

Identify the type of Account in the below mentioned cases:

1. Outstanding Rent
2. Loss by Fire
3. Rent Account
4. Salary Account
5. Prepaid Insurance
6. Land & Building
7. Sundry Creditors
8. Bank Account
9. Cash Account
10. Capital Account

Identify the type of Account in the below mentioned cases:

1. Outstanding Rent: Personal Account
2. Loss by Fire: Nominal Account
3. Rent Account: Nominal Account
4. Salary Account: Nominal Account
5. Prepaid Insurance: Personal Account
6. Land & Building: Real Account
7. Sundry Creditors: Personal Account
8. Bank Account: Personal Account
9. Cash Account: Real Account
10. Capital Account: Personal Account

Pass Journal Entries for the following Transactions or Events:

1. Purchased goods for 10,00,000 on credit from M/s Ram Narain Bros.
2. Sold goods to M/s Ram & Co. for 6,00,000. Amount is received in cheque.
3. Sold goods to Ramesh on credit for 13,00,000.
4. Received cheque from Ramesh 13,00,000.
5. Rent due for the month Rs. 25,000.
6. Rent paid by Cheque Rs. 25,000.
7. Received Telephone bill for the month of March amounting to Rs. 4,500
8. Paid Telephone Bill in Cash
9. Stationery purchased in Cash Rs. 2,000.
10. Salary due for the month Rs. 12,000.
11. Salary paid in cash.

1	Purchase A/c.....Dr To M/s Ram Narain Bros		10,00,000	10,00,000
2	Bank A/c.....Dr To Sales A/c		6,00,000	6,00,000
3	Ramesh A/c.....Dr To Sales A/c		13,00,000	13,00,000
4	Bank A/c.....Dr To Ramesh		13,00,000	13,00,000
5	Rent A/c.....Dr To Rent Payable/Outstanding Rent		25,000	25,000
6	Rent Payable/Outstanding Rent...Dr To Bank A/c		25,000	25,000
7	Telephone Expense A/c.....Dr To Telephone Expense Payable		4,500	4,500
8	Telephone Expense Payable A/c.....Dr To Cash		4,500	4,500
9	Stationery A/c.....Dr To Cash		2,000	2,000
10	Salary A/c.....Dr To Salary Payable		12,000	12,000
11	Salary Payable A/c.....Dr To Cash		12,000	12,000

1. Enter the following transactions in a Simple Cash Book

<b>2022</b>		₹
1 Jan	Cash in Hand	1,200
5	Received from Ram	300
7	Paid Rent of last month	30
8	Sold Goods for Cash	300
10	Paid to Shyam	700
27	Purchased Furniture	200
31	Paid Salaries	100
31	Rent Due for current month	30

**Answer 1)**

<b>Date</b>	<b>Particulars</b>	<b>Amount</b>	<b>Date</b>	<b>Particulars</b>	<b>Amount</b>
1 Jan	To Balance b/d	1,200	7 Jan	By Outstanding Rent	30
5	To Ram A/c	300	10	By Shyam	700
8	To Sales A/c	300	27	By Furniture	200
			31	By Salaries	100
			31	By Balance c/d	770
		<b>1,800</b>			<b>1,800</b>
1 Feb	To Balance b/d	770			

**Practice Question 1**

Journalise the following transactions in the books of Narendra General Stores

2019 April	1	Narendra commenced business with Cash ₹80,000
	3	Purchased goods from Kiran ₹40,000 on credit
	5	Paid rent ₹2,000 of last month
	10	Sold goods to Mr. Vikas ₹55,000 on credit
	15	Purchased Furniture of ₹30,000 in cash
	18	Received a Cheque of ₹25,000 from Mr. Vikas
	21	Paid to Kiran by Cheque ₹20,000
	30	Salaries due for the month Rs. 5,000
	30	Outstanding salaries paid in cash

**Practice Question 2**

Journalise the following transactions in the books of Sankalp General Stores

2017 July	1	Started business with Cash ₹1,00,000, Stock of Goods worth ₹50,000, and Computer ₹50,000.
	4	Purchased goods from Karina on credit ₹10,000 at 5% trade discount.
	10	Sold goods to Priyanka ₹20,000 at 10% trade discount.
	13	Paid into State Bank of India ₹50,000
	15	Goods worth ₹2,000 lost by theft.
	18	Paid for Rent ₹4,000 of last month
	20	Received Cash of ₹17,500 from Priyanka in full settlement of her account.
	25	Paid for Stationery purchased ₹8,000.

## ANSWERS

### Solution 1:

#### In the books of Narendra Journal with classification of Accounts

Date	Particulars	L.F.	Debit Amount (₹)	Credit Amount (₹)
2019 April 1	Cash A/c                      Dr. To Capital A/c (Being started business with cash)		80,000	80,000
3	Purchase A/c                      Dr. To Kiran's A/c (Being purchased goods from Kiran on credit)		40,000	40,000
5	Outstanding Rent A/c                      Dr. To Cash A/c (Being paid for Rent)		2,000	2,000
10	Vikas's A/c                      Dr. To Sales A/c (Being sold goods to Vikas on credit)		55,000	55,000
15	Furniture A/c                      Dr. To Cash A/c (Being Furniture purchased in cash)		30,000	30,000
18	Bank A/c                      Dr. To Vikas's A/c (Being received bearer cheque from Vikas)		25,000	25,000
21	Kiran's A/c                      Dr. To Bank A/c (Being paid to Kiran by Cheque)		20,000	20,000
30	Salary A/c                      Dr. To Outstanding Salary (Being Salary Due for the month)		5,000	5,000
30	Outstanding Salary A/c                      Dr. To Cash A/c (Being paid for salary)		5,000	5,000
	<b>Total</b>		<b>2,62,400</b>	<b>2,62,400</b>

**Solution 2:** In the books of Sankalp General Stores**Journal**

<b>Date</b>	<b>Particulars</b>	<b>L.F.</b>	<b>Debit Amount (₹)</b>	<b>Credit Amount (₹)</b>
2017 July 1	Cash A/c Dr. Stock of Goods (Purchase) A/c Dr. Computer A/c Dr. To Capital A/c (Being started business with Cash, Goods and Computer)		1,00,000 50,000 50,000	2,00,000
4	Purchase A/c Dr. To Kiran's A/c (Being purchased goods from Karina on credit at 5% trade discount) (10,000 - 5% = 9,500)		9,500	9,500
10	Priyanka's A/c Dr. To Sales A/c (Being goods sold to Priyanka on credit at 10% trade discount) (20,000 - 10% = 18,000)		18,000	18,000
13	Bank A/c Dr. To Cash A/c (Being cash deposited into State Bank of India)		50,000	50,000
15	Loss by theft A/c Dr. To Purchases A/c (Being goods lost by theft)		2,000	2,000
18	Outstanding Rent A/c Dr. To Cash A/c (Being paid for Rent)		4,000	4,000
20	Cash A/c Dr. Discount Allowed A/c Dr. To Priyanka's A/c (Being cash received from Priyanka and discount allowed)		17,500 500	18,000
25	Stationery A/c Dr. To Cash A/c (Being paid for stationery)		8,000	8,000
	<b>Total</b>		<b>3,09,500</b>	<b>3,09,500</b>

**Practice Question 1**

Journalise the following transactions in the books of Rajkumar Grocery Seller. 2019 April

1	Rajkumar started business with Cash ₹2,00,000 Building ₹2,00,000 and borrowed loan from Rakesh in cash ₹50,000.
4	Deposited Cash into Dena Bank ₹50,000
7	Purchased Computer from Brijesh of ₹30,000 and paid by Cheque,
10	Cash Sales ₹90,000
12	Goods sold on credit to Ganesh ₹10,000 at 5% Trade Discount.
15	Ganesh returned goods of ₹950.
18	Goods taken by Rajkumar for his personal use ₹1,000.
20	Paid Telephone Charges ₹500 and Taxi Fare ₹200
22	Paid Transport Charges ₹5,000
24	Paid Audit Fees ₹5,000 by Cheque.
26	Purchased Furniture of ₹70,000 and amount paid by cheque.
28	Sold Motor Car worth ₹1,00,000 and Sales proceeds credited to our account.
30	Paid cash to Kavita ₹15,500 who allowed us discount ₹500

**ANSWERS****Solution 1:**

In the books of Rajkumar Grocery Seller Journal

<b>Date</b>	<b>Particulars</b>	<b>L.F.</b>	<b>Debit Amount (₹)</b>	<b>Credit Amount (₹)</b>
2018 April 1	Cash A/c Dr. Building A/c Dr. To Capital A/c To Rakesh's loan A/c (Being started business with Cash, Building and loan from Rakesh)  Note: two separate entries can also be passed, one for capital and other for loan)		2,50,000 2,00,000	4,00,000 50,000
4	Dena Bank A/c Dr. To Cash A/c (Being cash deposited into Dena Bank)		50,000	50,000
7	Computer A/c Dr. To Dena Bank A/c (Being purchased computer and paid by cheque)		30,000	30,000
10	Cash A/c Dr. To Sales A/c (Being goods sold for cash)		90,000	90,000
12	Ganesh A/c Dr. To Sales A/c (Being goods sold to Ganesh on credit @ 5% trade discount) (10,000 – 5% = 9,500)		9,500	9,500
15	Sales Return A/c Dr. To Ganesh A/c		950	950

	(Being goods returned by ganesh)			
18	Drawing A/c Dr. To Purchase A/c (Being goods withdrawn for personal use)		1,000	1,000
20	Telephone Charges A/c Dr. Conveyance A/c Dr. To Cash A/c (Being paid for Telephone charges and Taxi fare) (As there is no time difference between accrual and payment, direct entry has been passed)		500 200	700
22	Transport Charges A/c Dr. To Cash A/c (Being paid for transport charges) (As there is no time difference between accrual and payment, direct entry has been passed)		5,000	5,000
24	Audit fees A/c Dr. To Dena Bank A/c (Being paid for Audit Fees) (As there is no time difference between accrual and payment, direct entry has been passed)		5,000	5,000
26	Furniture A/c Dr. To Dena Bank A/c (Being Furniture purchased)		70,000	70,000
28	Dena Bank A/c Dr. To Motor Car A/c (Being sold Motor car)		1,00,000	1,00,000
30	Kavita's A/c Dr. To Cash A/c To Discount Received A/c (Being paid to Kavita and discount received)		16,000	15,500 500

**Practice Question 1**

Journalise the following transactions in the books of Shridevi Medical Store 2019 August

1	Shridevi started business with own Cash ₹90,000 Stock of goods worth ₹40,000 Machinery worth ₹70,000 and borrowed money ₹50,000 from her friend Konika at 12% p.a.
4	Bought goods worth ₹50,000 from Madhuri @ 10% trade discount.
6	Returned goods worth ₹450 to Madhuri for not being as per sample
8	Sold goods worth ₹80,000 to Kiran @ 10% trade discount and received cash after allowing her 5% cash discount.
13	Paid for Rent ₹4,000.
17	Purchased a new Machinery worth ₹1,00,000 from Bajaj Ltd. and amount paid by Cheque
20	Paid for Salary ₹27,000.
27	Purchased 4 Computers of ₹ 1,20,000 and amount paid by Debit Card.
31	Withdrew from Bank ₹10,000 for personal use.

**ANSWERS**

**Solution 1:**

Journal of Shridevi Medical Stores

Date	Particulars	L.F.	Debit Amount (₹)	Credit Amount (₹)
2018 August 1	Cash A/c           Dr. Stock of Goods A/c   Dr. Machinery A/c   Dr. To Capital A/c To Konika's loan A/c (Being started business with Cash, goods, machinery and loan from Konika)		1,40,000 40,000 70,000	2,00,000 50,000
4	Purchases A/c       Dr. To Madhuri's A/c (Being bought goods from Madhuri on credit at 10% discount)		45,000	45,000
6	Madhuri's A/c   Dr. To Purchase Return A/c (Being goods returned to Madhuri)		450	450
8	Cash A/c   Dr. Discount Allowed A/c   Dr. To Sales A/c (Being goods sold for cash at 10% trade discount and 5% cash discount)		68,400 3,600	72,000
13	Rent A/c   Dr. To Cash A/c (Being paid for Rent)		4,000	4,000
17	Machinery A/c   Dr. To Bank A/c (Being Machinery purchase and		1,00,000	1,00,000

	paid by Cheque)			
20	Salaries A/c Dr. To Cash A/c (Being paid for Salary)		27,000	27,000
27	Computers A/c Dr. To Bank A/c (Being Purchased four Computers and paid by Cheque)		1,20,000	1,20,000

**Practice Question 1**

Journalise the following transactions of in the books of Vishal Electronics: 2018 April

1	Vishal commenced business with Cash ₹90,000 and Furniture ₹60,000 Building ₹1,00,000
4	Purchased Motor Car from Honda Company by Cheque ₹55,000
5	Paid Insurance of the above Car ₹3,000 to United India Insurance Company.
10	Paid into State Bank of India ₹40,000.
12	Paid for Salary ₹10,000 and Rent ₹3,000
15	Bought goods from Rajesh ₹80,000 and paid him $\frac{1}{4}$ amount in cash immediately.
18	Cash sales ₹60,000
20	Received Rent ₹1,000 and Commission ₹4,000.
25	Paid for Telephone Charges ₹1,500.
27	Invoiced goods to Katrina for cash ₹75,000
29	Sunita brought goods from us ₹45,000
30	Paid for Printing ₹17,000 by Cheque

**ANSWERS**

**Solution 1:**

Journal of Vishal Electronic

<b>Date</b>	<b>Particulars</b>	<b>L.F.</b>	<b>Debit Amount (₹)</b>	<b>Credit Amount (₹)</b>
2018 April 1	Cash A/c           Dr. Furniture A/c Dr. Building A/c   Dr. To Capital A/c (Being started business with Cash, Furniture and Building)		90,000 60,000 1,00,000	2,50,000
4	Motor Car A/c Dr. To Honda Company (Being purchased motor car from Honda Company)  Honda Company A/c Dr. To Bank A/c (Being amount paid by cheque)		55,000  55,000	55,000  55,000
5	Insurance A/c Dr. To Cash A/c (Being paid insurance premium on motor car)		3,000	3,000
10	State Bank of India A/c Dr. To Cash A/c (Being cash deposited into state bank of India)		40,000	40,000
12	Outstanding Salary A/c Dr. Outstanding Rent A/c Dr. To Cash A/c (Being paid for Rent and Salary)		10,000 3,000	13,000
15	Purchases A/c Dr. To Rajesh's A/c		80,000	60,000

	To Cash A/c (Being Purchased goods from Rajesh on credit and ¼ amount paid)			20,000
18	Cash A/c Dr. To Sales A/c (Being goods sold for cash)		60,000	60,000
20	Cash A/c Dr. To Outstanding Rent A/c To Outstanding Commission A/c (Being received rent and commission)		5,000	1,000 4,000
25	Telephone charges A/c Dr. To Outstanding Telephone A/c (Being Telephone charges due for the month)		1,500	1,500
	Outstanding Telephone charge To Cash (Being Outstanding charges paid)		1,500	1,500
27	Cash A/c Dr. To Sales A/c (Being goods sold for cash)		75,000	75,000
29	Sunita A/c Dr. To Sales A/c (Being sold good for Sunita an credit)		45,000	45,000
30	Printing A/c Dr. To Outstanding Printing Exp A/c (Being expense due)		17,000	17,000
	Outstanding Printing Exp To Bank (Being Amount paid by cheque)		17,000	17,000

### **Practice Question**

Kirloskar Ltd. issued 20,000 shares of ₹10 each, payable ₹4 on application, ₹3 on allotment and ₹3 on first and final call. Applications were received for 25,000 shares. The company decided to allot 20,000 shares on pro rata basis and excess Application Money was adjusted for allotment money due.

Pass Journal entries.

**JOURNAL ENTRIES IN THE BOOKS OF KIRLOS KAR LTD.**

<b>Date</b>	<b>Particulars</b>	<b>L.F.</b>	<b>Dr.( ₹)</b>	<b>Cr.( ₹)</b>
	Bank A/c ...Dr. To Shares Application A/c (Being Application money received on 25,000 shares @ ₹4 Per share)		1,00,000	1,00,000
	Shares Application A/c ...Dr. To Share Capital A/c (20,000 × ₹4) To Shares Allotment A/c (5,000 × ₹4) (Being application money transferred to Share Capital Account on 20,000 shares and excess money adjusted towards Shares Allotment)		1,00,000	80,000 20,000
	Shares Allotment A/c ...Dr. To Share Capital A/c (Allotment money due on 20,000 shares @ ₹3 per share)		60,000	60,000
	Bank A/c (60,000 – 20,000) ...Dr. To Shares Allotment A/c (Amount received for allotment)		40,000	40,000
	Shares First and Final Call A/c ...Dr. To Share Capital A/c (First and final call money due on 20,000 shares @ 3 per share)		60,000	60,000
	Bank A/c ...Dr. To Shares First and Final Call A/c (Amount received on first and final call		60,000	60,000

## Practice Question

On 1<sup>st</sup> April 2021, Prathana Ltd. was formed with an authorised capital of ₹90,00,000 divided into 90,000 Equity Shares of ₹100 each. The company invited applications for 80,000 Equity Shares. The amount was payable as follows:

On application	₹30 per share
On allotment	₹40 per share
On first and final call	Balance amount

Applications for 1,00,000 shares were received. Applications for 20,000 shares were rejected and the application money was refunded. All calls were made. Pass Journal Entries.

**JOURNAL ENTRIES IN THE BOOKS OF PRATHANA LTD**

<b>Date</b>	<b>Particulars</b>	<b>L.F.</b>	<b>Dr.( ₹)</b>	<b>Cr.( ₹)</b>
	Bank A/c (1,00,000 * 30) To Share Application Money (Being Share Application money received on 1,00,000 applications)		30,00,000	30,00,000
	Share Application Money To ESC (80,000 * 30) (Being 80,000 Shares allotted)		24,00,000	24,00,000
	Share Application Money To Bank (20,000 * 30) (Being 20,000 applications rejected and amount refunded)		6,00,000	6,00,000
	Share Allotment Money To ESC (80,000 * 40) (Being Allotment money due)		32,00,000	32,00,000
	Bank A/c To Share Allotment Money (Being Allotment money received)		32,00,000	32,00,000
	Share First & Final Call A/c To ESC (80,000 * 30) (Being First & Final Call money due)		24,00,000	24,00,000
	Bank A/c To Share First & Final Call money received)		24,00,000	24,00,000

### **Practice Question**

Sarvottam Ltd. invited applications for 40,000 Equity Shares of ₹10 each. The amount was payable as follows; on applications ₹3 per share; on allotment ₹4 per share and on first and final call ₹3 per share. Applications were received for 37,500 shares. Ashok to whom 1,000 shares were allotted did not pay the allotment money and also first and final call. Sohan who had applied for 500 shares did not pay the first and final call.

Pass Journal Entries.

