights**	**Cost**	**W.C**
Equity Funds	40,00,000	0.333333333	14.99%	5.00%
Preference Shares	24,00,000	0.2	9.77%	2.00%
Debt	56,00,000	0.466666667	7.64%	3.565%
Total	**1,20,00,000**			**10.52%**

CASE SCENARIO 5

Working Capital Management

ArMore LLP is a newly established startup dealing in manufacture of a revolutionary product HDHMR which is a substitute to conventional wood and plywood. It is an economical substitute for manufacture of furniture and home furnishing. It has been asked by a venture capitalist for an estimated amount of funds required for setting up plant and also the amount of circulating capital required. A consultant hired by the entity has advised that the cost of setting up the plant would be Rs.5 Crores and it will require 1 year to make the plant operational. The anticipated revenue and associated cost numbers are as follows:

Units to be sold = 3 lakh sq metres p.a.

Sale Price of each sq mtr = Rs. 1000

Raw Material cost = Rs. 200 per sq mtr

Labour cost = Rs. 50 per hour

Labour hours per sq mtr =3 hours

Cash Manufacturing Overheads = Rs. 75 per machine hour

Machine hours per sq mtr =2 hours
Selling and credit administration Overheads = Rs. 250 per sq mtr
Being a new product in the industry, the firm will have to give a longer credit period of 3 months to its customers. It will maintain a stock of raw material equal to 15% of annual consumption. Based on negotiation with the creditors, the payment period has been agreed to be 1 month from the date of purchase. The entity will hold finished goods equal to 2 months of units to be sold. All other expenses are to be paid one month in arrears Cash and Bank balance to the tune of Rs. 25,00,000 is required to be maintained.
The entity is also considering reducing the working capital requirement by either of the two options: a) reducing the credit period to customers by a month which will lead to reduction in sales by 5%.b) Engaging with a factor for managing the receivables, who will charge a commission of 2% of invoice value and will also advance 65% of receivables @12% p.a This will lead to savings in administration and bad debts cost to the extent of Rs.20 lakhs and 16 lakhs respectively
The entity is also considering funding a part of working capital by bank loan. For this purpose, bank has stipulated that it will grant 75% of net current assets as advance against working capital. The bank has quoted 16.5% rate of interest with a condition of opening a current account with it, which will require 10% of loan amount to be minimum average balance.
You being an finance manager, has been asked the following questions:

Question:1
The anticipated profit before tax per annum after the plant is operational is .

a) **750 Lakhs**
b) 570 Lakhs
c) 370 Lakhs
d) 525 Lakhs

Feedback:

	Units	Per unit (Rs.)	Amount (Rs.)
Raw Material consumption	3,50,000	200	7,00,00,000
labour cost	3,50,000	150	5,25,00,000
Production Overheads	3,50,000	150	5,25,00,000
Cost of Production	3,50,000	500	17,50,00,000
Less: Stock of FG	50,000	500	2,50,00,000
COGS	3,00,000	500	15,00,00,000
Selling and admin exp	3,00,000	250	7,50,00,000
Cost of Sales	3,00,000	750	22,50,00,000
Sales	3,00,000	1000	30,00,00,000
Profit	3,00,000	250	7,50,00,000

Stock of FG (sq. mtr.) = 30,00,000×2/12 =50,000
Units sold = 3,00,000
Raw material consumed (sq. mtr.) =3,50,000
Raw Material Purchases = Consumption + RM stock (15%) =7,00,00,000+1,05,00,000
= Rs.8,05,00,000

Question: 2
The estimated current assets requirement in the first year of operation (debtors calculated at cost) is

a) **9,42,50,000**
b) 2,17,08,333
c) 7,25,41,667
d) 67,08,333

Feedback:
Stock of Raw Material (15% of 7,00,00,000) =1,05,00,000
Stock of finished goods =2,50,00,000
Debtors (22,50,00,000 x 3/12) =5,62,50,000
Cash =25,00,000
Total Current Assets =9,42,50,000