**JOURNAL ENTRIES IN THE BOOKS OF SARVOTTAM LTD.**

Date	Particulars	L.F.	Dr.( ₹)	Cr.( ₹)
	Bank A/c ...Dr. To Equity Shares Application A/c (Being Application money received on 37,500 Equity shares @ ₹3 Per share )		1,12,500	1,12,500
	Equity Shares Application A/c ...Dr. To Equity Share Capital A/c (Being application money transferred to Equity Shares Capital Account )		1,12,500	1,12,500
	Equity Shares Allotment A/c ....Dr. To Equity Share Capital A/c (Being Allotment money due on 37,500 Equity shares @ ₹4 per share)		1,50,000	1,50,000
	Bank A/c ...Dr. To Equity Shares Allotment A/c (Being Allotment money received)		1,46,000	1,46,000
	Equity Shares First and Final Call A/c To Equity Share Capital A/c (Being First and final call money due on 37,500 Equity shares @₹3 per share)		1,12,500	1,12,500
	Bank A/c ...Dr. To Equity Shares First and Final Call (Being first and final call money received except on 1,500 shares)		1,08,000	1,08,000
	Calls in Arrears (4000 + 4500) To Equity Share Allotment A/c To Equity Share First and Final Call (Being amount not received transferred to Calls in Arrears)		8,500	4,000 4,500

**Working Notes:**

1.	Amount due on allotment	1,50,000
	Less; Allotment money not paid by Ashok (1,000 × ₹4)	4,000
	Amount received on allotment	<u>1,46,000</u>
2.	Amount due on first and final call	1,12,500
	Less; First call money not paid by Ashok and Sohan on 1,500 shares (1,000+500)@ ₹3 Per share	4,500
	Amount received on first and final call	<u>1,08,000</u>

**Practical Question**  
**(Similar to Question 12 of Regular Book)**

B Limited issued 50,000 equity shares of ₹ 10 each payable as ₹ 3 per share on application, ₹ 5 per share (including ₹ 2 as premium) on allotment and ₹ 4 per share on call. All these shares were subscribed. Money due on all shares was fully received except from X, holding 1000 shares who failed to pay the allotment and call money and Y, holding 2000 shares, failed to pay the call money. All those 3,000 shares were forfeited. Out of forfeited shares, 2,500 shares (including whole of X's shares) were subsequently re-issued to Z as fully paid up at a discount of ₹ 2 per share.

Pass necessary journal entries in the books of B limited relating to Forfeiture & Reissue of Shares.

**In the books of B Ltd  
Journal Entries**

Date	Particulars	LF	Dr	Cr
	ESC (3000 * 10) SP (1000 * 2) To Share Allotment (1000 * 5) To Share Call (3000 * 4) To Forfeited Shares (being forfeiture of 3000 equity shares)  Please Note: Students can pass two separate entries of forfeiture also)		30,000 2,000	5,000 12,000 15,000
	Bank A/c Forfeited Shares A/c To ESC (Being re-issue of 2500 shares @8 per share)		20,000 5,000	25,000
	Forfeited Shares A/c To Capital Reserve (being profit on re-issue transferred to capital reserve)		7,000	7,000

**Workings:**

Capital Reserve =

Amount Received =  $(1,000 \times 3) + (1,500 \times 6) = 12,000$

(-) Loss on Reissue =  $2,500 \times 2 = 5,000$

Capital Reserve =  $12,000 - 5,000 = 7,000$

### **Practical Question**

Shraddha Ltd. issued 100000 equity shares of ₹ 10 each at a premium of ₹ 2 per share payable as –

₹ > 3 on Application

₹ > 5 on Allotment

₹ > 4 on first & final call

Applications were received for 1,20,000 equity shares and pro-rata allotment was made to all the applicants. The excess application money was adjusted with allotment.

Vinita who was allotted 200 shares failed to pay First & Final call and her shares were forfeited.

Pass Journal Entries in the books of Shraddha Ltd. and show the Balance Sheet

**Journal Entries in the Books of Shraddha Ltd.**

<b>Date</b>	<b>Particulars</b>	<b>L.F.</b>	<b>Debit ₹</b>	<b>Credit ₹</b>
1.	Bank A/c ..... Dr. To Equity Share Application A/c (Being application money on 1,20,000 Equity shares @ ₹ 3 per share received)		3,60,000	3,60,000
2.	Equity Share Application A/c ..... Dr. To Equity Share Capital A/c To Equity Share Allotment A/c (Being application money on 1,00,000 shares transferred to share capital A/c and remaining money adjusted against allotment)		3,60,000	3,00,000 60,000
3.	Share Allotment A/c ..... Dr. To Share Capital A/c To Share Premium A/c (Being allotment money on 1,00,000 equity shares @ ₹ 5 per share including premium due)		5,00,000	3,00,000 2,00,000
4.	Bank A/c ..... Dr. To Equity Share Allotment A/c (Being share allotment money received after adjusting excess application money received)		4,40,000	4,40,000
5.	Equity Share First and Final Call A/c ... Dr. To Equity Share Capital A/c (Being Equity share first & Final Call Money on 1,00,000 shares @ ₹ 4 per share due)		4,00,000	4,00,000
6.	Bank A/c ..... Dr. To Share First & Final Call A/c (Being share first & Final call on 99800 shares @ ₹ 4 per share received)		3,99,200	3,99,200
7.	Equity Share Capital A/c ..... Dr. To Equity Share First & Final call A/c To Share Forfeiture A/c (Being forfeiture of 200 equity shares due to non-payment of first & final call)		2,000	800 1,200

**Balance Sheet of Shraddha Ltd.**

<b>Liabilities</b>	<b>Amount ₹</b>	<b>Assets</b>	<b>Amount ₹</b>
Share Capital	9,98,000	Bank	11,99,200
Share Premium Allotment	2,00,000		
Share Forfeiture Allotment	1200		
	11,99,200		11,99,200



### **Practical Question**

Rakesh Ltd. issued 2000 equity shares of ₹ 100 each at a premium of ₹ 20 per share payable as follows:

On Application ₹ 20

On Allotment ₹ 50 (including Premium)

On first Call ₹ 20

On final Call ₹ 30

Applications were received for 3000 shares, 2000 share allotted to the applicants for 2400 shares. The remaining applications for 600 shares being refused and application money there on was refunded. Excess money received on application was adjusted against allotment.

All amounts were duly received except Mr. Mandar to whom 80 shares were allotted.

Mandar fails to pay First and Final call. His shares were forfeited and were reissued to Mr. Ketan as fully paid at ₹ 80 per share.

Journalise the transactions in the books of the company.

**Journal Entries In the Books of Rakesh Ltd.**

Date	Particulars	L.F.	Debit ₹	Credit ₹
1.	Bank A/c ..... Dr. To Equity Share Application A/c (Being equity share application money on 3000 equity shares @ ₹ 20 per share received)		60,000	60,000
2.	Equity Share Application A/c ..... Dr. To Equity Share Capital A/c (Being application money on 2,000 shares @ ₹ 20 per share transferred to capital A/c)		40,000	40,000
3.	Equity Share Application A/c ..... Dr. To Equity Share Allotment A/c To Bank A/c (Being excess application money on 400 shares adjusted against allotment and on 600 shares refunded)		20,000	8,000 12,000
4.	Equity Share Allotment A/c ..... Dr. To Equity Share Capital A/c To Share Premium A/c (Being Allotment money on 2,000 equity shares @ ₹ 50 per share including premium due)		1,00,000	60,000 40,000
5.	Bank A/c ..... Dr. To Equity Share Allotment A/c (Being equity share allotment money received)		92,000	92,000
6.	Equity Share First Call A/c ..... Dr. To Equity Share Capital A/c (Being share first call money on 2,000 shares @ ₹ 20 per share due)		40,000	40,000
7.	Bank A/c ..... Dr. To Equity Share First Call A/c (Being equity share first call money on 1920 shares @ ₹ 20 per share received)		38,400	38,400
8.	Equity Share Final Call A/c ..... Dr. To Equity Share Capital A/c (Being equity share final call money on 2,000 shares @ ₹ 30 per share due)		60,000	60,000
9.	Bank A/c ..... Dr. To Equity Share Final Call A/c (Being share first call money on 1920 shares @ ₹ 30 per share received)		57,600	57,600
10.	Equity Share Capital A/c ..... Dr. To Equity Share First Call A/c To Equity Share Final Call A/c To Share Forfeiture A/c (Being forfeiture of 80 shares due to non-		8,000	1,600 2,400 4,000

	payment of first & final call)			
11.	Bank A/c ..... Dr. Share Forfeiture A/c To Equity Share Capital A/c (Being reissue of 80 forfeited shares @ ₹ 80 per share)		6,400 1,600	8,000
12.	Share Forfeiture A/c ..... Dr. To Capital Reserve A/c (Being balance on Share Forfeiture A/c transfer to Capital Reserve A/c)		2,400	2,400

### **Practical Question**

Suman Ltd. issued equity shares of ₹ 10 each at a Premium of ₹ 3 per share, Payable as follows –

- ₹ 3 on application
- ₹ 5 on Allotment (including Premium)
- ₹ 2.50 on 1st call
- ₹ 2.50 on final call

One shareholder Mr. Ashok failed to pay Allotment money and 1st call money on 200 shares. Directors forfeited his share after first call. While another shareholder Mr. Atul failed to pay 1st call and final call money on 100 shares and his shares were forfeited after final call.

Show Journal Entries for forfeiture of shares of Mr. Ashok & Mr. Atul.

Date	Particulars	L.F.	Debit ₹	Credit ₹
1.	Share Capital A/c ..... Dr. Share Premium A/c ..... Dr. To Share Allotment A/c To Share First call A/c To Share Forfeiture A/c (Being forfeiture of 200 equity share due to non-payment of Allotment money on first call money)		1,500 600	1,000 500 600
2.	Share Capital A/c ..... Dr. To Share First Call A/c To Share Final Call A/c To Share Forfeiture A/c (Being forfeiture of 100 equity shares due to non-payment of first call and final call money)		1,000	250 250 500

**Working Note No. 1 –**

Shares Forfeited & Premium not collected

Share Capital = No. of forfeited shares × Called up value including premium

No. of forfeited shares = 200

$200 \times 7.5 = 1,500$

Security premium =  $200 \times 3 = 600$  (No. of shares premium per share)

Share allotment =  $200 \times 5 = 1,000$  (No. of share Allotment money)

1st Call =  $200 \times 2.5 = 500$  (No. of share Call Money)

Forfeited shares = Bal. Amount

**Working Note No. 2 –**

Share forfeited premium is collected

Share Capital = No. of shares × called up value (including premium)

$= 100 \times 10 = 1,000$

First Call = No. of shares × Call Money

$= 100 \times 2.5 = 250$

Second Call = No. of shares × Call

$= 100 \times 2.5 = 250$

Forfeited Shares = Balance Amount

### **Practical Question**

Karur Ltd. invited applications for issuing 2,40,000 equity shares of ₹10 each at a premium of ₹4 per share. The amount was payable as under:

On application - ₹4 per share (including premium ₹2)

On allotment - ₹4 per share,

On first and final call - ₹6 per share (including premium ₹2)

Applications for 3,00,000 shares were received and pro-rata allotment was made to all the applicants. Excess application money received on application was adjusted towards sums due on allotment. All calls were made and were duly received except from Rohini, who failed to pay allotment and first and final call on 7,500 shares applied by her. These shares were forfeited. Afterwards, 40% of the forfeited shares were re-issued at ₹11 per share as fully paid-up.

Pass the necessary Journal entries in the books of Karur Ltd.

**Journal Entries**  
**In the books of Karur Ltd**

Date	Particulars	L.F.	Dr. ( ₹ )	Cr. ( ₹ )
	Bank A/c ...Dr. To Equity Shares Application A/c (Application money received on 3,00,000 shares @ ₹4 per share)		12,00,000	12,00,000
	Equity Shares Application A/c ...Dr. To Equity Share Capital A/c (2,40,000 x ₹2) To Securities Premium A/c (2,40,000 x ₹2) To Equity Shares Allotment A/c (60,000 x ₹4) (application money transferred to share capital, securities premium and share allotment )		12,00,000	4,80,000 4,80,000 2,40,000
	Equity Shares Allotment A/c ....Dr. To Equity Share Capital A/c (Allotment money due on 2,40,000 equity shares @ ₹4 per share)		9,60,000	9,60,000
	Bank A/c ....Dr. Calls-in-Arrears A/c ....Dr. To Equity Share Allotment A/c (Allotment money received) (WN 1 and WN 2)		7,02,000 18,000	7,20,000
	Equity Shares First and Final call A/ c ...Dr. To Equity Shares Capital A/c To Securities Premium A/c (First call money due on 2,40,000 shares @ ₹6 per share)		14,40,000	9,60,000 4,80,000
	Bank A/c ....Dr. Calls-in-Arrears A/c (6,000 x ₹6) ....Dr. To Equity Shares First and Final call A/ c (First and Final call money received)		14,04,000 36,000	14,40,000
	Share Capital A/c (6,000 x ₹10) ...Dr. Securities Premium A/c (6,000 x ₹2) ...Dr. To Calls-in-Arrears A/c To Forfeited Share A/c (6,000 shares forfeited for non-payment and first and final call)		60,000 12,000	54,000 18,000
	Bank A/c ....Dr. To Equity Shares Capital A/c To Securities Premium A/c (2,400 shares reissued for ₹11 per share fully paid)		26,400	24,000 2,400
	Forfeited Shares A/c ....Dr. To Capital Reserve A/c (Gain on reissue of forfeited shares transferred to Capital Reserve) (WN 3)		7,200	7,200

**Working Notes:**

1. No. of shares allotted to Rohini  $\left\{ 7,500 \times \frac{2,40,000}{3,00,000} \right\} = 6,000 \text{ shares.}$

2. Calculation of the amount due but not received on allotment from Rohini:	₹
	30,000
A. Application money received on shares applied (7,500 x ₹4)	24,000
B. Money due on shares allotted (6,000 x ₹4)	6,000
C. Excess Application money adjusted on allotment (A-B)	24,000
D. Allotment money due on shares allotted (6,000 x ₹4)	18,000
E. Allotment money due but not received = ₹24,000 - ₹6,000 (c)	
3. Calculation of gain on Re-issue to be transferred to Capital Reserve:	
Amount Forfeited {₹30,000-₹12,000 (Securities Premium)}	18,000
Amount forfeited on Re-issue Shares $\left\{ 18,000 \times \frac{2,400}{6,000} \right\}$	= 7,200
Less: Loss on re-issue	<u>Nil</u>
Transferred to Capital Reserve	<u>7,200</u>

## **PRACTICE QUESTION**

A joint stock company resolved to issue 10 lakh equity shares of ₹ 10 each at a premium of Re. 1 per share. Two lakh of these shares were taken up by the directors of the company, their relatives, associates and friends, the entire amount being received forthwith. The remaining shares were offered to the public, the entire amount being asked for with applications.

The issue was underwritten by X, Y and Z for a commission @ 2.5% of the issue price, 65% of the issue was underwritten by X, while Y's and Z's shares were 25% and 10% respectively.

Their firm underwriting was as follows:

X 30,000 shares, Y 20,000 shares and Z 10,000 shares. Share Underwritten firm by Underwriters are to be treated as Unmarked Application.

Marked applications were as follows:

X 1,19,500 shares, Y 57,500 shares and Z 10,500 shares.

Unmarked applications totaled 6,00,000 shares including firm underwriting.

You are required to:

- (i) Prepare a statement calculating underwriters' liability for shares.
- (ii) Pass journal entries for all the transactions including cash transactions.

## ANSWER

### Statement showing underwriters' liability for shares

	X	Y	Z	TOTAL
Gross liability (Issued shares – purchased by promoters, directors etc. (8,00,000 shares in the ratio of 65 : 25 : 10))	5,20,000	2,00,000	80,000	8,00,000
Less : Marked applications	(1,19,500)	(57,500)	(10,500)	(1,87,500)
	4,00,500	1,42,500	69,500	6,12,500
Less : Allocation of unmarked applications (including firm underwriting) i.e. 6,00,000 in the ratio 65 : 25 : 10	(3,90,000)	(1,50,000)	(60,000)	(6,00,000)
	10,500	(7,500)	9,500	12,500
Surplus of Y allocated to X and Z in the ratio 65 : 10	(6,500)	7,500	(1,000)	-
Underwriters Liability	4,000	-	8,500	12,500
+ Firm Underwriting (Actual)	30,000	20,000	10,000	60,000
Total Underwriters Liability	34,000	20,000	18,500	72,500

Issue Price for Shares to be subscribed by Underwriters	$34,000 \times 11 = 3,74,000$	$20,000 \times 11 = 2,20,000$	$18,500 \times 11 = 2,03,500$
Underwriting commission payable on Gross Liability (Shares underwritten as Gross liability $\times 11 \times 2.5\%$ )	(1,43,000)	(55,000)	(22,000)
Net Amount receivable/(payable)	2,31,000	1,65,000	1,81,500

(ii)

### Journal Entries

Particulars	Dr.	Cr.
Bank A/c To Equity Shares Application A/c (Being application money received on 2 lakh equity shares purchased by directors etc. @₹ 11 per share)	Dr.   	22,00,000   22,00,000
Bank A/c To Equity Share Application A/c	Dr.  	80,02,500  80,02,500

(Application money received on 7,27,500 equity shares @ ₹ 11 per share from general public and underwriters for shares underwritten firm)		
Underwriting commission A/c Dr. To X's A/c To Y's A/c To Z's A/c (Amount of underwriting commission payable to X, Y and Z @ 2.5% on the amount of shares underwritten)	2,20,000	1,43,000 55,000 22,000
Equity Share Application A/c X Y Z To Equity Share Capital To Securities Premium (Being 10,00,000 Shares Allotted)	1,02,02,500 3,74,000 2,20,000 2,03,500	1,00,00,000 10,00,000
Bank A/c Dr. To X's A/c To Y's A/c To Z's A/c (Amount received in final settlement)	5,77,500	2,31,000 1,65,000 1,81,500

## **PRACTICE QUESTION**

### **Question 1:**

M Ltd. forfeited 1,000 equity shares of ₹10 each, which were originally issued at a premium of 20% to Guna. On these shares ₹9 per share called up (other than premium). Guna failed to pay allotment money ₹5 (including premium) and also the first call of ₹2 per share. Out of these shares, 700 shares are re-issued to Naku as fully paid-up for ₹8 per share. Give journal entries for forfeiture and re-issue of shares.

### **Question 2:**

During the course of the meeting of Board of Directors of Yana Ltd., it has been decided to forfeit the 500 shares held by Aasha on account of non-payment of the call amount of ₹4 per share. It has been informed that the face value and the called-up value per share is ₹10. Based on the resolution passed in the meeting of Board of Directors, shares of Aasha have been forfeited. In turn, 300 forfeited shares are reissued at the rate of ₹9 per share. You are required to pass the journal entries in the books of Yana Ltd.



**ANS 2)**

In the bookd of Yana Ltd.  
Journal Entries

Date	Particulars	Dr. (₹)	Cr. (₹)
	Share Capital A/c (500 × 10) Dr. To Share Forfeited A/c (500 × 6) To Share First & Final Call A/c (500 × 4) (Being, 500 shares forfeited for non-payment first & final call as per Boards Resolution No. .... Dated ..... )	5,000	3,000 2,000
	Bank A/c (300 × 9) Share Forfeited A/c (300 × 1) Dr. To Share Capital A/c (300 × 10) (Being, 300 shares re-issued @ 9 and discount of ₹1 on re-issue debited to share forfeiture account as per Boards Resolution No. .... dated ....)	2,700 300	3,000
	Share Forfeited A/c [Note 1] Dr. To Capital Reserve A/c (Being, balance in share forfeiture account transferred to capital reserve account)	1,500	1,500

**Note 1: Calculation of capital reserve on reissue of share:**

	₹
Share Forfeited A/c credited at the time of forfeiture for 500 share	3,000
Proportionate Share Forfeited A/c bal. for reissued 300 share (3,000 × 300/500)	1,800
Amount debited on reissue	(300)
Amount Transferred to Capital Reserve	<b>1500</b>

**Alternatively,**

$$\begin{aligned}\text{Capital reserve} &= (\text{Amount paid per share} - \text{Discount on reissue}) \times \text{No. of shares issued} \\ &= (6 - 1) \times 300 \\ &= 1,500\end{aligned}$$

## PRACTICE QUESTION

### **Question 1:**

Super India Ltd. issued 75,000 equity shares. The whole of the issue was underwritten as follows: A – 50%, B = 25%, and C – 25%

Applications for 60,000 shares were received in all, out of which applications for 15,000 shares bear the stamp of A, those for 7,500 shares that of B and those for 15,000 shares that of C. The remaining applications for 22,500 shares did not bear any stamp.