Question:3
The net working capital requirement for the first year of operation is.

a) 9,42,50,000
b) 2,17,08,333
c) **7,25,41,667**
d) 67,08,333

Feedback:
Working Capital Statement

	Amount (Rs.)
Stock of Raw Material (15% of 7,00,00,000)	1,05,00,000
Stock of finished goods	2,50,00,000
Debtors (22,50,00,000 x 3/12)	5,62,50,000
Cash	25,00,000
Total Current Assets	**9,42,50,000**
Creditors (8,05,00,000 x 1/12)	67,08,333
O/s Exp (18,00,00,000 x 1/12)	1,50,00,000
Total Current Liabilities	**2,17,08,333**
Net Working Capital	**7,25,41,667**

Question: 4

The annualised % cost of two options for reducing the working capital is.

a) **18.18% and 16.92%**
b) 18.33% and 16.92%
c) 18.59% and 18.33%
d) 16.92% and 19.05%

Feedback:

Cost reducing debtors credit period

Debtors credit period = 2 months

Debtors balance = 21,37,50,000(2,85,000 units) x 2/12= Rs.3,56,25,000

Debtors credit period = 3 months

Debtors balance = 22,50,00,000 x3/12

= Rs. 5,62,50,000

Amount released from debtors -Rs. 2,06,25,000

reduction in profit (15,000 units x Rs. 250) = Rs. 37,50,000

% p.a. cost (37,50,000/2,06,25,000) 18.18%

Costs of factoring

Commission (2% of 30 crores) =Rs. 60,00,000

Interest = Rs. 58,50,000

(3Ocr x 65% x 12% x 3/12)

savings = Rs.36,00,000

Net cost of factoring = Rs.82,50,000

% p.a. cost = 16.92%

Question: 5

What will be the Maximum Permissible Bank Finance by the bank and annualised % cost of the same?

a) 4,55,03,630 and 18.33%
b) **5,44,06,250 and 18.33%**
c) 4,45,86,025 and 18.59%
d) 3,45,89,020 and 19.85%

Feedback:

Maximum Permissible Bank Finance = 75% of 7,25,41,667

= Rs.5,44,06,250

Annualised cost of bank loan =16.5/90% =18.33%

CASE SCENARIO 6

Capital Structure

Ramu Ltd. wants to implement a project for which Rs.25 lakhs is required. Following financing options are at hand:

Option 1:

Equity Shares 25,000 @ Rs. 100

Option 2:

Equity Shares 10,000 @ Rs. 100
12% Preference Shares 5,000@ Rs. 100
10% Debentures 10,000@ Rs.100

Question:1
What is the indifference point & EPS at that level of EBIT assuming corporate tax to be 35%.

a) Rs. 2,94,872; Rs 11.80
b) Rs.3,20,513; Rs 8.33
c) Rs.2,94,872; Rs 7.67
d) Rs.3,20,513; Rs 12.82

Feedback:
X = EBIT = Rs.3,20,513
At EBIT of Rs.3,20,513, EPS under both options will be the same i.e., Rs. 8.33 per share.

CASE SCENARIO 7
Leverage
If EBIT increases by 6%, taxable income increases by 6.9%. If sales increase by 6%, taxable income will increase by 24%.
Financial leverage must be-

Question:1
Financial leverage must be-.....

a) 1.19
b) 1.13
c) 1.12
d) 1.15

Feedback: FL = % change in NP / % change in EBIT = 6.9 / 6 = 1.15

CASE SCENARIO 8
Cost of Capital
Ranu & Co. has issued 10% debenture of face value 100 for Rs. 10 lakh. The debenture is expected to be sold at 5% discount. It will also involve floatation costs of Rs. 10 per debenture. The debentures are redeemable at a premium of 10% after 10 years. Calculate the cost of debenture if the tax rate is 30%.