Determine the liability of the underwriters.

### **Question 2:**

A company incorporated on 1<sup>st</sup> January, 2013 issued a prospectus inviting applications for 5,00,000 equity shares of ₹10 each. The whole issue was fully underwritten by four underwriters:

Underwriter – A:	2,00,000 shares
Underwriter – B:	1,50,000 shares
Underwriter – C:	1,00,000 shares
Underwriter – D:	50,000 shares

Applications were received for 4,50,000 shares of which marked applications were as follows:

Underwriter – A:	2,20,000
Underwriter – B:	90,000
Underwriter – C:	1,10,000
Underwriter – D:	10,000

Find out the liability of each underwriter individually.

**ANSWER**

**ANS 1)**

Statement showing underwriters liability

<b>Particulars</b>	<b>A 50%</b>	<b>B 25%</b>	<b>C 25%</b>	<b>Total 100%</b>
Gross liability	37,500	18,750	18,750	75,000
(-) Marked application	(15,000)	(7,500)	(15,000)	(37,500)
(-) Unmarked application	(11,250)	(5,625)	(5,625)	(22,500)
	11,250	5,625	(1,875)	15,000
Credit for over subscription of C (50:25 = 75)	(1,250)	(625)	(1,875)	-
<b>Net liability</b>	<b>10,000</b>	<b>5,000</b>	<b>-</b>	<b>15,000</b>

**ANS 2)**

Underwriters	Firm Application	Marked Application	Total
A	-	2,20,000	2,20,000
B	-	90,000	90,000
C	-	1,10,000	1,10,000
D	-	10,000	10,000
	-	4,30,000	4,30,000
Unmarked application (4,50,000 – 4,30,000)			20,000
			4,50,000
Shares not applied [ <i>Bal. Fig.</i> ]			50,000
No. of shares issued			5,00,000

**Statement showing underwriters liability:**

<b>Particulars</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>Total</b>
Gross liability	2,00,000	1,50,000	1,00,000	50,000	5,00,000
(-) Marked application	(2,20,000)	(90,000)	(1,10,000)	(10,000)	(4,30,000)
(-) Unmarked application (20:15:10:5)	(8,000)	(6,000)	(4,000)	(2,000)	(20,000)
	(28,000)	54,000	(14,000)	38,000	50,000
Credit for A (15:5 = 20)	28,000	(21,000)	-	(7,000)	-

Credit for C (15:5 = 20)	-	(10,500)	14,000	(3,500)	-
Net Liability	-	22,500	-	27,500	50,000

**PRACTICE QUESTION**

D Ltd. furnished the following summarized Balance Sheet as at 31st March, 2020:

Balance Sheet of D Ltd. as at 31st March, 2020.

Particulars	(₹ 000)
<b>I. EQUITY AND LIABILITIES</b>	
(1) Shareholders Funds:	
(a) Share Capital:	
Authorized Share Capital:	
2,50,000 Equity Shares of ₹10 each	2,500
5,000 Preference Shares of ₹100 each	500
	3,000
Issued & Subscribed Capital:	
2,50,000 Equity Shares of ₹10 each fully paid-up	2,500
2,000, 10% Preference Shares (₹100 each fully paid-up; issued for the purpose of buy-back)	200
(b) Reserves and Surplus:	
Capital Reserve	1,000
General Reserve	3,000
Securities Premium	2,200
Profit & Loss Account	3,500
(2) Current Liabilities:	
Other Current Liabilities	1,400
<b>Total</b>	<b>13,800</b>
<b>II. ASSETS</b>	
(1) Non-Current Assets:	
(a) Fixed Assets	
Tangible Assets	9,300
(2) Current Assets:	
(a) Current Investment	3,000
(b) Cash and Cash Equivalents	1,500
<b>Total</b>	<b>13,800</b>

The Company passed a resolution to buy-back 20% of its equity capital @ ₹50 per share. For this purpose, it sold all of its investment for ₹22,00,000. You are required to pass necessary journal entries and prepare the Balance Sheet after buy-back.

**ANSWER**

In the books of D Ltd.  
Journal Entries

(₹ in '000)

Date	Particulars	Dr.	Cr.
	Bank A/c Dr. Profit & Loss A/c Dr. To Investment A/c (Being, sale of investment at profit)	2,200 800	3,000
	Equity Share Capital A/c (50 × 10) Dr. Securities Premium A/c (50 × 40) Dr. To Equity Shareholders A/c (50 × 50) (Being, amount due on buy-back of equity shares as per Shareholders Resolution No ..... dated .....)	500 2,000	2,500
	Equity Shareholders A/c Dr. To Bank A/c (Being, amount paid to equity shareholders on buy-back)	2,500	2,500
	General Reserve A/c Dr. To Capital Redemption Reserve A/c (Being, amount equal to face value of equity shares brought back transferred to CRR as	300	300

per requirement of section 68 of the Companies Act, 2013)		
Total requirement = 500 (-) Already PSC raised for Buy Back = 200 Balance Requirement = 300		

**Balance Sheet of D Ltd.  
As on 31st March, 2020**

<b>EQUITY &amp; LIABILITIES</b>	<b>(₹ in '000)</b>
Shareholders Funds	
Issued, Subscribed & Paid-up Capital:	
Equity Share Capital (2,500 – 500)	2,000
Preference Share Capital	200
Reserve & Surplus	
Capital Reserve	1,000
General Reserve (3,000 – 300)	2,700
Securities Premium (2,200 – 2,000)	200
Profit & Loss Account (3,500 – 800)	2,700
Capital Redemption Reserve	300
Current Liabilities	
Other Current Liabilities	1,400
<b>Total</b>	<b>10,500</b>
<b>ASSETS</b>	<b>(₹ in '000)</b>
Non-Current Assets	
Tangible Assets	9,300
Current Assets	
Cash and Cash Equivalent (1,500 + 2,200 – 2,500)	1,200
<b>Total</b>	<b>10,500</b>

### **PRACTICE QUESTION**

XYZ Ltd. issued 1,50,000 equity shares of ₹10 each to public. The issue was underwritten by A, B, C and D as under:

A 30%, B 25%, C 25%, and D 20%

The issue was firm underwritten by the underwriters as under:

A: 6,000 shares, B: 8,000 shares, C: Nil, D: 16,000 shares

Public subscription excluding firm underwriting but including marked applications were 1,10,000 shares. The marked applications were as under:

A 30,000 shares

B 23,000 shares

C 17,000 shares

D 25,000 shares

Ascertain the liability of each underwriter (No. of shares), assuming firm underwriting shares be treated as unmarked applications.

**ANSWER**

Data given in problem can be arranged as follows:

<b>Underwriters</b>	<b>Firm Application</b>	<b>Marked Application</b>	<b>Total</b>
A	6,000	30,000	36,000
B	8,000	23,000	31,000
C	-	17,000	17,000
D	16,000	25,000	41,000
	30,000	95,000	1,25,000
Unmarked application (1,10,000 - 95,000)			15,000
Shares not applied {Bal. Fig.}			1,40,000
No. of shares issued			10,000
			1,50,000

**Underwriter's liability - When firm underwriting is treated as unmarked application:**

<b>Particulars</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>Total</b>
Gross liability (30:25:25:20)	45,000	37,500	37,500	30,000	1,50,000
(-) Marked application	(30,000)	(23,000)	(17,000)	(25,000)	(95,000)*
(-) Unmarked application (30:25:25:20)	(13,500)	(11,250)	(11,250)	(9,000)	(45,000)
Credit for over subscription of D (30:25:25)	1,500	3,250	9,250	(4,000)	10,000
	(1,500)	(1,250)	(1,250)	4,000	-
(+) Firm underwriting	-	2,000	8,000	-	10,000
Net liability	6,000	10,000	8,000	16,000	40,000

\* Calculation of net unmarked application:

Unmarked application	15,000
(+) Firm underwriting	<u>30,000</u>
	45,000

### **PRACTICE QUESTION**

Aarvi Ltd. 20,000 shares which were underwritten as follows:  
X: 12,000 shares; Y: 5,000 shares and Z: 3,000 shares.

The underwriters made applications for firm underwriting as under:  
X: 1,600 shares; Y: 600 shares and Z: 2,000 shares.

The total subscription excluding firm underwriting (including marked applications) were, 10,000 shares.

The marked applications were X: 2,000 shares; Y: 4,000 shares and Z: 1,000 shares. Prepare a statement showing the net liability of underwriters.

**ANSWER**

Data given in problem can be arranged as follows:

<b>Underwriters</b>	<b>Firm Application</b>	<b>Marked Application</b>	<b>Total</b>
X	1,600	2,000	3,600
Y	600	4,000	4,600
Z	2,000	1,000	3,000
	4,200	7,000	11,200
Unmarked application (10,000 – 7,000)			3,000
			14,200
Shares not applied {Bal. Fig.}			5,800
No. of shares issued			20,000

**Method 1 – When firm underwriting is treated as unmarked application:**

<b>Particulars</b>	<b>X</b>	<b>Y</b>	<b>Z</b>	<b>Total</b>
Gross liability	12,000	5,000	3,000	20,000
(-) Marked application	(2,000)	(4,000)	(1,000)	(7,000)*
(-) Unmarked application (12:5:3)	(4,320)	(1,800)	(1,080)	(7,200)
Credit for over subscription of B(12:3)	5,680 (640)	(800) 800	920 (160)	5,800 -
(+) Firm underwriting	5,040 1,600	- 600	760 2,000	5,800 4,200
Net liability	6,640	600	2,760	10,000

\* Calculation of net unmarked application:

Unmarked application	3,000
Add: Firm underwriting	<u>4,200</u>
	7,200

**Method 2 – When firm underwriting is treated as market application:**

<b>Particulars</b>	<b>X</b>	<b>Y</b>	<b>Z</b>	<b>Total</b>
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Gross liability	12,000	5,000	3,000	20,000
(-) Marked application (including firm underwriting)	(3,600)	(4,600)	(3,000)	(11,200)
(-) Unmarked application (12:5:3=20)	(1,800)	(750)	(450)	(3,000)
	6,600	(350)	(450)	5,800
Credit for over subscription of B & C (12:3)	(800)	350	450	-
	5,800	-	-	5,800
(+) Firm underwriting	1,600	600	2,000	4,200
Net liability	7,400	600	2,000	10,000

Student can make an assumption of any one treatment and present answer according to their assumption.

## PRACTICE QUESTION

On 1st April, 2022, the following balances were extracted from the ledger of X Limited :

	(₹)
(i) 10% redeemable preference share capital amount 5,000 shares of ₹100 each, fully called up	5,00,000
(ii) Securities premium account	14,000
(iii) General Reserve	1,60,000
(iv) Profit and loss account	1,18,540

The company redeemed all the preference shares at a premium of 5% and for the purpose, it issued equity shares of ₹10 each at a premium of ₹1 for such an amount as was necessary for the purpose after utilizing the available profits to the maximum possible extent.

You are required to pass the necessary journal entries for above mentioned transactions.

**ANSWER**

Date	Particular	L. F.	Amount Dr. (₹)	Amount Cr. (₹)
	Bank A/c Dr. To Equity share capital A/c To Securities premium A/c (Allotment of 22,146 equity shares of ₹10 each at a premium of ₹1 Per share)		2,43,606	2,21,460 22,146
	Securities premium A/c/P & L Dr. To Premium on redemption of Preference shares A/c (Utilization of securities premium account for meeting the premium payable on redemption of preference shares)		25,000	25,000
	General reserve A/c Dr. Profit and loss A/c Dr. To Capital redemption reserve account (Creation of capital redemption reserve account out of divisible profits for redemption of preference shares.)		1,60,000 1,18,540	2,78,540
	10% redeemable pref. share capital A/c Dr. Premium on redemption of pref. shares A/c Dr. To Preference shareholders A/c (Amount payable to preference shareholders on redemption of preference shares at a premium of 5%)		5,00,000 25,000	5,25,000
	Preference shareholder's A/c Dr. To Bank A/c (Payment made to preference shareholders to redeem all the preference shares at a premium of 5%)		5,25,000	5,25,000

**Working Note:**

Divisible profits available = ₹1,60,000 + 1,18,540 = ₹2,78,540

Face value of the Preference share to be redeemed = ₹5,00,000

Minimum amount of new issue = ₹5,00,000 – ₹2,78,540 = ₹2,21,460

Securities premium to be received = 10% of ₹2,21,460 = ₹22,146.

Total securities premium ₹14,000 + ₹22,146 = 36,146

Premium payable on redemption of preference shares ₹5/100 × 5,00,000 = ₹25,000

As the total share premium after new issue would be sufficient to take care of the premium Payable on redemption of preference shares, the company can proceed to redeem the preference shares by issuing 22,146 new equity shares of rupees 10 each.

### PRACTICE QUESTION

New Ltd. issued 1,00,000 shares which were underwritten as under :

	<b>Number of shares underwritten</b>	<b>Applications for firm underwriting</b>	<b>Marked applications</b>
Underwriter A	60,000	8,000	10,000
Underwriter B	25,000	3,000	20,000
Underwriter C	15,000	10,000	5,000

Total subscriptions excluding firm underwriting (including market applications) were 50,000 shares. Prepare a statement calculating net underwriter liability. Consider firm underwriting shares are treated as unmarked applications.

## ANSWER

### Calculation of unmarked applications

	<b>Shares</b>
Total Subscriptions	50,000
Less: Marked Applications	35,000
	15,000
Firm Underwriting	21,000
	<b>36,000</b>

### Statement of Underwriters Liability

<b>Particulars</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>Total</b>
Gross Liability	60,000	25,000	15,000	1,00,000
Less: Marked Applications	10,000	20,000	5,000	35,000
Balance	50,000	5,000	10,000	65,000
Less: Unmarked applications (Distributed in ratio of gross liability)	21,600	9,000	5,400	36,000
Balance	28,400	-4,000	4,600	29,000
Credit of B's Subscription in 60:15 ratio	-3200	4000	-800	-
<b>Net Liability</b>	<b>25,200</b>	<b>-</b>	<b>3,800</b>	<b>29,000</b>
Add: Firm Underwriting	8,000	3,000	10,000	21,000
<b>Total Liability</b>	<b>33,200</b>	<b>3,000</b>	<b>13,800</b>	<b>50,000</b>

### **PRACTICE QUESTION**

Rainbow Ltd. has issued 10,000, 12% redeemable preference shares (Face value `1,000 each).

The shares are to be redeemed at a premium of 20%. The redemption proceeds will be raised through issue of equity share capital. Number of equity shares to be issued are 50,000 shares of 10 each at `240 a share.

The whole amount is received and paid out towards redemption of preference share capital.

Pass the necessary journal entries.

**ANSWER**

<b>Particulars</b>		<b>Dr. (in `)</b>	<b>Cr. (in `)</b>
Bank A/c To Equity Share Application and Allotment A/c <b>(Being application of 50,000 equity shares at `240 a share including premium of `230 per share)</b>	Dr.	1,20,00,000	1,20,00,000
Equity Share Application and Allotment A/c To Equity Share Capital A/c To Securities Premium A/c <b>(Being allotment of 50,000 equity shares of `10 each issued at a premium of `230 per share)</b>	Dr.	1,20,00,000	5,00,000 1,15,00,000
General Reserve / P & L A/c To Capital Redemption Reserve A/c <b>(Being free reserves transferred to Capital Redemption Reserve for compliance of Companies Act) (1,00,00,000 – 5,00,000)</b>	Dr.	95,00,000	95,00,000
12% redeemable preference share capital A/c Premium on redemption of preference share capital A/c To 12% Preference Shareholders A/c <b>(Being amount due on redemption of preference shares)</b>	Dr. Dr.	1,00,00,000 20,00,000	1,20,00,000
Securities Premium A/c To Premium on redemption of preference share capital A/c <b>(Being application of securities premium account to write off premium on redemption of preference shares)</b>	Dr.	20,00,000	20,00,000
12% Preference Shareholders A/c To Bank A/c <b>(Being amount paid to 12% preference shareholders)</b>	Dr.	1,20,00,000	1,20,00,000

**Question:**

Mona Earth Mover Limited decided to issue 12,000 shares of Rs.100 each payable at Rs.30 on application, Rs.40 on allotment, Rs.20 on first call and balance on second and final call. Applications were received for 13,000 shares. The directors decided to reject application of 1,000 shares and their application money being refunded in full. The allotment money was duly received on all the shares, and all sums due on calls are received except on 100 shares. Record the transactions in the books of Mona Earth Movers Limited. (5 Marks) (10 Mins)

**Answer:**

**Books of Mona Earth Mover Limited**  
**Journal Entries**

<b>Date</b>	<b>Particulars</b>	<b>L.F.</b>	<b>Debit Amount (Rs.)</b>	<b>Credit Amount (Rs.)</b>
	Bank A/c Dr. To Share Application A/c (Application money on 13,000 shares @ Rs.30 per share received)		3,90,000	3,90,000
	Share Application A/c Dr. To Share Capital A/c (Application money transferred to share capital)		3,60,000	3,60,000
	Share Application A/c Dr. To Bank A/c (Application money on 1,000 shares returned]		30,000	30,000
	Share Allotment A/c Dr. To Share Capital A/c (Money due on allotment of 12,000 shares @ Rs. 40 per share)		4,80,000	4,80,000
	Bank A/c Dr. To Share Allotment A/c (Money received on 12,000 shares @ Rs. 40 per share on allotment)		4,80,000	4,80,000
	Share First Call A/c Dr. To Share Capital A/c (Money due on 12,000 shares @ Rs. 20 per share on first Call)		2,40,000	2,40,000
	Alternative-1 [Call in arrear not open] Bank A/c Dr. To Share First Call A/c (First Call money received except for 100 shares)		2,38,000	2,38,000
	Alternative-2 [Call in arrear open] Bank A/c Dr. Call in Arrear To Share First Call A/c		2,38,000 2,000	2,40,000
	Share Second and Final Call A/c Dr. To Share Capital A/c (Money due on 12,000 shares @ Rs. 10 per share on Second and final Call )		1,20,000	1,20,000
	Alternative-1 [Call in arrear not open] Bank A/c Dr. To Share Second and Final Call A/c		1,19,000	1,19,000

	(Second and final call money received except for 100 shares)			
	Alternative-2 [Call in arrear open] Bank A/c Dr. Call in Arrear To Share Second and First Call A/c		1,19,000 1,000	1,20,000

## **PRACTICE QUESTION**

Jupiter Company Limited issued 35,000 equity shares of Rs. 10 each at a premium of Rs.2 payable as follows:

On Application Rs. 3

On Allotment Rs. 5 (including premium)

Balance on First and Final Call

The issue was fully subscribed. All the money was duly received. Record journal entries in the books of the Company. (5 Marks) (10 Mins)

**Answers:**

**Books of Jupiter Company Limited  
Journal Entry**

<b>Date</b>	<b>Particulars</b>	<b>L.F.</b>	<b>Debit Amount (Rs.)</b>	<b>Credit Amount (Rs.)</b>
	Bank A/c Dr. To Equity Share Application A/c (Money received on applications for 35,000 shares @ Rs. 3 per share)		1,05,000	1,05,000
	Equity Share Application A/c Dr. To Equity Share Capital A/c (Transfer of application money on allotment to share capital)		1,05,000	1,05,000
	Equity Share Allotment A/c Dr. To Equity Share Capital A/c To Securities Premium A/c (Amount due on allotment of 35,000 shares @ Rs. 5 per share including premium)		1,75,000	1,05,000 70,000
	Bank A/c Dr. To Equity Share Allotment A/c (Money received including premium )		1,75,000	1,75,000
	Equity Share First and Final Call A/c Dr. To Equity Share Capital A/c (Amount due on First and Final Call of Rs. 4 per share on 35,000 shares)		1,40,000	1,40,000
	Bank A/c Dr. To Equity Share First and Final Call A/c (Money received on First and Final Call)		1,40,000	1,40,000

### **PRACTICE QUESTION**

Ganga Limited issued 10,000 equity shares of 100 each payable as follows: Rs. 20 on application, Rs. 30 on allotment, Rs. 20 on first call and Rs. 30 on second and final calls 10,000 shares were applied for and allotted.