Question:1
Calculate the cost of debenture

a) 8.97%
b) 9.56%
c) 8.25%
d) 10.12%

Feedback: 8.75 / 97.5 = 8.97%

CASE SCENARIO 9

Investment Decisions

A project requires an initial investment of Rs. 20,000 and it would give annual cash inflow of Rs 4,000. The useful life of the project is estimated to be 10 years.

Question:1

What is payback reciprocal/Approximated IRR?

a) **20%**
b) 15%
c) 25%
d) 12%

Feedback: Payback reciprocal = 20%

CASE SCENARIO 10

Ratio Analysis

RNOC Ltd is a listed company and has been facing a cash crunch situation since a while. The CFO is of the opinion that excess stock maintained as per the instructions of management of the company is the reason for cash crunch. However, the management states that its product line requires larger amount of inventory due to greater variety of product line and customer may ask for any type of product. To maintain competitive advantage, the company should be able to cater to customer needs as and when required. The management is highly critical of the collection team as the management feels that they are not collecting the receivables within time as per industry standards

You have been hired by the company as a financial consultant. Management has provided you the latest audited financial statements and also relevant industry statistics. You are required to advice the company to improve its liquidity position.

Statement of Profit and Loss	Rs.	Rs.
Sales		1,25,00,000
Cost of goods sold		
Opening Stock	23,00,000	
Add: Purchases	80,00,000	
Add: Direct expenses	12,00,000	
Less: Closing Stock	(38,60,000)	(76,40,000)
Gross Profit		48,60,000
Less: Operating Expenses		
Administrative Expenses	13,20,000	
Selling and Distribution Expenses	15,90,000	(29,10,000)
Operating Profit		19,50,000
Add: Non-Operating Income		3,28,000
Less: Non-Operating Expenses		(1,27,000)
Profit before Interest and taxes		21,51,000
Less: Interest		(4,39,000)
Profit before tax		17,12,000
Less: Taxes		(4,28,000)
Profit after Tax		12,84,000

Balance Sheet

Sources of Funds		Rs.	Rs.
Owned Funds			
	Equity Share Capital	30,00,000	
	Reserves and Surplus	18,00,000	48,00,000
Borrowed Funds			
	Secured Loan	10,00,000	
	Unsecured Loan	4,30,000	14,30,000
Total Funds Raised			62,30,000

Application of Funds			
Non-Current Assets			
	Building	7,50,000	
	Machinery	2,30,000	
	Furniture	7,60,000	
	Intangible Assets	50,000	17,90,000
Current Assets			
	Inventory	38,60,000	
	Receivables	39,97,000	
	ST investments	3,00,000	
	Cash and Bank	2,30,000	83,87,000
Less: Current Liabilities			
	Creditors	25,67,000	
	ST loans	13,80,000	(39,47,000)
Total Funds Employed			
			62,30,000

Question : 1

What is the inventory turnover ratio in days and whether assertion of CFO is correct?

a) 120 days; Assertion of CFO is correct
b) 100 days; Assertion of CFO is incorrect.
c) 185 days; Assertion of CFO is correct
d) 150 days; Assertion of CFO is incorrect

Feedback:

Inventory Turnover = Inventory COGSx365

Inventory x 365

COCS

38.60.000 x 365

76.40.00o

=184.41 days=185 days (apx)

Inventory holding period of 185 days is significantly higher as compared to industry standard of 100 days. This means a significant amount of working capital is tied in inventory, which may be leading to liquidity crunch.

Question: 2

What is the receivables turnover and whether assertion of management is correct?

a) **117 days; Assertion of management is correct.**
b) 100 days; Assertion of management is correct.
c) 85 days; Assertion of management is correct
d) 85 days; Assertion of management is not correct.

Feedback:

Receivables Turnover= ReceivablesSalesx365

Receivable ×365

Sales

= 39,97,000x3651,25,00,000

39,97,000 ×365

1,25, 00, 000

=116.71=117 days (apx)

Receivables turnover of 117 days as compared to industry standard of 90 days is a further delay of 27 days. This will lead to good amount of money being tied up in debtors.