All money due was received with the exception of both calls on 300 shares held by Supriya. These shares were forfeited. Give necessary journal entries relating to Forfeiture of Shares.

**Answers:**

**Books of Ganga Limited  
Journal Entries**

<b>Date</b>	<b>Particulars</b>	<b>Amount (Dr.)</b>	<b>Amount (Cr.)</b>
1	Alternative-1 [Call in Arrear not open] Share Capital A/c Dr. To Equity Share First Call A/c To Equity Share Second and Final Call A/c To Share Forfeiture A/c (300 shares forfeited)	30,000	6,000 9,000 15,000
2	Alternative-2 [Call in Arrear open] Share Capital A/c Dr. To Call in Arrear To Share Forfeiture A/c (300 shares forfeited)	30,000	15,000 15,000

## PRACTICE QUESTION

### ALLUWALIA Ltd. Balance Sheet as at 31st March, 2023

<b>I. EQUITIES AND LIABILITIES</b>		
1. Shareholders' funds		
(a) Share Capital	1	10,00,000
(b) Reserve & Surplus	2	7,05,000
2. Non-Current Liability		
Long-term borrowings		4,00,000
3. Current Liability		
Trade payables	3	60,000
<b>TOTAL</b>		<b>21,65,000</b>
<b>II. ASSETS</b>		
1. Non-current assets		
(a) Fixed Assets		
(i) Tangible fixed assets	4	13,30,000
(b) Non-Current Investment		1,50,000
2. Current Assets		
Inventories	1,00,000	
Trade receivables	1,00,000	
Cash and cash equivalents Balance	4,85,000	6,85,000
<b>TOTAL</b>		<b>21,65,000</b>
<b>Notes</b>		
1. Share Capital		
Authorized Share Capital		
Issued, Subscribe Called-Up and Paid-Up Share Capital:-		
1,00,000 shares of Rs. 10 each fully paid-up		10,00,000
2. Reserve and Surplus		
Securities Premium	2,00,000	
General Reserve	5,05,000	7,05,000
3. Long-term borrowings		
14% Debentures		4,00,000
4. Tangible Fixed assets		
Land-building	9,30,000	
Plant and machinery	3,50,000	
Furniture and fitting	50,000	13,30,000

On 1st April, 2023 the shareholders of the company have approved the scheme of buy-back of equity shares as under:

- (i) 5% of the equity shares would be bought back at Rs 15.
- (ii) 12% Debentures to be issued for Rs 10,000 to finance for the buy-back, and balance from the General reserve may be utilized for this purpose.
- (iii) Premium paid on buy-back of shares should be met from securities premium account.
- (iv) Investments would be sold for Rs 275,000.

Pass journal entries to record the above transactions and prepare the balance sheet of the company immediately after the buy-back of shares.



Answers:

**ALLUWALIA Ltd.  
Journal Entries**

Particulars	Dr. (Rs)	Cr. (Rs)
Bank A/c To Investments A/c To Profit and Loss A/c (Sale of investments, the profit being transferred to profit and loss account as per shareholder's special resolution)	Dr.   275,000	 150,000 125,000
Shareholders A/c To Bank A/c (Purchase of 5,000 of own shares @ Rs 15 each)	Dr.  75,000	 75,000
Equity Share Capital A/c Securities Premium A/c To Shareholders A/c (Cancellation of 5,000 equity shares bought back, and securities premium utilized as per shareholders' special resolution)	Dr. Dr.  50,000 25,000	  75,000
General Reserve A/c To Capital Redemption Reserve A/c (Transfer of general reserve utilized to the extent of nominal value of shares bought back)	Dr.  50,000	 50,000
Bank A/c To 12% Debentures A/c (Issue of 12% Debentures to partly finance the buy-back)	Dr.  10,000	 10,000

**ALLUWALIA Ltd.  
Balance Sheet (After Buy-back) as at 1st April, 2023**

<b>I. EQUITIES AND LIABILITIES</b>		
1. Shareholders' funds		950,000
(a) Share Capital		
(b) Reserve & Surplus		805,000
2. Non-Current Liability (Long-term borrowings)		410,000
3. Current Liability (Trade payables)		60,000
<b>TOTAL</b>		<b>22,25,000</b>
<b>II. ASSETS</b>		
1. Non-current assets		
(a) Fixed assets		
(i) Tangible fixed assets		13,30,000
2. Current Assets (Stock)	1,00,000	
Sundry debtors	1,00,000	
Cash and Cash equivalents	6,95,000	8,95,000
<b>TOTAL</b>		<b>22,25,000</b>
<b>Notes</b>		
1. Share Capital		
Authorized Share Capital		
Issued, Subscribed Called Up and Paid-up Share Capital		
95,000 shares of Rs. / 10 each fully paid up		9,50,000
2. Reserve and Surplus		
Securities Premium	1,75,000	
General Reserve	4,55,000	
Capital Redemption Reserve	50,000	
Profit and Loss Account	1,25,000	8,05,000
3. Long-term borrowings		
14% Debentures –	400,000	

12% Debentures –	<u>10,000</u>	4,10,000
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**Note:** The debt-equity ratio of the company after buy-back of shares:

Debt-equity ratio = Debt / Equity (Capital and free reserves)

= (410000 + 60000) / (950,000 + 175,000 + 455,000 + 125,000)

= 0.276 : 1

The debt equity ratio is within the limit.

## **PRACTICE QUESTION**

Mona Earth Mover Limited decided to issue 12,000 shares of Rs.100 each payable at Rs.30 on application, Rs.40 on allotment, Rs.20 on first call and balance on second and final call. Applications were received for 13,000 shares. The directors decided to reject application of 1,000 shares and their application money being refunded in full. The allotment money was duly received on all the shares, and all sums due on calls are received except on 100 share s. Record the transactions in the books of Mona Earth Movers Limited.

Answers:

**Solution:**

**Books of Mona Earth Mover Limited  
Journal Entries**

Date	Particulars	L.F.	Debit Amount (Rs.)	Credit Amount (Rs.)
	Bank A/c Dr. To Share Application A/c (Application money on 13,000 shares @ Rs.30 per share received)		3,90,000	3,90,000
	Share Application A/c Dr. To Share Capital A/c (Application money transferred to share capital)		3,60,000	3,60,000
	Share Application A/c Dr. To Bank A/c (Application money on 1,000 shares returned]		30,000	30,000
	Share Allotment A/c Dr. To Share Capital A/c (Money due on allotment of 12,000 shares @ Rs. 40 per share)		4,80,000	4,80,000
	Bank A/c Dr. To Share Allotment A/c (Money received on 12,000 shares @ Rs. 40 per share on allotment)		4,80,000	4,80,000
	Share First Call A/c Dr. To Share Capital A/c (Money due on 12,000 shares @ Rs. 20 per share on first Call)		2,40,000	2,40,000
	Alternative-1 [Call in arrear not open] Bank A/c Dr. To Share First Call A/c (First Call money received except for 100 shares)		2,38,000	2,38,000
	Alternative-2 [Call in arrear open] Bank A/c Dr. Call in Arrear To Share First Call A/c		2,38,000 2,000	2,40,000
	Share Second and Final Call A/c Dr. To Share Capital A/c (Money due on 12,000 shares @ Rs. 10 per share on Second and final Call)		1,20,000	1,20,000
	Alternative-1 [Call in arrear not open] Bank A/c Dr. To Share Second and Final Call A/c (Second and final call money received except for 100 shares)		1,19,000	1,19,000
	Alternative-2 [Call in arrear open] Bank A/c Dr. Call in Arrear To Share Second and First Call A/c		1,19,000 1,000	1,20,000

## PRACTICE QUESTION

High Light India Ltd. invited applications for 30,000 Shares on ₹100 each at a premium of ₹20 per share payable as follows:

On Application	₹40 (including 10 premium)
On Allotment	₹30 (including 10 premium)
On First Call	₹30
On Second and Final Call	₹20

Applications were received for 40,000 shares and pro-rata allotment was made on the application for 35,000 share. Excess application money was utilized towards allotment.

Rohan to whom 600 shares were allotted failed to pay the allotment money and his shares were forfeited immediately after allotment.

Aman who applied for 1,050 shares failed to pay first call and his share were forfeited immediately first Call.

Second and final call was made. All the money due on second call have been received.

Of the shares forfeited, 1,000 share were reissued as fully paid-up for ₹80 per share, which included the whole of Aman's shares.

Record necessary journal entries in the books of High Light India Ltd.

**Solution:**

Date	Particulars	L. F.	Debit Amount (₹)	Credit Amount (₹)
	Bank A/c Dr. To Share Application A/c (Application money received on 40,000 shares)		16,00,000	16,00,000
	Share Application A/c To Share Capital A/c To Securities Premium Reserve A/c To Share Allotment A/c (Application money transferred to share capital account, securities premium account and the excess money transferred to share allotment account)	Dr.	14,00,000	9,00,000 3,00,000 2,00,000
	Share Application A/c To Bank A/c (Amount returned on 500 shares)	Dr.	2,00,000	2,00,000
	Share Allotment A/c To Share Capital A/c To Securities Premium Reserve A/c (Money due on allotment)	Dr.	9,00,000	6,00,000 3,00,000
	Bank A/c To Share Allotment A/c (Amount received in allotment)	Dr.	6,86,000	6,86,000
	Share Capital A/c Securities Premium A/c To Share Allotment A/c To Share Forfeiture A/c (Forfeiture of 600 shares of Rohan for non-payment of allotment money)	Dr. Dr.	30,000 6,000	14,000 22,000

Share First Call A/c To Share Capital A/c (First Call money due on 29,400 shares)	Dr.		8,82,000	8,82,000
Bank A/c To Share First Call A/c (First call money received on 28,500 shares)	Dr.		8,55,000	8,55,000
Share Capital A/c To Share First Call A/c To Share Forfeiture A/c (Forfeiture of 900 Aman Shares)	Dr.		72,000	27,000 45,000
Share Second and Final Call A/c To Share Capital A/c (Second and Final Call money due on 28,500 shares)	Dr.		5,70,000	5,70,000
Bank A/c To Share Second and Final Call A/c (Due money received)	Dr.		5,70,000	5,70,000
Bank A/c Share Forfeiture A/c Dr. To Share Capital A/c Reissue of 1,000 forfeited shares)	Dr.		80,000 20,000	1,00,000
Share Forfeiture A/c To Capital Reserve (Profit on 1,000 reissued shares transferred to capital reserve)	Dr.		18,333	18,333

Working Notes:

**(I) Excess amount received on Rohan's application**

Rohan has been allotted = 600 Shares	
He must have applied for $\frac{₹35,000}{₹30,000} \times 600$	700 Shares
Amount received from Rohan = $700 \times ₹40$	₹28,000
Amount Adjusted on Application = $600 \times ₹40$	(24,000)
Amount Adjusted on Allotment	<b>4,000</b>
Money due on Allotment = $600 \times ₹30$	18,000
Money Adjusted	(4,000)
Balance due on Allotment	<b>14,000</b>

**(II) Amount received on allotment**

Total Amount due on Allotment = $₹30,000 \times ₹30$	= 9,00,000
Amount received on Application	(2,00,000)
	7,00,000
Amount not received on Rohan's Share	(14,000)
	<b>6,86,000</b>

**(III) Money received on First Call**

First Call money due on 29,400 shares $29,400 \times ₹30$	= 8,82,000
Application money not received on 900 Shares $900 \times ₹30$	(27,000)
	<b>8,55,000</b>

**(IV) 1000 shares have been reissued including 900 shares of Aman and Balance 100 shares of Rohan**

Profit on 100 shares = $\frac{22,000}{600} \times 100$	= 3,667
Profit in 900 shares	= 45,000
	48,667
Less: Loss on reissue of 1,000 shares	(20,000)
	<b>28,667</b>

**(V) Balance in Share Forfeiture Account of 500 shares**

$$\text{₹ } \frac{22,000}{600} \times 500 = \text{₹}18,333$$

### PRACTICE QUESTION

X Ltd. issued for public subscription 40,000 equity shares of ₹10 each at premium of ₹2 per share payable as under:

On application	₹4 per share
On Allotment	₹5 per share (including premium)
On Call	₹3 per share

Applications were received for 60,000 shares. Allotment was made pro-rata to the applicants for 48,000 shares, the remaining applications being rejected. Money overpaid on application was applied towards sums due on allotment.

Shri Chitnis, to whom 1,600 shares were allotted, failed to pay the allotment money and Shri Jagdale, to whom 2,000 shares were allotted, failed to pay the call money. These shares were subsequently forfeited.

Record journal entries in the books of the company to record the above transactions.

**Solution:****Books of X Ltd.  
Journal**

Date	Particulars	L. F.	Debit Amount (₹)	Credit Amount (₹)
	Bank A/c Dr. To Equity Share Application A/c (Money received on applications for 60,000 shares @ ₹4 per share)		2,40,000	2,40,000
	Equity Share Application A/c Dr. To Equity Share Capital A/c To Equity Share Allotment A/c To Bank A/c (Application amount transferred to share capital, excess application money under pro-rata distribution credited to share allotment and money refunded on rejected application)		2,40,000	2,40,000 32,000 48,000
	Equity Share Allotment A/c Dr. To Equity Share Capital A/c To Securities Premium Reserve A/c (Amount due on allotment of 40,000 shares @ ₹5 per share including premium)		2,00,000	1,20,000 80,000
	Bank A/c Dr. Calls-in-Arrears A/c Dr. To Equity Share Allotment A/c (Money received consequent upon allotment)		1,61,280 6,720	1,68,000
	Equity Share Call A/c Dr. To Equity Share Capital A/c (First call money due on 40,000 shares @ ₹3 per share)		1,20,000	1,20,000
	Bank A/c Dr. Calls-in-Arrears A/c Dr.		1,09,200 10,800	

	To Equity Share Call A/c (Money received on first call)			1,20,000
	Equity Share Capital A/c	Dr.	36,000	
	Securities Premium A/c	Dr.	3,200	
	To Share Forfeiture A/c			21,680
	To Call-in-Arrears A/c			17,520
	(Entry for forfeiture of 3,600 shares)			

*Working Notes:*

<b>I. Amount received on allotment</b>	₹
(a) Amount due on allotment 40,000 shares × ₹5 per share	<u>2,00,000</u>
(b) Amount actually due on allotment	2,00,000
Amount due on allotment	
Less Excess Application amount applied for allotment	<u>32,000</u>
Amount actually due	<u>1,68,000</u>
(c) Allotment amount due from Chitnis	
Allotment money due on Chitnis's shares 1,600 shares × ₹5 per share	8,000
Less excess application money paid Due to pro-rata distribution – (1,920 shares – 1,600 shares) 320 × 4	<u>1,280</u>
Allotment amount due from Chitnis	<u>6,720</u>
According to the ratio of pro-rata distribution (40,000 shares: 48,000 shares), for 1,600 shares to be allotted, Chitnis must have applied for 1,920 shares (1,600 shares × 6/5)	
(d) Allotment money received (Amount actually due on Allotment)	1,68,000
Less Amount unpaid by Chitnis	<u>(6,720)</u>
Amount received	<u>1,61,280</u>
<b>II. Balance on Shares Forfeited Account</b>	
Amount paid by Chitnis: 1,920 Shares applied for × ₹4 per share	7,680
Amount paid by Jagdale: 2,000 Shares × (₹4 + ₹3) ₹7 per share	<u>14,000</u>
Total balance	<u>21,680</u>

Note: Premium amount on Jagdale's shares will not be taken into account as it has been received in full by the company.

## PRACTICE QUESTION

Garima Limited issued a prospectus inviting applications for 3,000 shares of ₹100 each at a premium of ₹20 payable as follows:

On Application	₹20 per share
On Allotment	₹50 per share (Including premium)
On First call	₹20 per share
On Second call	₹30 per share

Applications were received for 4,000 shares and allotments made on pro-rata basis to the applicants of 3,600 shares, the remaining applications being rejected, money received on application was adjusted on account of sums due on allotment.

Renuka to whom 360 shares were allotted, failed to pay allotment money and calls money, and her shares were forfeited.

Kanika, the applicant of 200 shares failed to pay the two calls, her shares were also forfeited. All these shares were sold to Naman as fully paid for ₹80 per share. Show the journal entries in the books of the company.

**Solution:****Books of Garima Limited  
Journal**

Date	Particulars	L. F.	Debit Amount (₹)	Credit Amount (₹)
	Bank A/c Dr. To Share Application A/c (Being Application money received on 4,000 shares @ ₹20 per share)		80,000	80,000
	Share Application A/c Dr. To Share Capital A/c To Share Allotment A/c To Bank A/c (Being Transfer of application money on 3,000 shares to Share Capital Account, on 600 shares to Allotment Account, and on of 400 shares refunded)		80,000	60,000 12,000 8,000
	Share Allotment A/c Dr. To Share Capital A/c To Securities Premium Reserve A/c (Being Money due on allotment @ ₹50 per share on 3,000 shares including ₹20 on account of share premium)		1,50,000	90,000 60,000
	Bank A/c Dr. To Share Allotment A/c (Being Money received on share allotment)		1,21,440	1,21,440
	Share First Call A/c Dr. To Share Capital A/c (Being Money due on call on 3,000 shares @ ₹20 per share)		60,000	60,000
	Bank A/c Dr. To Share First Call A/c (Being First call money received on 2,440 shares)		48,800	48,800

	Share Second and Final Call A/c Dr. To Share Capital A/c (Being Money due on call on 3,000 shares @ ₹30 per share)		90,000	90,000
	Bank A/c Dr. To Share Second and Final Call A/c (Being Second and Final Call money received on 2,440 shares)		73,200	73,200
	Share Capital A/c Dr. Securities Premium Reserve A/c To Share Allotment A/c To Share First Call A/c To Share Second and Final A/c To Share Forfeiture A/c (Being Forfeiture of 560 shares)		56,000 7,200	16,560 11,200 16,800 18,640
	Bank A/c Dr. Shares Forfeited A/c Dr. To Share Capital A/c (Being Reissue of 560 forfeited shares)		44,800 11,200	56,000
	Shares Forfeiture A/c Dr. To Capital Reserve (Being Profit on reissue of 560 forfeited shares transferred to Capital reserve)		7,440	7,440

**Working Notes:**

Amount received on allotment has been calculated as follows:	(₹)
Total money due on allotment (including premium)	1,50,000
Less: Application money received on 600 shares adjusted towards allotment money	(12,000)
Net amount due on allotment on 3,000 shares	1,38,000
Less: Allotment money due on 360 shares allotted to	
<i>Renuka, not received</i> $\frac{360}{3,000} \times 1,38,000$	(16,560)
Net amount received on 2,640 shares	1,21,440

Since the allotment money which includes securities premium of ₹20 per share has not been received on 360 shares held by Renuka (now forfeited) has been debited to Securities premium account as per rules.

Amount forfeited has been worked out as follows:

Application money received from Renuka: $\left(360 \times \frac{3,600}{3,000}\right) = 432 \times ₹20$	=₹8,640
Application and Allotment money received from Kanika on 200 shares	₹10,000
Total amount received on forfeited shares	₹18,640

### **Practice Question**

Himalayas Ltd. had ₹ 10,00,000, 8% Debentures of ₹ 100 each as on 31st March, 2012. The company purchased in the open market following debentures for immediate cancellation:

On 01-07-2012 – 1,000 debentures @ ₹ 97 (cum interest)

On 29-02-2013 – 1,800 debentures @ ₹ 99 (ex-interest)

Debenture interest due date is 30th September and 31st March.

Give Journal Entries in the books of the company for the year ended 31st March, 2013.

**Answer**

**In the books of Himalayas Ltd.  
Journal Entries**

Date	Particulars	Dr. ₹	Cr. ₹
1.07.2012	Own Debentures A/c Dr. Debenture Interest Account [1,000×100×8%× (3/12)] To Bank A/c (Being 1,000 Debentures purchased @ ₹ 97 cum interest for immediate cancellation)	95,000  2,000	   97,000
1.07.2012	8% Debentures A/c Dr. To Own Debentures A/c To Capital reserve A/c (Profit on cancellation of debentures) (Being profit on cancellation of 1,000 Debentures transferred to capital reserve account)	1,00,000	 95,000 5,000
30.09.2012	Debenture interest A/c Dr. [9,000 × 100 × 8% × (1/2)] To Debenture holders A/c (Being interest accrued on 9,000 debentures and credited to debenture holders account)	36,000	  36,000
	Debenture holders A/c Dr. To Bank A/c (Being interest amount paid)	36,000	 36,000
29.02.2013	Own Debentures A/c Dr. Debentures Interest Account Dr. [1,800 × 100 × 8% × (5/12)] To Bank A/c (Purchase of 1,800 Debentures @ ₹ 99 ex interest for immediate cancellation)	1,78,200 6,000	  1,84,200
29.02.2013	8% Debentures A/c Dr. To Own Debentures A/c To Capital reserve A/c (Profit on cancellation of debentures) (Being profit on cancellation of 1,800 Debentures transferred to capital reserve account)	1,80,000	 1,78,200 1,800
31.03.2013	Debentures Interest A/c Dr.	28,800	

	[7,200 × 100 × 8% × (1/2)] To Debenture holders A/c (Being interest accrued on 7,200 debentures and credited to debenture holders account)		28,800
31.03.2013	Debenture holders A/c Dr. To Bank A/c (Being amount paid)	28,800	28,800
31.03.2013	Profit and Loss A/c Dr. To Debentures Interest A/c (Being interest on debentures for the year transferred to profit and loss account at the year end)	72,800	72,800

### **Practice Question**

Rama Limited issued 8% Debentures of ₹ 3,00,000 in earlier year on which interest is payable half yearly on 31st March and 30th September. The company has power to purchase its own debentures in the open market for cancellation thereof. The following purchases were made during the financial year 2012-13 and cancellation made on 31st March, 2013:

- (a) On 1st April, ₹ 50,000 nominal value debentures purchased for ₹ 49,450, ex-interest.
- (b) On 1st September, ₹ 30,000 nominal value debentures purchased for ₹ 30,250 cum interest.

Show the Journal Entries for the transactions held in the year 2012-13.

**Answer****In the books of Rama Limited  
Journal Entries**

		Dr. (₹)	Cr. (₹)
1 <sup>st</sup> April, 2012	Own debentures A/c Dr. To Bank A/c (Being own debentures purchased ex- interest)	49,450	49,450
1 <sup>st</sup> Sept. 2023	Own debentures A/c Dr. Interest on own debentures Dr. [ $30,000 \times 8\% \times \frac{5}{12}$ ] To Bank A/c (Being own debentures purchased cum- interest)	29,250 1,000	30,250
30 <sup>th</sup> Sept. 2012	Interest on debentures A/c Dr. To Bank A/c To Interest on own debentures (Being interest @ 8% paid on ₹ 2,20,000 & adjustment of interest on ₹ 50,000 & ₹ 30,000 own debentures)	12,000	8,800 3,200
31 <sup>st</sup> March, 2013	Interest on debentures Dr. To Bank A/c To Interest on own debenture (Being interest @ 8% paid on ₹ 2,20,000 & adjustment of interest on ₹ 80,000 own debentures for 6 month)	12,000	8,800 3,200
31 <sup>st</sup> March, 2013	8% Debentures A/c Dr. To Own debentures A/c To Profit on cancellation of Debentures A/c (Being cancellation of own debentures)	80,000	78,700 1,300
31 <sup>st</sup> March, 2013	Interest on own debentures Dr. To Profit and Loss (3,200+3,200- 1,000) (Being total interest paid on own debentures credited to P/L A/c)	5,400	5,400
31 <sup>st</sup> March, 2013	Profit and Loss A/c (12,000+12,000) To Interest on debentures A/c	24,000	24,000

	(Being total interest paid on debentures transferred to P/L A/c)		
31 <sup>st</sup> March, 2013	Profit on cancellation of debentures To Capital reserve A/c (Being profit on cancellation of debentures transferred to Capital Reserve A/c)	1,300	1,300

### **Practice Question**

A Company had issued 20,000, 13% convertible debentures of Rs. 100 each on 1<sup>st</sup> April 2011. The debentures are due for redemption on 1<sup>st</sup> July 2013. The terms of issue of debentures provided that they were redeemable at a premium of 5% and also conferred option to the debenture holders to convert 20% of their holding into equity shares (nominal value Rs. 10) at a price of Rs. 15 per share. Debenture holders holding 2,500 debentures did not exercise the option. Calculate the number of equity shares to be allotted to the debenture holders exercising the option to the maximum.

**Answer****Calculation of number of equity shares to be allotted**

	Number of Debentures
Total number of debentures	20,000
Less: Debenture holders not opted for conversion	(2,500)
Debenture holders opted for conversion	17,500
Option for conversion	20%

Redemption value =  $17,500 \times 105 \times 20\% = 3,67,500$

Equity shares to be issued on conversion =  $3,67,500 / 15 = 24,500$  Equity Shares

X Ltd. made an issue of 10,000 12% debentures of ₹100 each as follows:

₹25 on Application

₹25 on Allotment

₹50 on First & Final Call

Applications were received for 12,000 shares and the directors allowed 10,000 debentures rejecting an application for 2,000 debentures. The money received on application for 2,000 debentures rejected was duly refunded. All the calls were made and duly received.

Show the necessary Journal Entries.

**ANSWERS**

In the books of X Ltd.  
Journal Entries

Date	Particulars	Dr. (₹)	Cr. (₹)
	Bank A/c (12,000 × 25) Dr. To 12% Debenture Application (Being, application money received @ ₹25 for 12,000 debentures)	3,00,000	3,00,000
	12% Debenture Application A/c To 12% Debenture A/c (10,000 × 25) To Bank A/c (2,000 × 25) (Being, application money of 10,000 debentures @ ₹25 transferred to 12% Debenture Account and application money of 2,000 debentures refunded to applicants as per Boards Resolution No.... dated.....)  (Refund entry can be passed separately)	3,00,000	2,50,000 50,000
	12% Debenture Allotment A/c Dr. To 12% Debenture A/c (Being, allotment money due on 10,000 debentures @ ₹25 as per Boards Resolution No.... dated .....) )	2,50,000	2,50,000
	Bank A/c (10,000 × 25) Dr. To 12% Debenture Allotment A/c (Being, allotment money on 12% Debenture received)	2,50,000	2,50,000
	12% Debenture First & Final Call Dr. To 12% Debenture A/c (Being, first & final call money due on 10,000 debentures @ ₹50 as per Boards Resolution No ..... dated .....) )	5,00,000	5,00,000
	Bank A/c (10,000 × 50) Dr. To 12% Debenture First & Final Call (Being, first & final call money on 12% Debenture received)	5,00,000	5,00,000

Mars. Ltd. obtained an overdraft of ₹5,00,000 on 31st March, 2022 from a bank by issuing and securing 6,000, 12% debentures of ₹100 each as collateral security.

Show necessary journal entries and the entry in the balance sheet as on 31st March, 2022.

## ANSWERS

In the books of Mars. Ltd.

### Journal Entries

Date	Particulars	Dr. (₹)	Cr. (₹)
31.3.2022	For taking loan: Bank A/c Dr. To Bank Overdraft A/c (Being, bank overdraft taken)	5,00,000	5,00,000
31.3.2022	For issuing debenture as collateral security:  Debentures Suspense A/c Dr. To 12% Debentures A/c (Being, 6,000, 12% Debentures of ₹100 each issued as collateral security as per contra)	6,00,000	6,00,000

### Balance Sheet of Mars. Ltd. (*Extract*) As at 31.3.2022

<b>EQUITIES &amp; LIABILITIES</b>	₹
Non-Current Liabilities:	
Bank Loan (Secured by issue of 600, 12% Debentures of ₹100 each as collateral security)	5,00,000
6,000, 12% Debentures of ₹100 each (issued as collateral security as per contra)	6,00,000
<b>ASSETS</b>	
Non-Current Assets:	
Debentures Suspense Account (issued as collateral security as per contra)	6,00,000
Current Assets:	
Cash at Bank	5,00,000

On 1st July, 2020 a company purchased its own 1,000 9% Debentures of 100 each for ₹88,360. You are required to give necessary journal entries if:

(i) These 9% debentures are cancelled immediately.

(ii) These 9% debentures, purchased by the company, are kept as investment

**ANSWERS**  
Journal Entries

Date	Particulars	Dr. (₹)	Cr. (₹)
(i)	Debenture Redemption A/c Dr. To Bank A/c (Being, the purchase of 1,000 debentures for immediate cancellation)	88,360	88,360
	9% Debentures A/c Dr. To Debentures Redemption A/c To Profit on Cancellation of Deb A/c (Being, the cancellation of 1,000 debentures and profit transferred to profit on cancellation of debentures account)	1,00,000	88,360 11,640
(ii)	Investment in Own Debenture A/c Dr. To Bank A/c (Being, the purchased of 1,000 own debentures as investment)	88,360	88,360

The following balances appeared in the books of a Company as on 1st April, 2022 :  
Sinking Fund for Redemption of Debentures ₹5,50,000;

Sinking Fund Investments ₹3,44,325;

7% Debentures ₹10,00,000.

In order to redeem these debentures, the company sold the Sinking Fund Investments and realized ₹3,45,000.

You are required to pass journal entry for the accounting treatment of profit/ loss on sale of Sinking Fund Investment.

**ANSWER**

(i) Sale Price of Investments		₹3,45,000	
Less: Book Value of Investments Sold		₹3,44,325	
Profit on Sale of Investments		₹675	
Journal Entry:			
Debenture Sinking Fund Investments A/c	Dr.	675	
To Debenture Sinking Fund A/c P & L			675
(Profit on Sale of Investments transferred to Sinking Fund Account)			

Out of ₹10,00,000 6% Debentures outstanding on 1st April, 2022, ₹5,00,000. Debentures were redeemed on 31st October, 2022. The balance of Debenture Sinking Fund Account on 1st April, 2022 was ₹10,00,000. Interest on debenture is paid on 31st March, 2022.

How will you deal with the balance of Debenture Sinking Fund Account at the time of its redemption ? You are required to pass necessary journal entry in this regard. What will be the amount of interest paid on these debentures at the time of redemption ?

**ANSWER**

On 31 <sup>st</sup> October, 2022, redemption of Debenture of ₹5,00,000. The following entry are passed.		
Debenture Sinking Fund A/c To General Reserve A/c (Amount transferred on redemption of debenture)	Dr.	5,00,000 5,00,000

The interest on debentures is paid each year on 31st March, the interest paid on redeemed debentures from 1st April, 2022 to 31st October, 2022 i.e. for 7 months @ 6% per annum is calculated as under:

$$\text{Amount of Interest} = 5,00,000 \times 7 \times 6\% / 12 = ₹17,500$$

The Balance Sheets of X Ltd. as on 31<sup>st</sup> March, 2014 and 31<sup>st</sup> March, 2015 are as follows:

<b>Liabilities</b>	<b>2014 Amount (₹)</b>	<b>2015 Amount (₹)</b>	<b>Assets</b>	<b>2014 Amount (₹)</b>	<b>2015 Amount (₹)</b>
Share Capital	5,00,000	7,00,000	Land and Buildings	80,000	1,20,000
General Reserve	50,000	70,000	Plant and Machinery	5,00,000	8,00,000
Profit and Loss A/c	1,00,000	1,60,000	Inventory	1,00,000	75,000
Trade payables	1,93,000	2,40,000	Trade receivables	1,50,000	1,60,000
Outstanding Expenses	7,000	5,000	Cash	20,000	20,000
				=	=
	<u>8,50,000</u>	<u>11,75,000</u>		<u>8,50,000</u>	<u>11,75,000</u>

Additional Information:

- (a) ₹50,000 depreciation has been charged to Plant and Machinery during the year 2015.  
 (b) A piece of Machinery costing ₹12,000 (Depreciation provided there on ₹7,000) was sold at 60% profit on book value.

You are required to prepare Cash flow statement for the year ended 31<sup>st</sup> March 2015 as per AS 3 (revised), using indirect method.

**ANSWER**

**Cash Flow Statement for the year ended 31<sup>st</sup> March, 2015**

	Amount ₹	Amount ₹
<b>I. Cash Flows from Operating Activities</b>		
Closing Balance as per Profit & Loss A/c		1,60,000
Less: Opening Balance as per Profit & Loss A/c		<u>(1,00,000)</u>
		60,000
Add: Transfer to General Reserve		<u>20,000</u>
Net Profit before taxation and extra-ordinary items		80,000
Add: Depreciation on Plant and Machinery		50,000
Less: Profit on sale of machinery (Refer W.N.)		<u>(3,000)</u>
Operating Profit		1,27,000
Add: Decrease in Inventory	25,000	
Increase in trade payables	47,000	72,000
		1,99,000
Less: Increase in trade receivables	(10,000)	
Decrease in Outstanding expenses	<u>(2,000)</u>	<u>(12,000)</u>
Net Cash from Operating Activities		1,87,000
<b>II. Cash Flows from Investing Activities</b>		
Purchase of Land & Building	(40,000)	
Proceeds from Sale of Machinery (Refer W.N.)	8,000	
Purchases of Plant & Machinery (Refer W.N.)	<u>(3,55,000)</u>	
Net Cash Used in Investing Activities		(3,87,000)
<b>III. Cash Flows from Financing Activities</b>		
Proceeds from Issuance of Share Capital	<u>2,00,000</u>	
Net Cash from Financing Activities		<u>2,00,000</u>

Net Increase/Decrease in Cash & Cash Equivalents		0
Add: Cash in hand at the beginning of the year		<u>20,000</u>
Cash in hand at the end of the year		<u>20,000</u>

**Working Note:**

**Plant and Machinery Account**

	₹		₹
To Balance b/d	5,00,000	By Bank	8,000*
To Profit and Los A/c (Profit on sale)	3,000	By Depreciation	50,000
To Purchases (Bal. fig.)	<u>3,55,000</u>	By Balance c/d	<u>8,00,000</u>
	<u>8,58,000</u>		<u>8,58,000</u>

The following are the summarized Balance Sheet of Star Ltd. as on 31<sup>st</sup> March, 2014 and 2015:

	(₹'000)	
	2014	2015
Equity share capital of 10 each	3,400	3,800
Profit and Loss A/c	400	540
Securities Premium	40	80
14% Debentures	800	900
Long term borrowings	180	240
Trade payables	360	440
Provision for Taxation	20	40
Outstanding Expenses	300	480
	<b>5,500</b>	<b>6,520</b>
Sundry Fixed Assets:		
Gross Block	3,200	4,000
Less: Depreciation	(640)	(1,440)
Net Block	2,560	2,560
Investment	1,200	1,400
Inventories	1,000	1,400
Trade receivables	640	900
Cash and Bank Balance	100	260
	<b>5,500</b>	<b>6,520</b>

The Profit and Loss account for the year ended 31<sup>st</sup> March, 2015 disclosed:

	(₹'000)
Profit before tax	780
Less: Taxation	(160)
Profit after tax	620
Less: Dividend Paid	(480)
<b>Retained Profit</b>	<b>140</b>

The following information are also available:

- (1) 40,000 equity shares issued at a premium of ₹1 per share.
- (2) The Company paid taxes of ₹1,40,000 for the year 2014-15.
- (3) During the period, it discarded fixed assets costing ₹4 lacs, (accumulated depreciation ₹80,000) at ₹40,000 only.
- (4) 14% Debentures were issued on 1<sup>st</sup> April 2014.

You are required to prepare a cash flow statement as per AS 3 (Revised), using indirect method.

**ANSWER**

**Cash Flow Statement for the year ended 31<sup>st</sup> March, 2015**

			(₹'000)
<b>(A)</b>	Cash flow from operating activities		
	Net profit before tax	780	
	Add: Adjustment for depreciation	880	
	Loss on sale of fixed assets	280	
	Interest on debenture (9,00,000 × 14%)	<u>126</u>	
	Operating profit before changes in working capital	2,066	
	Less: Increase in trade receivables	(260)	
	Less: Increase in Inventories	(400)	
	Add: Increase in trade payables	80	
	Add: Increase in Outstanding Expenses	<u>180</u>	
	Cash generated from operations	1,666	
	Less: Income tax paid (W.N. 1)	<u>(140)</u>	
	Net cash from operating activities		1,526
<b>(B)</b>	<b>Cash flow from investing activities</b>		
	Purchase of fixed assets		
	Sale of fixed assets	40	
	Purchase of investments	<u>(200)</u>	
	Net cash used in investing activities		(1,360)
<b>(C)</b>	<b>Cash flow from financing activities</b>		
	Proceeds from issue of shares including premium (400 + 40)	440	
	Proceeds from issue of 14% debentures (900 – 800)	100	
	Proceeds from long term borrowings	60	
	Interest on debentures	(126)	
	Payment of dividend	<u>(480)</u>	

	Net cash from financing activities		(6)
	Net increase in cash and cash equivalents (A+B+C)		160
	Cash and cash equivalents at the beginning of the year		100
	Cash and cash equivalents at the end of the year		260

**Working Notes:**

<b>1. Calculation of Income tax paid during the year</b>	₹('000)
Income tax expense for the year	160
Add: Income tax liability at the beginning of the year	<u>20</u>
	180
Less: Income tax liability at the end of the year	<u>(40)</u>
Income tax paid during the year	<u>140</u>
<b>2. Calculation of Fixed assets purchased during the year</b>	
Closing balance of gross block of fixed assets	4,000
Add: Cost of assets discarded during the year	<u>400</u>
	4,400
Less: Opening balance of gross block of fixed assets	<u>(3,200)</u>
Fixed assets purchased during the year	<u>1,200</u>
<b>3. Calculation of Depreciation charged during the year</b>	
Closing balance of accumulated depreciation	1,440
Add: Depreciation charged on assets discarded during the year	<u>80</u>
	1,520
Less: Opening balance of accumulated depreciation	<u>(640)</u>
Depreciation charged during the year	<u>880</u>

Please note:

**My Students have to prepare workings by preparing Ledgers (not +/- Format)**

The following are the summarized Balance Sheets of 'X' Ltd. as on March 31, 2014 and 2015:

<b>Liabilities</b>	<b>As on 31.3.2014 (₹)</b>	<b>As on 31.3.2015 (₹)</b>
Equity share capital	15,00,000	16,50,000
Capital Reserve	---	10,000
General Reserve	2,50,000	3,00,000
Profit and Loss A/c	1,50,000	1,80,000
Trade payables	5,00,000	4,00,000
Provision for Taxation	50,000	60,000
Outstanding Expenses	<u>1,00,000</u>	<u>1,25,000</u>
	<u>25,50,000</u>	<u>27,25,000</u>
<b>Assets</b>	<b>Year 2014 (₹)</b>	<b>Year 2015 (₹)</b>
Land and Building	5,00,000	4,80,000
Machinery	7,50,000	9,20,000
Investment	1,00,000	50,000
Inventory	3,00,000	2,80,000
Trade receivables	4,00,000	4,20,000
Cash in Hand	2,00,000	1,65,000
Cash at Bank	<u>3,00,000</u>	<u>4,10,000</u>
	<u>25,50,000</u>	<u>27,75,000</u>

**Additional Information:**

- (i) Machinery during the year purchased for ₹1,25,000.
- (ii) Machinery of another company was purchased for a consideration of ₹1,00,000 payable in equity shares.
- (iii) Income-tax provided during the year ₹55,000.
- (iv) Company sold some investment at a profit of ₹10,000, which was credited to Capital reserve.
- (v) There was no sale of machinery during the year.
- (vi) Depreciation written off on Land and Building ₹20,000.