Question: 3

What is the expense company needs to incur for earning Rs. 1 of revenue in the last year?

a) **0.844**
b) 0.754
c) 0.962
d) 0.824

Feedback:

Operating Ratio is the number which indicates cost incurred by company for earning each rupee of revenue

Operating Ratio= COGS +Operating Expenses Sales x 100

COCS+0perating Expenses x100

Sales

= 76,40,000+29,10,000 1,25,00,000x100

76.40.000+29,10,000 x100

1, 25, 00, 000

=0.844

Question: 4

What is the projected net working capital of the company?

a) 42,87,891
b) **40,27,891**
c) 48,27,891
d) 48,28,891

Feedback:

Equity to Reserves=1

Reserves= 1x30,00,000 = 30,00,000

Projected profit= 30,00,000-18,00,000=12,00,000
Net Profit Margin= 15%
12,00,000/ Sales = 0.15
Sales=80,00,000
Gross Profit=80,00,000x50%=40,00,000
COGS=80,00,000-40,00,000=40,00,000
Projected Debtors Turnover= 100 days= closing Receivables/Sales x 365
100=Closing Receivables /80,00,000x365
Closing Receivables=80,00,000x100/365 = 21,91,781
Projected Closing Inventory= 70% of opening inventory=70% of 38,60,000 = 27,02,000 Projected Creditor Turnover= 100 days=closing creditors/COGSx365
Closing Creditors = COGSx100/365
Closing Creditor=40,00,000x100/365-10,95,890
NetWorkingCapital=Çash+Debtors+Inventory-creditors=2,30,000+21,91,781+27,02,000
=10,95,890
Net Working Capital=40,27,891

Question:5
What is the projected Long-Term Debt of the company for the next year?

a) 60,00,000
b) **30,00,000**
c) 14,30,000
d) 28,60,000

Feedback:
Equity Share Capital + Reserves=30,00,000+30,00,000=60,00,000
Long Term Debt to Equity=0.5
LTD/60,00,000=0.5
Long Term Debt=0.5x60,00,000
Long Term Debt=30,00,000

CASE SCENARIO 11
Investment Decisions
A Ltd. is evaluating a project involving an outlay of Rs. 10,00,000 resulting in an annual cash inflow of Rs.2,50,000 for 6 years. Assuming salvage value of the project is zero;

Question:1
DETERMINE the IRR of the project

a) 12.98%
b) 12.21%
c) 14.98%
d) 10.65%

Feedback:
First of all, we shall find an approximation of the payback period
=10,00,0002,50,000=4

10,00,000 =4
2,50,000
Now, we shall search this figure in the PVAF table corresponding to 6-year row.
The value 4 lies between values 4.111 and 3.998, correspondingly discounting rates are 12% and 13% respectively. NPV @12% and 13% is:
NPV12%=(10,00,000)+4.111 × 2,50,000=+27,750
NPV13%=(10,00,000) +3.998 ×2,50,000=-500
The internal rate of return is, thus, more than 12% but less than 13%. The exact rate can be obtained by interpolation:
IRR = 12.978% or 12.98%

CASE SCENARIO 12

Cost of Capital

AHF Ltd. is a well-established organization known for its innovative products and services. With a strong financial standing and a commitment to growth, the company is exploring different financing options to fuel its expansion strategies. AHF Lid. is considering issuing debentures to raise funds for expansion and investment opportunities. The company aims to determine the cost of debt after tax under various scenarios of issuance, considering factors such as issue price and brokerage expenses.

CA Aananda, Chief Financial Officer of AHF Ltd. plans to issue 7,12,00,000,15% debentures of 100 each, redeemable after a fixed period of 10 years. The company operates in a 35% tax bracket, which will impact the cost of debentures after tax.

The cost of debt after tax is calculated by adjusting the coupon rate for tax savings on interest payments. Additionally, brokerage expenses, if applicable, are factored into the analysis to determine the overall cost of debentures.

By analysing the cost of debt under different issuance scenarios, CA Aananda can make informed decisions regarding its financing strategy. Understanding the impact of issue price and brokerage expenses on the cost of debentures enables the company to optimize its capital structure and enhance shareholder value. Continuous evaluation of financing options and market conditions will be essential for AHF Ltd. to maintain financial flexibility and support its long-term growth objectives.

Calculate Cost of Debentures after tax and help CA Aananda, CFO of AHF Ltd. to understand the various scenarios.

Question:1

What will be the cost of debenture if the debentures are issued at par?

a) 9.25%
b) 15%
c) 7.80%
d) 9.75%

Feedback:

$$\text{Cost of Debentures, } K_d = \frac{I(1-t)+\frac{(RV-NP)}{n}}{\frac{(RV+NP)}{2}} \; x \; 100$$

I = Interest on debentures

t = Tax Rate

RV= Redemption Value

NP= Current Market Price or Net Proceed received

n =Period of debenture

cost of debenture if the debentures are issued at par.

$$\text{Cost of Debentures, } K_d = \frac{15(1-0.35)+\frac{(100-100)}{10}}{\frac{(100+100)}{2}} \; x \; 100 = 9.75\%$$

Question:2

What will be the cost of debenture if the debentures are issued at 10% discount?

a) 10.95%
b) 11.32%
c) 8.33%
d) 10%

Feedback :

cost of debenture if the debentures are issued at 10% discount.

$$\text{Cost of Debentures, } K_d = \frac{15(1-0.35)+\frac{(100-90)}{10}}{\frac{(100+90)}{2}} \; x \; 100 = 11.32\%$$

Question:3

What will be the cost of debenture if the debentures are issued at 10% premium?

a) 8.33%
b) 8.66%
c) 10.23%
d) 11.32%

Feedback :

cost of debenture if the debentures are issued at 10% premium.

$$\text{Cost of Debentures, } K_d = \frac{15(1-0.35)+\frac{(100-110)}{10}}{\frac{(100+110)}{2}} \; x \; 100 = 8.33\%$$

Question:4

What will be the cost of debenture if the brokerage is paid at 2% and issue is at par?

a) 8.33%
b) 15.35%
c) 10.05%
d) 9.98%

Feedback :

cost of debenture if the brokerage is paid at 2% and issue is at par.

$$\text{Cost of Debentures, } K_d = \frac{15(1-0.35)+\frac{(100-98)}{10}}{\frac{(100+98)}{2}} x\ 100 = 10.05\%$$

Question:5

What will be the cost of debenture if the debenture's current market price is Rs. 120 and are redeemed at par?

a) 7%
b) 7.05%
c) 7.68%
d) 9.75%

Feedback :

cost of debenture if the debenture's current market price is ₹120 and are redeemed at par.

$$\text{Cost of Debentures, } K_d = \frac{15(1-0.35)+\frac{(100-120)}{10}}{(100+120)} x\ 100 = 7.05\%$$

CASE SCENARIO 13

Dividend Decision

The following data are available for R Ltd

Earnings per share Rs. 8

Rate of return on investment 16%

Rate of return to shareholders 12%

Question: 1

If Gordon's basic valuation formula is applied what will be the price per share when the dividend pay out ratio is 50%

a) 85.71
b) 66.61
c) 100
d) 78

Feedback:

DPR=50%,

DPS-50%x8=4,

g=16% x O.5=8%,

Po=4/(0.12-0.08)=100.

CASE SCENARIO 14

Investment Decisions

ANP Ltd. is providing the following information:

Annual cost of saving-748,000

Useful life-5 years

Salvage value Zero

Internal rate of return-15%

Profitability index-1.05

Question:1

What is projects initial investment?

a) 1,60,900

b) 1,60,896

c) 1,60,494

d) 1,60,499

Feedback:

Annual cost saving = Cash inflow=48,000

Useful life-5 years

IRR= 15%

At 15% IRR, total present value of cash inflow is equal to initial cash outlay.