From the above particulars, prepare a cash flow statement for the year ended March, 2015 as per AS 3 (Indirect method).

**ANSWER**

**Cash Flow Statement for the year ending on March 31, 2015**

	₹	₹
<b>I. Cash flows from Operating Activities</b>		
Net profit made during the year (1,80,000 – 1,50,000)	30,000	
Add: Transfer to general reserve	50,000	
Add: Provision for taxation made during the year	55,000	
Adjustment for depreciation on Machinery (W.N. 2)	55,000	
Adjustment for depreciation on Land & Building	<u>20,000</u>	
Operating profit before change in Working Capital	2,10,000	
Decrease in inventory	20,000	
Increase in trade receivables	(20,000)	
Decrease in trade payables	(1,00,000)	
Increase in Outstanding Expenses	25,000	
Income-tax paid	<u>(45,000)</u>	
Net cash from operating activities		90,000
<b>II. Cash flows from Investing Activities</b>		
Purchase on Machinery	(1,25,000)	
Sale of Investments	<u>60,000</u>	(65,000)
<b>III. Cash flows from Financing Activities</b>		
Issue of equity shares (1,50,000 – 1,00,000)	<u>50,000</u>	50,000
Net increase in cash and cash equivalent		75,000
Cash and cash equivalents at the beginning of the period		<u>5,00,000</u>
Cash and cash equivalents at the end of the period		<u>5,75,000</u>

**Working Notes:****(i) Machinery Account**

	₹		₹
To Balance b/d	7,50,000	By Depreciation (Bal. Fig.)	55,000
To Bank	1,25,000	By Balance c/d	9,20,000
To Equity share capital	<u>1,00,000</u>		₹
	<u>9,75,000</u>		<u>9,75,000</u>

**(ii) Provision for Taxation Account**

	₹		₹
To Cash (Bal. Fig.)	45,000	By Balance b/d	50,000
To Balance c/d	<u>60,000</u>	By P & L A/c	<u>55,000</u>
	<u>1,05,000</u>		<u>1,05,000</u>

**(iii) Investment Account**

	₹		₹
To Balance b/d	1,00,000	By Bank A/c (Balancing figure for investment sold)	60,000
To Capital Reserve A/ c (Profit on sale of investment)	<u>10,000</u>	By Balance c/d	<u>50,000</u>
	<u>1,10,000</u>		<u>1,10,000</u>

The following summary cash account has been extracted from the company's accounting records:

**Summary Cash Account**

		(₹'000)
Balance at 1.3.20X1		35
Receipts from customers		2,783
Issue of shares		300
Sale of fixed assets		<u>128</u>
		3,246
Payments to suppliers	2,047	
Payments for property, plant & equipment	230	
Payments for overheads	115	
Wages and salaries	69	
Taxation	243	
Dividends	80	
Repayments of bank loan	<u>250</u>	<u>(3,034)</u>
Balance at 31.3.20X2		212

Prepare Cash Flow Statement of this company Hills Ltd. for the year ended 31st March, 20X2 in accordance with AS-3 (Revised).

The company does not have any cash equivalents.

**Answer:**

**Hills Ltd.**  
**Cash Flow Statement for the year ended 31st March, 20X2**  
**(Using direct method)**

		(₹'000)
<b>Cash flows from operating activities</b>		
Cash receipts from customers	2,783	
Cash payments to suppliers	(2,047)	
Cash paid to employees	(69)	
Other cash payments (for overheads)	(115)	
Cash generated from operations	552	
Income taxes paid	(243)	
Net cash from operating activities		309
<b>Cash flows from investing activities</b>		
Payments for purchase of fixed assets	(230)	
Proceeds from sale of fixed assets	128	
Net cash used in investing activities		(102)
<b>Cash flows from financing activities</b>		
Proceeds from issuance of share capital	300	
Bank loan repaid	(250)	
Dividend paid	(80)	
Net cash used in financing activities		(30)
Net increase in cash and cash equivalents		177
Cash and cash equivalents at beginning of period		35
Cash and cash equivalents at end of period		212

The following are the summary of cash transactions extracted from the books of Happy Ltd.:

	(in ₹'000)
Balance as on 1st April, 2013	140
Receipts from customers	11,132
Issue of shares	1,200
Sale of fixed assets	<u>512</u>
	<u>12,984</u>
Payments to suppliers	8,188
Payments for fixed assets	920
Payments for overheads	460
Wages and salaries	276
Taxation	972
Dividends	320
Repayment of bank loans	<u>1,000</u>
	<u>12,136</u>
Balance as on 31st March, 2014	848

You are required to prepare a cash flow statement of the company for the period ended 31st March, 2014 in accordance with the Accounting Standard- 3 (Revised) using Direct Method.

**SOLUTION:****In the books of Happy Limited  
Cash Flow Statement for the period ending 31st March, 2014**

	(₹in '000)
A. Cash Flow from Operating Activities	
Receipts from customers	11,132
Payment to suppliers	(8,188)
Payment of Wages and Salaries	(276)
Payment of Overheads	(460)
Payment of Taxes	<u>(972)</u>
Net Cash from Operating Activities (A)	<u>1236</u>
B Cash Flow from Investing Activities	
Proceeds on sale of fixed assets	512
Acquisition on sale of fixed assets	<u>(920)</u>
Net Cash Used in Investing Activities (B)	<u>(408)</u>
C Cash Flow from Financing Activities	
Proceeds on issue of shares	1200
Payments of dividends	(320)
Repayments of bank loans	<u>(1,000)</u>
Net Cash Used in Investing Activities (C)	<u>(120)</u>
Net increase in cash and cash equivalents (A) + (B) + (C)	708
Cash and cash equivalents at the beginning of the period	<u>140</u>
Cash and cash equivalents at the end of the period	<u>848</u>

## Practice Question

XYZ Ltd. Company's Balance Sheet for 20X2 and the Company's Income Statement for the year is as follows:

Balance Sheet as at 31st December 20X2

( ₹ in crore)

	Particulars	Note No.	20X2	20X1
I	Equity and Liabilities:			
(1)	Shareholders' funds			
	Share Capital		140	140
	(b) Reserves and surplus		110	92
(2)	Non-current liabilities			
	(a) Long-term borrowings		135	40
(3)	Current liabilities			
	Trade Payables		230	310
	Other current liabilities		70	60
	(c) Provision for Current Tax		15	8
	Total		700	650
II	Assets:			
(1)	Non-current assets			
	Fixed Assets (tangible)			
	(i) Plant and equipment		430	309
	Less: Accumulated Depreciation		(218)	(194)
			212	115
	(b) Investment Property		60	75
(2)	Current Assets			
	Inventories		205	160
	Trade receivable		180	270
	Cash and cash equivalents		26	10
	Other Current Assets		17	20
			700	650

Income Statement (extract) as at 31st December 20X2

( ₹ in crore)

Sales	1,000
Less : Cost of goods sold	(530)
Gross margin	470
Less : Operating expenses	(352)
Net operating income	118
Non-operating items:	
Loss on sale of equipment	(4)
Profit before taxes	114
Less : Provision for income-taxes	(48)
Net Profit	66

Additional information:

- i) Dividends of ₹ 48 crores were paid in 20X2.
- ii) The loss on sale of equipment of ₹ 4 crore reflects a transaction in which equipment with an original cost of ₹ 12 crore and accumulated depreciation of ₹ 5 crore were sold for ₹ 3 crore in cash.

Required:

Using the indirect method construct a statement of cash flows for the year 20X2

## SOLUTION:

Statement of Cash Flows for the year ended 31st December 20X2

	(₹ in crore)
<b>Cash flow from Operating Activities</b>	
Profit before taxation	114
Adjustments:	
Add: Loss on sale of equipment	4
Add: Depreciation (₹218 + ₹5 - ₹194)	29
Operating profit before working capital changes	147
Decrease in trade receivable (₹270 - ₹180)	90
Increase in inventory (₹205 - ₹160)	(45)
Decrease in other current assets (₹20 - ₹17)	3
Decrease in trade payable (₹310 - ₹230)	(80)
Increase in other current liabilities (₹70 - ₹60)	10
Cash generated from operations	125
Less: Income tax paid (₹8 + ₹48 - ₹15)	(41)
Net Cash from Operating activities (A)	84
<b>Cash flow from Investing Activities</b>	
Purchase of plant and equipment (₹430 + ₹12 - ₹309)	(133)
Sale of investments (₹75 - ₹60)	15
Sale of plant and equipment	3
Net cash from Investing activities (B)	(115)
<b>Cash Flow from Financing Activities</b>	
Payment of dividend	(48)
Long term borrowings (₹135 - ₹40)	95
Net cash from Financing activities (C)	47
	16
Net Increase/(Decrease) in cash and cash equivalents (A+B+C)	
Cash and cash equivalent at the beginning of the year	10
Cash and cash equivalent at the end of the year	26

### Practice Question

Following balances are provided by Nakul Ltd. for the year ended on 31<sup>st</sup> March, 2018 and on 31<sup>st</sup> March, 2019:

<b>Particulars</b>	<b>31<sup>st</sup> March 2018</b>	<b>31<sup>st</sup> March 2019</b>
Equity Share Capital	500	560
General Reserves	310	365
Surplus	165	222
8% Debentures	350	200
Goodwill	60	47
Land & Building	430	387
Plant & Machinery	300	330
Investment (Trading)	48	53
Trade Payables	105	122
Provision for tax	78	98
Outstanding Expenses	18	13
Inventories	165	153
Trade Receivables	171	206
Cash at Bank	52	63
Prepaid Expenses	7	5

Additional Information:

- (1) During the year, an old machine costing ₹45 lakh was sold for ₹21 lakh. Its written down value was ₹29 lakh.
- (2) Depreciation charged on plant and machinery @ 15% on the opening balance.
- (3) There were no purchases or sales of land and building during the year.
- (4) Provision for tax made during the year was ₹96 lakh.
- (5) During the year, premium on redemption of debentures was written-off as ₹15 lakh.

From the abovementioned information, you are required to prepare a Statement showing the Net Cash Flow from the Operating Activities.

**SOLUTION:**

Statement showing net cash flow from Operating Activities:

<b>Particulars</b>	<b>₹</b>
Net profit before working capital changes	332
(+) Decrease in Current Assets	
- Inventories	12
- Prepaid Expenses	2
(-) Increase in Current Assets	
- Trade Receivables	(35)
- Investment (Trading)	(5)
(+) Increase in Current Liabilities	
- Trade Payables	17
(+) Decrease in Current Liabilities	
- Outstanding Expenses	(5)
Cash generated from operation	318
Income-tax paid	(76)
Cash before extraordinary item	242
Extraordinary item	-
Net cash flow from Operating Activities	242

Dr. Profit & Loss Adjustment A/c Cr.

To General Reserve	55	By Balance b/d	165
To Goodwill written off	13	By Profit before working capital changes {Bal. Fig.}	332
To Depreciation on Land & Building	43		
To Plant & Machinery	45		
To Loss on Plant & Machinery	8		
To Premium on redemption of debentures	15		
To Provision for tax	96		
To Balance	222	By	
	497		497
Dr. <span style="margin-left: 100px;">Plant &amp; Machinery A/c</span>		Cr.	
To Balance b/d	300	By Bank A/c	21
To Bank A/c {Bal. Fig.}	104	By P & L Adj. A/c	8
		By Depreciation A/c	45
		By Balance	330
	404		404
Dr. <span style="margin-left: 100px;">Provision for Tax A/c</span>		Cr.	
To Bank A/c { Bal. Fig.}	76	By Balance b/d	78

By Balance c/d	98	By P & L Adj. A/c	96
	174		174

## PRACTICE QUESTIONS 1

1.

The following information is pertaining to A Ltd.

Current ratio	: 4
Acid Test ratio	: 2.8
Current liabilities	: ₹ 31.00 Lakh

Find out the value of Inventory.

2.

P Ltd. furnished the following information :

Cost of Goods Sold	: ₹ 6 Lakh
Net Profit	: ₹ 3 Lakh
Sales Return	: ₹ 1 Lakh

If the net profit margin of P Ltd. was 25%, then the gross profit margin was?

3.

If Stock, Current Assets and Working Capital are ₹ 25 Lakh, ₹ 80 Lakh and ₹ 30 Lakh respectively, then liquid ratio will be?

4.

The relevant data from financial statements of Ross Ltd. as on 31<sup>st</sup> March, 2016 is given below:

	₹
Cash	1,50,000
Trade receivables	4,00,000
Investment (short – term)	3,30,000
Stock	25,00,000
Prepaid expenses	50,000
Current liabilities	10,00,000

The quick ratio will be?

5.

Cost of goods sold : ₹ 4,00,000

Administration and office expenses : ₹ 35,000

Selling and distribution expenses : ₹ 45,000

Net credit sales : ₹ 4,75,000

Cash sales : ₹ 1,25,000

Operating profit ratio will be ?

## ANSWERS

1.

$$\text{Current Ratio} = \text{CA} \div \text{CL}$$

$$\text{CA} = \text{Current Ratio} \times \text{CL}$$

$$\text{CA} = 4 \times 31$$

$$\text{CA} = 124$$

$$\text{Acid Test Ratio} = (\text{CA} - \text{Stock}) \div \text{CL}$$

$$\text{Stock} = \text{CA} - (\text{Acid Test Ratio} \times \text{CL})$$

$$\text{Stock} = 124 - (2.8 \times 31)$$

$$\text{Stock} = 37.2$$

2.

$$\text{NP \%} = \text{NP} \div \text{Net Sales}$$

$$\text{Net Sales} = \text{NP} \div \text{NP\%} = 3 \div 25\% = 12$$

$$\text{GP \%} = \text{GP} \div \text{Net sales} = (12 - 6) \div 12 = 50\%$$

3.

$$\text{Working Capital} = \text{CA} - \text{CL}$$

$$30 = 80 - x$$

$$x = 50$$

$$\text{Quick Ratio} = \frac{\text{CA} - \text{Stock}}{\text{CL}}$$

$$= \frac{80 - 25}{50}$$

$$= \frac{55}{50}$$

$$= 1.1:1$$

4.

$$\text{Quick ratio} = \frac{\text{Liquid assets}}{\text{Current liabilities}} = \frac{8,80,000}{10,00,000} = 0.88$$

$$\text{Liquid Assets} = \text{Cash} + \text{Trade Receivables} + \text{Investments} = 1,50,000 + 4,00,000 + 3,30,000 = 8,80,000$$

5.

### **Operating Profit Ratio**

$$= \frac{\text{Operating Profit}}{\text{Total Sales}} \times 100$$

$$= \frac{1,20,000}{6,00,000} \times 100 = 20\%$$

$$\text{Operating Profit} = \text{Sales} - \text{Total Operating Cost}$$

$$= 6,00,000 - 4,80,000$$

$$= 1,20,000$$

## PRACTICE QUESTIONS 2

From the final accounts of Prudent Ltd. given below, calculate the following: (i) gross profit ratio; (ii) current ratio; (iii) liquid ratio; and (iv) return on investment ratio.

### Trading and Profit & Loss Account for the year ended 31st March, 2014

		₹			₹
To Material consumed:			By Sales		8,50,000
Opening stock	90,500		By Profit (non-operating)		6,000
Purchases	<u>5,45,250</u>		By Interest on investment		3,000
	6,35,750				
Less: Closing stock	<u>1,40,000</u>	4,95,750			
To Carriage inwards		14,250			
To Office expenses		1,50,000			
To Sales expenses		30,000			
To Financial expenses		15,000			
To Loss on sales of fixed assets		4,000			
To Net profit		<u>1,50,000</u>			-
		<u>8,59,000</u>			<u>8,59,000</u>

### Balance Sheet as on 31st March, 2014

Liabilities		₹	Assets		₹
Share capital:			Fixed assets:		
20,000 equity shares of 10 each, fully paid		2,00,000	Buildings	1,50,000	
General reserve		90,000	Plant	<u>80,000</u>	2,30,000

Profit & Loss Account		60,000			
Bank overdraft		30,000	Current assets:		
Sundry creditors			Stock-in-trade	1,40,000	
For Expenses	20,000		Debtors	70,000	
For others	<u>80,000</u>	<u>1,00,000</u>	Bills receivable	10,000	
			Bank balance	<u>30,000</u>	<u>2,50,000</u>
		<u>4,80,000</u>			<u>4,80,000</u>

## ANSWERS

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

$$\begin{aligned} \text{Gross Profit} &= \text{Sales} - \text{Material consumed} - \text{Carriage inwards} \\ &= ₹8,50,000 - ₹4,95,750 - ₹14,250 \\ &= ₹3,40,000 \\ \text{Sales} &= ₹8,50,000 \end{aligned}$$

$$\text{Gross Profit Ratio} = \frac{₹3,40,000}{₹8,50,000} \times 100 = 40\%$$

$$(ii) \text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$\begin{aligned} \text{Current Assets} &= \text{Stock} + \text{Debtors} + \text{Bills Receivable} + \text{Bank Balance} \\ &= ₹(1,40,000 + 70,000 + 10,000 + 30,000) \\ &= ₹2,50,000 \end{aligned}$$

$$\begin{aligned} \text{Current Liabilities} &= \text{Sundry Creditors} + \text{Bank Overdraft} \\ &= ₹(1,00,000 + 30,000) \\ &= ₹1,30,000 \end{aligned}$$

$$\text{Current Ratio} = \frac{₹2,50,000}{₹1,30,000} = 1.92:1$$

$$(iii) \text{Liquid Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

$$\begin{aligned} \text{Liquid Assets} &= \text{Debtors} + \text{Bills Receivable} + \text{Bank Balance} \\ &= ₹(70,000 + 10,000 + 30,000) \\ &= ₹1,10,000 \end{aligned}$$

$$\begin{aligned} \text{Current Liabilities} &= \text{Sundry Creditors} + \text{Bank Overdraft} \\ &= ₹(1,00,000 + 30,000) \\ &= ₹1,30,000 \end{aligned}$$

$$\text{Liquid Ratio} = \frac{₹1,10,000}{₹1,30,000} = 0.84:1$$

**N.B.** Bank overdraft is treated as current liability.

(iv) Return on Investment

$$(iv) \text{ Ratio} = \frac{\text{Operating Profit} \times 100}{\text{Capital Employed}}$$

Operating Profit = Net Profit + Non-operating expense/loss – Non-operating income

= Net Profit + Loss on sale of fixed assets + Financial expenses – (Profit + Interest on investment)

= 150,000 + 4,000 + 15,000 – 9,000 = ₹160,000

Capital Employed = Share Capital + General Reserve + Profit & Loss Account

= (2,00,000 + 90,000 + 60,000) = ₹3,50,000

$$= \frac{₹1,60,000}{₹3,50,000} \times 100 = 45.71\%$$

## PRACTICE QUESTIONS 2

Calculate net profit margin from the following given information :

<b>Particulars</b>	<b>Amount (₹)</b>
Revenue from operations	17,00,000
Cost of Revenue from operations	10,00,000
Selling Expenses	2,00,000
Administrative Expenses	1,00,000
Depreciation	2,00,000
Interest expenses	50,000
Other Income	45,000
Tax Rate	30%

### ANSWERS

Particulars	Amount in ₹	
Sales	17,00,000	
Cost of Sales	- 10,00,000	
Gross Profit	<b>7,00,000</b>	<b>41.18%</b>
Selling Expenses	- 2,00,000	
Admin Expenses	- 1,00,000	
EBITDA	<b>4,00,000</b>	<b>23.53%</b>
Depreciation	- 2,00,000	
EBIT	2,00,000	
Interest	- 50,000	
Other income	45,000	
EBT	<b>1,95,000</b>	
Tax	- 58,500	Tax rate 30%
Net Profit	<b>1,36,500</b>	<b>7.82%</b>

$$\text{Net profit Margin} = \frac{\text{Net Profit}}{\text{Total Revenue}} = \frac{1,36,500}{17,45,000} = 7.82\%$$

**Note: Total Revenue and Net Profit includes Other Income.**

## PRACTICE QUESTION

From the following balance sheet of ABC Co. Ltd. As on March 31, 2015. Calculate debt equity ratio:

### ABC Co. Ltd. Balance Sheet as at 31 March, 2017

Particulars	Note No.	Amount (₹)
<b>I. Equity and Liabilities</b>		
<b>1. Shareholders' funds</b>		
a) Share capital		12,00,000
b) Reserves and surplus		2,00,000
c) Money received against share warrants		1,00,000
<b>2. Non-current Liabilities</b>		
a) Long-term borrowings		4,00,000
b) Other long-term liabilities		40,000
c) Long-term provisions		60,000
<b>3. Current Liabilities</b>		
a) Short-term borrowings		2,00,000
b) Trade payables		1,00,000
c) Other current liabilities		50,000
d) Short-term provisions		1,50,000
		<b>25,00,000</b>
<b>II. Assets</b>		
<b>1. Non-Current Assets</b>		
a) Fixed assets		15,00,000
b) Non-current investments		2,00,000
c) Long-term loans and advances		1,00,000
<b>2. Current Assets</b>		
a) Current investments		1,50,000
b) Inventories		1,50,000
c) Trade receivables		1,00,000
d) Cash and cash equivalents		2,50,000
e) Short-term loans and advances		50,000
		<b>25,00,000</b>

## **ANSWERS**

$$\text{Debt - Equity Ratio} = \frac{\text{Debts}}{\text{Equity}}$$

$$\begin{aligned}\text{Debt} &= \text{Long-term borrowings} + \text{Other long-term liabilities} + \text{Long-term provisions} \\ &= ₹4,00,000 + ₹40,000 + ₹60,000 \\ &= ₹5,00,000\end{aligned}$$

$$\begin{aligned}\text{Equity} &= \text{Share capital} + \text{Reserves and surplus} + \text{Money received against share warrants} \\ &= ₹12,00,000 + ₹2,00,000 + ₹1,00,000 \\ &= ₹15,00,000\end{aligned}$$

$$\text{Debt Equity Ratio} = \frac{5,00,000}{15,00,000} = 0.33:1$$

## RATIO ANALYSIS

### LIQUIDITY RATIOS

#### Question 1:

Following information is of Wye Ltd. regarding its Current Assets and Current Liabilities

Current Assets:	₹	Current Liabilities:	₹
Cash and cash Equivalents	25,000	Sundry Creditors	1,25,000
Debtors	1,45,000	Bills Payable	80,000
Bills Receivable	25,000	Outstanding Expenses	40,000
Marketable Securities	75,000	Provision for Expenses	25,000
Inventories	2,70,000		

Calculate Current Ratio and Liquid Ratio of the company.

**Question 2:**

Current Liabilities ₹ 1,50,000, Current Assets ₹ 2,80,000, Inventories ₹40,000. Advance Tax ₹ 30,000 and Prepaid Rent ₹ 10,000. Calculate Quick Ratio.

**Question 3:**

Calculate Liquid Ratio/Quick Ratio/Acid Test Ratio From the following:  
Working Capital ₹ 1,80,000; Total Outside Liabilities ₹ 3,90,000; Long-term Debts ₹3,00,000; Inventories ₹ 90,000.

**Question 4:**

Current liabilities of a company are ₹ 3,00,000. Its Current Ratio is 3 and Liquid Ratio is 1. Calculate value of Inventories.

**Question 5:**

From the Following data, Calculate Current Ratio:

Liquid Assets ₹ 37,500; Inventories ₹ 10,000; Prepaid Expenses ₹ 2,500;  
Working Capital ₹ 30,000.

**Question 6:**

Current Ratio of A Ltd. is 4.5 : 1 and Liquid is 3 : 1 If its Inventories are ₹ 3,00,000, find its Current Liabilities; Current Assets and Quick Assets.

**Question 7**

Current Assets of a company are ₹ 17,00,000. Its Current Ratio is 2.50 and Liquid Ratio is 0.95. Calculate Current Liabilities, Liquid Assets and Inventory.

**Question 8:**

Following is the balance Sheet of Wye Limited as at 31<sup>st</sup> March, 2022:

Particulars	Note No.	₹
<b>I. EQUITY AND LIABILITIES</b>		
<b>1. Shareholders' Funds</b>		
(a) Share Capital		2,40,000
(b) Reserves and Surplus		60,000
<b>2. Non-Current Liabilities</b>		
Long-term Borrowing: 10% Debentures		1,50,000
<b>3. Current Liabilities</b>		
(a) Trade Payables		2,34,000
(b) Short-term Provisions		6,000
<b>Total</b>		6,90,000
<b>II. ASSETS</b>		
<b>1. Non-Current Assets</b>		
Property, Plant and Equipment and Intangible Assets:		4,50,000
Property, Plant and Equipment		
<b>2. Current Assets</b>		
(a) Inventories		1,20,000
(b) Trade Receivables		90,000
(c) Cash and Cash Equivalents		22,800
(d) Other Current Assets:		
Prepaid Expenses		7,200
<b>Total</b>		6,90,000

Calculate:

- (i) Current Ratio
- (ii) Liquid Ratio.
- (iii) Cash Ratio



**Question 9:**

From the following information, calculate Debt to Equity Ratio:

<b>Liabilities</b>	<b>₹</b>	<b>Assets</b>	<b>₹</b>
Long-term Borrowings	2,00,000	Non-current Assets	3,60,000
Long-term Provisions	1,00,000	Current Assets	90,000
Current Liabilities	50,000		

**Question 10:**

Calculate Debt to Equity Ratio from the Following Information:

	₹		₹
Fixed Assets (Gross)	6,00,000	Current Liabilities	2,00,000
Accumulated Depreciation	1,00,000	Long-term Borrowings (10% Debentures)	3,00,000
Non-current Investments	30,000	Long-term Provisions	1,00,000
Long-term Loans and Advances	20,000		
Current Asset	2,50,000		

**Question 11:**

From the following Balance Sheet of Defense Brokers Ltd. Compute Debt to Equity Ratio:

**BALANCE SHEET as at 31 st March, 2022**

Particulars	Note No.	₹
<b>I. EQUITY AND LIABILITIES</b>		
<b>1. Shareholders' Funds</b>		
(a) Share Capital		15,00,000
(b) Reserves and Surplus (Surplus, i.e, Balance in Statement of Profit & Loss)		(2,30,000)
<b>2. Non-Current Liabilities</b>		
(a) Long-term Borrowing:		15,00,000
(b) Long-term Provisions		2,85,000
<b>3. Current Liabilities</b>		
(a) Short-term Borrowing:		55,000
(b) Trade Payables		1,15,000
(c) Other Current Liabilities		25,000
<b>Total</b>		<b>32,50,000</b>
<b>II. ASSETS</b>		
<b>1. Non-Current Assets</b>		
(a) Property, Plant and Equipment and Intangible Assets:		11,00,000
(i) Property, Plant and Equipment		1,30,000
(ii) Intangible Assets	1	2,60,000
(b) Non-current Investments		
<b>2. Current Assets</b>		
(a) Current Investments		1,90,000
(b) Inventories		7,50,000
(c) Trade Receivables		3,00,000
(d) Cash and Cash Equivalents		5,20,000
<b>Total</b>		<b>32,50,000</b>

**Notes to Accounts**

Particulars	₹
<b>1. Non-Current Investments</b>	
Trade Investments	2,60,000
<b>2. Current Investments</b>	
Government Securities	50,000
Other Investments	1,40,000
	<b>1,90,000</b>



**Question 12:**

Prakash Ltd. has a term-loan of ₹ 10,00,000. Interest on the lone for the year is ₹1,25,000. And its Net Profit before Interest and Tax is ₹5,00,000. Calculate Interest Coverage Ratio.

**Question 13:**

From the following details obtained from the financial statements of jeev Ltd. calculate Interest Coverage Ratio:

Net Profit after Tax	₹1,20,000
12% Long-term Debt	₹20,00,000
Tax Rate	40%





**PRACTICE QUESTION**  
**CONSOLIDATED BALANCE SHEET**

H Ltd and S Ltd provide the following information as at 31<sup>st</sup> March 2022:

	<b>H Ltd Rs.</b>	<b>S Ltd Rs.</b>
Property plant & equipment	2,00,000	2,60,000
Investments (14,000 Equity Shares of S Ltd)	2,52,000	-
Current Assets	1,48,000	1,40,000
Share Capital (Fully paid Equity Shares of Rs. 10 Each)	3,00,000	2,00,000
Profit & Loss	1,00,000	80,000
Trade Payables	2,00,000	1,20,000

Additional Information:

H Ltd acquired the shares of S Ltd on 1<sup>st</sup> April 2021 and balance of profit and loss account of S Ltd on 1<sup>st</sup> April 2021 was Rs. 60,000. Prepare Consolidated Balance Sheet of H Ltd and its subsidiary as on 31<sup>st</sup> March 2022.

**ANSWER**

**Consolidated Balance Sheet of H Ltd and its Subsidiary S Ltd as at  
31<sup>st</sup> March 2022**

	Rs.
Equities and Liabilities	
Shareholders Fund	
a) Share Capital	3,00,000
b) Reserves & Surplus	1,14,000
Minority Interest	84,000
Current Liabilities	
Trade Payable (2,00,000 + 1,20,000)	3,20,000
	<b>8,18,000</b>
Assets	
Non Current Assets	
PPE (2,00,000 + 2,60,000)	4,60,000
Intangible Asset (Goodwill)	70,000
Current Assets (1,48,000 + 1,40,000)	2,88,000
	<b>8,18,000</b>

Notes to Accounts:

<b>Share Capital</b> 30,000 Equity shares of Rs. 10 each	3,00,000
<b>Reserves &amp; Surplus</b> Profit & Loss Account (1,00,000 + 70% of (80,000 – 60,000))	1,14,000
<b>Minority Interest</b> Share Capital (2,00,000 × 30%) 60,000 Share in P & L (80,000 × 30%) 24,000	84,000
<b>Goodwill (Cost of Control)</b> Cost of Investment 2,52,000 Less: Share Capital (2,00,000 × 70%) (1,40,000) Less: Pre Acquisition Profits (70% × 60,000) (42,000)	70,000

**PRACTICE QUESTION**  
**CONSOLIDATED BALANCE SHEET**

Prepare consolidated balance sheet of H Ltd. and its subsidiary as at 31 March, 20X1 from the following information:

	<b>H Ltd.</b>	<b>S Ltd.</b>
	₹	₹
PPE	5,00,000	3,00,000
Investments		
(2,000 equity shares of S Ltd.)	2,20,000	
Current Assets	1,55,000	1,00,000
Share capital (Fully paid equity shares of ₹ 10 each)	5,00,000	2,50,000
Profit and loss account	2,00,000	1,00,000
Trade Payables	1,75,000	50,000

H Ltd. acquired the shares of S Ltd. on 31st March, 20X1.

## ANSWER

Percentage of holding:				
		No. of Shares		Percentage
Holding Co	:	2,000		(80%)
Minority shareholders	:	500		(20%)
TOTAL SHARES	:	2,500		

### Consolidated Balance Sheet of H Ltd. and its subsidiary S Ltd. as at 31st March, 20X1

				Note No	Amount (₹)
	<b>I</b>		<b>EQUITY AND LIABILITIES</b>		
<b>1</b>			<b>Shareholder's Fund</b>		
			(a) Share Capital	1	5,00,000
			(b) Reserve and Surplus	2	2,60,000
<b>2</b>			<b>Minority interest</b>	3	70,000
<b>3</b>			<b>Current Liabilities</b>		
			(a) Trade payables	4	2,25,000
	<b>Total</b>				10,55,000
	<b>II</b>		<b>ASSETS</b>		
<b>1.</b>			<b>Non-Current Assets</b>		
			PPE	5	8,00,000
<b>2.</b>			<b>Current Assets</b>	6	2,55,000
	<b>Total</b>				10,55,000

#### Notes to Accounts

				Amounts ₹
1	<b>Share capital</b>			
	50,000 Equity Shares @ ₹10 each			5,00,000
2	<b>Reserve and Surplus</b>			
	Capital Reserve (W.N.)			60,000
	Profit and loss account			2,00,000
				2,00,000
3	<b>Minority Interest</b>			
	Paid up value of shares	50,000		
	Add: Share in Profit and loss account	20,000		70,000

4	<b>Trade payables</b>			
	H Ltd.			1,75,000
	S Ltd.			50,000
				2,25,000
5	<b>PPE</b>			
	H Ltd.			5,00,000
	S Ltd.			3,00,000
				8,00,000
6	<b>Current Assets</b>			
	H Ltd.			1,55,000
	S Ltd.			1,00,000
				2,55,000

**Working Note:**

<b>Determination of Goodwill/(Capital Reserve)</b>		
Cost of investment		2,20,000
Less: Paid up value of shares (80% of 2,50,000)	2,00,000	
Share in pre-acquisition profits		
(80% of 1,00,000)	80,000	(2,80,000)
Capital Reserve		(60,000)

**PRACTICE QUESTION  
CONSOLIDATED BALANCE SHEET**

From the Balance Sheets and information given below, prepare Consolidated Balance Sheet of Virat Ltd. and Anushka Ltd. as at 31st March. Virat Ltd. holds 80% of Equity Shares in Anushka Ltd. since its (Anushka Ltd.'s) incorporation.

**Balance Sheet of Virat Ltd. and Anushka Ltd. as at 31st March,  
20X1**

	Particulars	Note No.	Virat Ltd.₹	Anushka Ltd.₹
I.	<b>Equity and Liabilities</b>			
	<b>(1) Shareholder's Funds</b>			
	(a) Share Capital	1	6,00,000	4,00,000
	(b) Reserves and Surplus	2	1,00,000	1,00,000
	<b>(2) Non-current Liabilities</b>		2,00,000	1,00,000
	Long Term Borrowings			
	<b>(3) Current Liabilities</b>			
	(a) Trade Payables		1,00,000	1,00,000
	Total		10,00,000	7,00,000
II.	<b>Assets</b>			
	<b>(1) Non-current assets</b>			
	(a) Property, Plant and Equipment		4,00,000	3,00,000
	(b) Non-current investments	3	3,20,000	-
	<b>(2) Current Assets</b>			
	(a) Inventories		1,60,000	2,00,000
	(b) Trade Receivables		80,000	1,40,000
	(c) Cash & Cash Equivalents		40,000	60,000
	Total		10,00,000	7,00,000

**Notes to Accounts**

	Particulars	(₹)	Virat Ltd.₹	Anushka Ltd
1.	<b>Share capital</b>			
	60,000 equity shares of ₹ 10 each fully paid up		6,00,000	-
	40,000 equity shares of ₹ 10 each fully paid up			4,00,000
	Total		6,00,000	4,00,000
2.	<b>Reserves and Surplus</b>			
	General Reserve		1,00,000	1,00,000
	Total		1,00,000	1,00,000
3.	<b>Non-current investments</b>			
	Shares in Anushka Ltd		3,20,000	

## ANSWER

### Consolidated balance Sheet of Virat Ltd. and its Subsidiary Anushka Ltd. as at 31<sup>st</sup> March, 20X1

	Particulars	Note	Amount (₹)
I	<b>EQUITY AND LIABILITIES:</b>		
(1)	<b>Shareholders' Funds:</b>		
	(a) Share Capital	1	6,00,000
	(b) Reserve and Surplus	2	1,80,000
(2)	<b>Minority Interest</b>	3	1,00,000
(3)	<b>Non-Current Liabilities:</b>		
	Long Term Borrowings	4	3,00,000
(4)	<b>Current Liabilities:</b>		
	Trade Payables	5	2,00,000
	Total		13,80,000
II	<b>ASSETS:</b>		
(1)	<b>Non-Current Assets</b>		
	Property, Plant & Equipment	6	7,00,000
(2)	<b>Current Assets:</b>		
	(a) Inventories	7	3,60,000
	(b) Trade receivables	8	2,20,000
	(c) Cash and Cash Equivalents	9	1,00,000
	Total		13,80,000

### Notes to Accounts

	Particulars	₹	₹
1.	<b>Share capital</b>		
	60,000 equity shares of ₹10 each fully paid up		6,00,000
2.	<b>Reserves and Surplus</b>		
	General Reserve	1,00,000	

	Add: General reserve of Anushka Ltd (80%)	80,000	
	Total		1,80,000
<b>3.</b>	<b>Minority interest</b>		
	20% share in Anushka Ltd (WN 3)		1,00,000
<b>4.</b>	<b>Long term borrowings</b>		
	Long term borrowings of Virat	2,00,000	
	Add: Long term borrowings of Anushka	1,00,000	
	Total		3,00,000
<b>5.</b>	<b>Trade payables</b>		
	Trade payables of Virat	1,00,000	
	Add: Trade payables of Anushka	1,00,000	
	Total		2,00,000
<b>6.</b>	<b>Property, Plant and Equipment (PPE)</b>		
	PPE of Virat Ltd	4,00,000	
	Add: PPE of Anushka Ltd	3,00,000	
	Total		7,00,000
<b>7.</b>	<b>Inventories</b>		
	Inventories of Virat Ltd	1,60,000	
	Add: Inventories of Anushka Ltd	2,00,000	
	Total		3,60,000
<b>8.</b>	<b>Trade receivables</b>		
	Trade receivables of Virat Ltd	80,000	
	Add: Trade receivables of Anushka Ltd	1,40,000	
	Total		2,20,000
<b>9.</b>	<b>Cash and cash equivalents</b>		
	Cash and cash equivalents of Virat Ltd	40,000	
	Add: Cash and cash equivalents of Anushka Ltd	60,000	
	Total		1,00,000

### Working Notes:

<b>1.</b>	<b>Basic Information</b>		
	<b>Company Status</b>	<b>Dates</b>	<b>Holding Status</b>
	Holding co. = Virat Ltd.	Acquisition Anushka's	Holding Company =
		Incorporation	80%
	Subsidiary = Anushka	Consolidation: 31 <sup>st</sup> March,	Minority Interest =
	Ltd.	20X1	20%
<b>2.</b>	<b>Analysis of General Reserves of Anushka Ltd</b>		
	Since Virat holds shares in Anushka since its incorporation, the entire Reserve balance of ₹1,00,000 will be Revenue.		
<b>3.</b>	<b>Consolidation of Balances</b>		
	<b>Holding- 80%,</b>	<b>Total</b>	<b>Minority</b>
			<b>Holding Company</b>

	<b>Minority - 20%</b>		<b>Interest</b>		
	Equity Capital	4,00,000	80,000	3,20,000	-
	General Reserves	1,00,000	20,000	Nil (pre-acq)	80,000 (POST)
	<b>Total</b>		<b>1,00,000</b>	<b>3,20,000</b>	<b>80,000</b>
	Cost of Investment			(3,20,000)	
	Goodwill/capital reserve			NIL	
	Parent's Balance				<b>1,00,000</b>
	Amount for Consolidated Balance Sheet				<b>1,80,000</b>

**PRACTICE QUESTION  
CONSOLIDATED BALANCE SHEET**

(a) From the following Balance Sheets of Hani Ltd. and its subsidiary Sani Ltd., drawn up at 31st March, 2019, prepare a Consolidated Balance Sheet as at that date, having regard to the following:

(i) General Reserves and Profit (Surplus) of Sani Ltd. stood at ₹50,000 and ₹30,000 respectively on the date of acquisition and 80% of its shares were held by Hani Ltd. on 1st April, 2018.