Total present value of cash inflow @ 15% for 5 years is 3.353

=48,000 x 3.352=1,60,896.

Thus, Project cost=1,60,896

CASE SCENARIO 15

Dividend Decision

KGF Chemicals Ltd., a prominent player in the chemical industry, faces the challenge of determining its growth trajectory and dividend policy to maximize shareholder value. With expectations of significant growth in the near term and stabilization in the long run, the company must strategically manage its resources to align with investor expectations.

KGF Chemicals Ltd. is a leading manufacturer and supplier of specialty chemicals catering to diverse industries such as pharmaceuticals, agriculture, and manufacturing. Established with a commitment to innovation and quality, the company has garnered a strong market presence over the years.

The company is projected to experience robust growth at a rate of 14% per annum for the next four years. Subsequently, the growth rate is expected to stabilize at the national economy's rate of 7% indefinitely. This forecast reflects both the company's expansion plans and the broader economic landscape.

KGF Chemicals Ltd. paid a dividend ofR2 per share last year (Do-2). The management faces the crucial decision of balancing dividend payouts with reinvestment opportunities to sustain growth and meet shareholders' expectations. The dividend policy must strike a delicate balance between rewarding shareholders and retaining earnings for future investments.

The required rate of return on equity shares is 12%, indicating investors' expected return given the company's risk profile and market conditions. Management must carefully assess

investment opportunities to ensure they meet or exceed this threshold, thereby generating value for shareholders over the long term.

In navigating the dynamic landscape of the chemical industry, KGF Chemicals Ltd. must adopt a proactive approach to managing growth and dividend policy. By aligning strategic decisions with investor expectations and market dynamics, the company can position itself for sustainable success while maximizing shareholder value. Continual valuation and adaptation will be essential to capitalize on growth opportunities and maintain competitiveness in the evolving marketplace.

You are required to answer the following on the basis of above information:

Question:1

What is the expected dividend at the end of 4th Year?

a) 2.1097
b) 2.1483
c) 2.9631
d) 3.3779

Question: 2

What is the present value of Expected Dividends to be received in next four years?

a) 11.2202
b) 8.3655
c) 9.8423
d) 6.2176

Question:3

Determine the Market Price of shares at the end of 4th Year?

a) 72.28
b) 67.55
c) 50.67
d) 77.34

Question: 4

Determine the Present Value of Market Price of shares at the end of 4th Year?

a) 49.18
b) 32.22
c) 45.79
d) 42.96

Question: 5

Calculate today's market price of the share.

a) 59.03
b) 54.33
c) 57.01
d) 57.54

Feedback: 1 to 5

Intrinsic Value = Sum of PV of Expected Dividends +PV of Share Price at the end of the period
The following steps are required:
A. Determine PV of expected dividends to be received in the next four years.
B. Determine PV share at the end of 4th Year.
C. Add the values of A and B above.
A.

Year	$D_1 = D_0(1+g)$	PV Discount Factor @ 12%	PV in ₹
1	2(1+14%) =2.28	0.893	2.0364
2	2.28(1+14%) =2.5992	0.797	2.0715
3	2.5992(1+14%) =2.9631	0.712	2.1097
4	2.9631(1+14%) =**3.3779**	0.636	2.1483
(A) Total PV of Expected Dividend			₹ 8.3655

$$P_4 = \frac{D_5}{K_e - g} = \frac{D_4(1+g)}{K_e - g} = \frac{3.3779\,(1+7\%)}{12\% - 7\%}$$

=Rs.72.28

B. PV of share at the end of 4th year = Rs.72.28 X 0.636 = Rs.45.97
C. Market price of shares = Rs. 8.3655 + Rs.45.97 = Rs. 54.33