(ii) Machinery (Book-value ₹2,00,000 and furniture (Book value ₹ 40,000) were revalued at ₹1,50,000 and ₹30,000 respectively as on 1st April, 2018 for the purpose of fixing the price of its shares.

(iii) Depreciation is charged @ 10% on machinery and @ 15% on furniture.

**Balance Sheet of Hani Ltd. & Sani Ltd. as on 31st March, 2019.**

Particulars	Hani Ltd. ₹	Sani Ltd. ₹
<b>(1) Shareholders' Funds</b>		
(a) Share Capital		
Equity shares of ₹10 each	6,00,000	1,00,000
(b) Reserves and Surplus		
General Reserve	2,00,000	1,50,000
Statement of Profit & Loss	1,00,000	50,000
<b>(2) Current Liabilities</b>		
Trade payable	1,10,000	57,000
<b>Total</b>	<b>10,10,000</b>	<b>3,57,000</b>
<b>II. ASSETS</b>		
<b>(1) Non-Currents Assets</b>		
(a) Tangible Fixed Assets		
Machinery	3,00,000	1,80,000
Furniture	1,50,000	34,000
(b) Non-current Investments Investment in Shares of Sani Ltd.	1,20,000	-
<b>(2) Currents Assets</b>	<b>4,40,000</b>	<b>1,43,000</b>
<b>Total</b>	<b>10,10,000</b>	<b>3,57,000</b>

## ANSWER

### Consolidated Balance Sheet of Hani Ltd. and its Subsidiary Sani Ltd. As on 31st March, 2019

<i>Particulars</i>	<i>Notes to Accounts</i>	<i>Amount Rs.</i>
<b>I EQUITY AND LIABILITIES</b>		
(1) Shareholder's Funds:		
(a) Share Capital 60000 Equity shares of Rs. 10 each		600000
(b) Reserves and Surplus	1	401200
(i) General Reserve		
(2) Minority Interest (W. No. 5)		49300
(3) Current Liabilities :		
Trade Payables	2	167000
Total		1217500
<b>II ASSETS</b>		
(1) Non – Current Assets :		
(a) Fixed Assets		
(i) Tangible Assets	3	610500
(ii) Intangible Assets	4	24000

(2) Current Assets	5	583000
Total		1217500

<i>Notes to Accounts</i>		
I. Reserves and Surplus	₹	₹
Reserves (W. No 3)	2,00,000	
Add : 4/5 share of Sani Ltd. post acquisition reserves	80,000	2,80,000
(W. No. 3)	1,00,000	
Profit & loss A/c		
Add : 4/5 share of Sani Ltd. post acquisition reserves	21,200	1,21,200
(W. No. 4)		
Total		4,01,200
2. Trade payable		
Hani Ltd.	1,10,000	
Sani Ltd.	57,000	1,67,000
3. Tangible Assets		
(a) Machinery		
Hani Ltd.	3,00,000	
Sani Ltd. (180000 x 100 / 90)	2,00,000	
	5,00,000	
Less : Decrease in Value (Sani Ltd.)	(50,000)	
Less : Depreciation (Sani Ltd. 150000 x 10/100)	(15000)	4,35,000
(b) Furniture	1,50,000	
Hani Ltd.	40,000	
Sani Ltd. (34000 x 100 / 85)	1,90,000	
	(10000)	
Less : Decrease in Value (Sani Ltd.)	(4500)	
Less : Depreciation (Sani ltd. 30000 x 15 / 100)		1,75,500
Total		6,10,500
4. Intangible Assets		
Goodwill (W. No. 6)		24000
5. Current Assets		
Hani	4,40,000	
Sani	1,43,000	5,83,000

*Working Notes:*

1. Pre-acquisition profits and reserves of Sani Ltd.	
Reserves	₹ 50,000
Profit	₹ <u>30,000</u>
	₹ <u>80,000</u>

Hani Ltd. Share (4/5*80000)	₹64000
Minority Interest (1/5 * 80000)	₹16000
2. Loss on revaluation of assets of Sani Ltd. Machinery (₹200000 - ₹150000)	= ₹50,000
Furniture (₹40000 - ₹30000)	= ₹10,000
	= ₹60,000
Hani Ltd.' Share (60000 * 4/5)	= ₹48,000
Minority Interest (60000 * 1/5)	= ₹12000
3. Post-acquisition reserves of Sani Ltd. (₹150000 - ₹50000)	= ₹100,000
Hani Ltd. Share (100000 * 4/5)	= ₹80000
Minority Interest (100000 * 1/5)	= ₹20,000
4. Post-acquisition profits of Sani Ltd. (₹50000 - ₹30000)	= ₹20,000
Add : Excess depreciation charged on Machinery @ 10% on ₹50000 (₹ 200000-₹150000)	= ₹5000
Furniture @15% on ₹10,000 (₹ 40000 - ₹30000)	= ₹1500
Hani Ltd. Share (26500 * 4/5)	₹26,500
Minority Interest (26500* 1/5)	= ₹21200
	= ₹5,300
5. Minority Interest	
Paid up value of Equity Share held	20000
Add : 1/5 Share of Pre-acquisition profit & reserves	16000
Add : 1/5 Share of Post-acquisition reserves	20000
Add : 1/5 Share of Post-acquisition profit	5300
Less : 1/5 Share of loss on revaluation of Assets	(12000)
Minority Interest	49300
6. Cost of Control or Goodwill	
Paid up value of Equity Share held by Hani Ltd.	80000
Add : 4/5 Share of Pre-acquisition profit & reserves of Sani Ltd.	64000
Less : 4/5 Share of loss on revaluation of Assets of Sani Ltd.	(48000)
Intrinsic Value of Share on the date of acquisition	96000
Less: Investment in share of Sani Ltd. by Hani Ltd.	(120000)
Goodwill	24000

### PRACTICE QUESTION

Beta Ltd. is a subsidiary of Alpha Ltd. Following is the Balance Sheet of Beta Limited as at 31<sup>st</sup> March, 2019:

Particulars	(₹ in lakh)
<b>EQUITY AND LIABILITIES</b>	
1. Shareholders Funds	
(a) Share Capital: Equity Shares of ₹ 10 each	300
(b) Reserves and Surplus (Statement of Profit and Loss)	250
2. Non-current Liabilities: 8% Debentures	200
3. Current Liabilities	160
<b>Total Equity and Liabilities</b>	<b>910</b>
<b>ASSETS</b>	
1. Non-Current Assets:	
Tangible Assets:	
Land and Building	270
Plant and Machinery	350
2. Current Assets	
<b>Total Assets</b>	<b>910</b>

On 1<sup>st</sup> April, 2018, Alpha Ltd. acquired 24 lakh equity shares of Beta Ltd. at a cost of ₹460 lakh. On that date, Statement of profit and Loss of Beta Ltd. showed a credit balance of ₹180 lakh and land & Building was revalued by Alpha Ltd. at 20% above book value of ₹300 lakh (but no such adjustments are shown in the books of Beta Ltd.)

You are required to calculate:

- (1) Cost of Control
- (2) Minority Interest.

## ANSWER

### Control Ratio:

$$\frac{\text{No. of shares held by holding}}{\text{Total shares of subsidiary}} \times 100 = \frac{24 \text{ lakh}}{30 \text{ lakh}} \times 100 = 80\%$$

Analysis of profits of Beta Ltd.:

Particulars	Alpha Ltd. 80%	Minority 20%	Total 100%
Pre-acquisition/Capital Profit			
Opening Profit & Loss A/c	144	36	180
Revaluation profit on Land & Building	48	12	60
	192	48	240
Post-acquisition/Revenue Profit:			
Profit during the year	56	14	70
Depreciation on increased value of Land & Building	(4.8)	(1.2)	(6)
	51.2	12.8	64

Minority Interest	₹	Cost of Control	₹
Share Capital	60	Cost of investment	460
Share of profits		(-) Face value of shares	(240)
- Pre-acquisition	48	(-) Pre-acquisition profit	(192)
- Post-acquisition	12.8	Goodwill	28
	120.8		
Dr.		Profit & Loss A/c (Beta Ltd.)	
Cr.			
To Balance	250	By Balance b/d	180
		By Profit during the year	70
	250		250

Balance on 1.4.2018	300
Depreciation for 2018-2019 {Bal. Fig.}	(30)
Balance on 31.3.2019	270

$$\text{Rate of depreciation} = \frac{30}{300} \times 100 = 10\%$$

**PRACTICE QUESTION**  
**COST OF CONTROL**

Long limited acquired 60% stake in short limited for a consideration of Rs. 112 Lakhs. On the date of acquisition Short Limited Equity Share Capital was Rs. 100 lakhs. Revenue reserve was Rs. 40 Lakhs and balance in profit and loss account was Rs. 30 Lakhs. From the above information you are required to calculate Goodwill/ Capital Reserve in the following situations:

- (i) On consolidation of balance sheet
- (ii) If long limited showed the investment in subsidiary at a carrying value of Rs. 104 Lakhs
- (iii) If the consideration paid for acquiring the 60% stake was Rs. 92 Lakhs

## ANSWER

Particulars	Rs. In Lakhs
60% of Equity Share Capital	60
60% of Accumulated Reserve of Rs. 70 Lakhs (40+30)	42
Net Share	102

- (i) Goodwill or Capital Reserve = 112 Lakhs – 102 Lakhs = 10 Lakhs  
Goodwill
- (ii) Goodwill or Capital Reserve = 104 Lakhs – 102 Lakhs = 2 Lakhs  
Goodwill
- (iii) Goodwill or Capital Reserve = 92 Lakhs – 102 Lakhs = 10 Lakhs  
Capital Reserve

Following are the details regarding capital structure of a company.

	<b>Book value</b>	<b>Market value</b>	<b>Specific cost</b>
	(₹)	(₹)	(%)
Debentures	80,000	76,000	5
Preference Capital	20,000	22,000	8
Equity Capital	1,20,000	2,40,000	13
Retained Earnings	40,000		9
	<b>2,60,000</b>	<b>3,38,000</b>	

You are required to calculate the weighted average cost of capital using (i) book value as weights (ii) market value as weights.

## SUGGESTED ANSWERS

**(i) Calculation of the weighted average cost of capital using book value weights:**

Source of Capital	Amount of Book value (₹)	Weights	Specific Cost (X)(%)	Weights × Costs
Debentures	80,000	0.31	5	1.55
Preference Capital	20,000	0.08	8	0.64
Equity Capital	1,20,000	0.46	13	5.98
Retained Earning	40,000	0.15	9	1.35
	<b>2,60,000</b>			<b>9.52%</b>

**(ii) Calculation of the weighted average cost of capital using market value as weights:**

Source of Capital	Market value	Weights	Specific Cost (%)	Weights × Costs
Debentures	76,000	0.22	5	1.1
Preference Capital	22,000	0.07	8	0.56
Equity Capital	1,80,000	0.53	13	6.89
Retained Earning	60,000	0.18	9	1.62
	<b>3,38,000</b>			<b>10.17%</b>

Market Value of Equity Shares includes value of retained earnings as well. We can present them in a combined way if cost of equity and retained earnings is same. However, in given question, cost of Equity share capital and retained earnings is different hence, we have to split the total value of Equity Shares on a proportionate basis.

Book Value ratio = 1,20,000 : 40,000 i.e 3:1

So, we will split the total market value in 3:1

Market Value of ESC = 2,40,000 ×  $\frac{3}{4}$  = 1,80,000

Market Value of Retained Earnings = 2,40,000 ×  $\frac{1}{4}$  = 60,000

PQR Ltd. has the following capital structure on October 31, 2015:

<b>Sources of capital</b>	<b>(₹)</b>
Equity Share Capital (2,00,000 Shares of ₹ 10 each)	20,00,000
Reserves & Surplus	20,00,000
12% Preference Shares	10,00,000
9% Debentures	30,00,000
	80,00,000

The market price of equity share is ₹ 30. It is expected that the company will pay next year a dividend of ₹ 3 per share, which will grow at 7% forever. Assume 40% income tax rate.

You are required to compute weighted average cost of capital using market value weights.

## ANSWER

### Workings:

$$(i) \text{Cost of Equity}(K_e) = \frac{D_1}{P_0} + g = \frac{Rs. 3}{Rs. 30} + 0.07 = 0.1 + 0.07 = 0.17 = 17\%$$

$$(ii) \text{Cost of Debentures (Kd)} = I (1 - t) = 0.09 (1 - 0.4) = 0.054 \text{ or } 5.4\%$$

### Computation of Weighted Average Cost of Capital (WACC using market value weights)

Sources of capital	Market Value of capital (₹)	Weight	Cost of capital (%)	WACC (%)
9% Debentures	30,00,000	0.30	5.40	1.62
12% Preference Shares	10,00,000	0.10	12.00	1.20
Equity Share Capital (₹ 30 × 2,00,000 shares)	60,00,000	0.60	17.00	10.20
<b>Total</b>	<b>1,00,00,000</b>	<b>1.00</b>		<b>13.02</b>

SK Limited has obtained funds from the following sources, the specific cost are also given against them:

<b>Source of funds</b>	<b>Amount (₹)</b>	<b>Cost of Capital</b>
Equity shares	30,00,000	15 percent
Preference shares	8,00,000	8 percent
Retained earnings	12,00,000	11 percent
Debentures	10,00,000	9 percent (before tax)

You are required to calculate weighted average cost of capital. Assume that Corporate tax rate is 30 percent.

ANSWER

Calculation of Weighted Average Cost of Capital (WACC)

Sources of Funds	Amount (₹)	Weight	Cost of Capital (%)	WACC (%)
Equity Shares	30,00,000	0.500	15.00	7.50
Preference Shares	8,00,000	0.133	8.00	1.06
Retained Earnings	12,00,000	0.200	11.00	2.20
Debentures	10,00,000	0.167	6.30*	1.05
Total	60,00,000	1.000		11.81

\*Cost of Debentures ( $K_d$ ) =  $K_d$  (before tax)  $\times$  (1 - t) = 9% (1 - 0.3) = 6.30%

*A company issued 40,000, 12% Redeemable Preference Share of ₹ 100 each at a premium of ₹ 5 each, redeemable after 10 years at a premium of ₹ 10 each. The floatation cost of each share is ₹ 2.*

*You are required to calculate cost of preference share capital*

## ANSWER

Calculation of Cost of Preference Shares ( $K_p$ )

$$\text{Preference Dividend (PD)} = ₹100 \times 40,000 \text{ shares} \times 0.12 = ₹4,80,000$$

$$\text{Floatation Cost} = 40,000 \text{ shares} \times ₹ 2 = ₹ 80,000$$

$$\text{Net Proceeds (NP)} = ₹105 \times 40,000 \text{ shares} - ₹ 80,000 = ₹ 41,20,000$$

$$\text{Redemption Value (RV)} = 40,000 \text{ shares} \times ₹110 = ₹ 44,00,000$$

$$\text{Cost of Redeemable Preference Shares} = \frac{\text{PD} + (\text{RV} - \text{NP}) / \text{N}}{\frac{\text{RV} + \text{NP}}{2}}$$

$$K_p = \frac{₹4,80,000 + (\₹44,00,000 - ₹41,20,000) / 10 \text{ years}}{\frac{₹44,00,000 + ₹41,20,000}{2}}$$

$$= \frac{₹4,80,000 + ₹2,80,000 / 10 \text{ years}}{₹85,20,000 / 2}$$

$$= \frac{₹4,80,000 + ₹28,000}{₹42,60,000} = \frac{₹5,08,000}{₹42,60,000}$$

$$= 0.1192 \text{ or } 11.92\%$$



ANSWER

Calculation of Weighted Average Cost of Capital (WACC)

Sources of Funds	Amount (₹)	Weight	Cost of Capital (%)	WACC (%)
Equity Shares	30,00,000	0.500	15.00	7.50
Preference Shares	8,00,000	0.133	8.00	1.06
Retained Earnings	12,00,000	0.200	11.00	2.20
Debentures	10,00,000	0.167	6.30*	1.05
Total	60,00,000	1.000		11.81

\*Cost of Debentures ( $K_d$ ) =  $K_d$  (before tax)  $\times$  (1 - t) = 9% (1 - 0.3) = 6.30%

*The capital structure of a company consists of equity shares of ₹50 lakhs; 10 percent preference shares of ₹ 10 lakhs and 12 percent debentures of ₹ 30 lakhs. The cost of equity capital for the company is 14.7 percent and income-tax rate for this company is 30 percent.*

*You are required to calculate the Weighted Average Cost of Capital (WACC).*

**ANSWER**

**Calculation of Weighted Average Cost of Capital (WACC)**

Source	Amount (₹)	Weight	Cost of Capital after tax	WACC
Equity Capital	50,00,000	0.5556	0.147	0.0817
10% Preference Capital	10,00,000	0.1111	0.100	0.0111
12% Debentures	30,00,000	0.3333	0.084*	0.0280
Total	90,00,000	1.0000		0.1208

\* Cost of Debentures (after tax) =  $12\% (1 - 0.30) = 8.4\% = 0.084$

Weighted Average Cost of Capital =  $0.1208 = 12.08\%$

## ANSWER

Calculation of Cost of Preference Shares ( $K_p$ )

$$\text{Preference Dividend (PD)} = ₹100 \times 40,000 \text{ shares} \times 0.12 = ₹4,80,000$$

$$\text{Floatation Cost} = 40,000 \text{ shares} \times ₹ 2 = ₹ 80,000$$

$$\text{Net Proceeds (NP)} = ₹105 \times 40,000 \text{ shares} - ₹ 80,000 = ₹ 41,20,000$$

$$\text{Redemption Value (RV)} = 40,000 \text{ shares} \times ₹110 = ₹ 44,00,000$$

$$\text{Cost of Redeemable Preference Shares} = \frac{\text{PD} + (\text{RV} - \text{NP}) / \text{N}}{\frac{\text{RV} + \text{NP}}{2}}$$

$$K_p = \frac{₹4,80,000 + (\text{₹}44,00,000 - \text{₹}41,20,000) / 10 \text{ years}}{\frac{\text{₹}44,00,000 + \text{₹}41,20,000}{2}}$$

$$= \frac{₹4,80,000 + ₹2,80,000 / 10 \text{ years}}{\text{₹}85,20,000 / 2}$$

$$= \frac{₹4,80,000 + ₹28,000}{₹42,60,000} = \frac{₹5,08,000}{₹42,60,000}$$

$$= 0.1192 \text{ or } 11.92\%$$



ANSWER

Calculation of Weighted Average Cost of Capital (WACC)

Sources of Funds	Amount (₹)	Weight	Cost of Capital (%)	WACC (%)
Equity Shares	30,00,000	0.500	15.00	7.50
Preference Shares	8,00,000	0.133	8.00	1.06
Retained Earnings	12,00,000	0.200	11.00	2.20
Debentures	10,00,000	0.167	6.30*	1.05
Total	60,00,000	1.000		11.81

\*Cost of Debentures ( $K_d$ ) =  $K_d$  (before tax)  $\times$  (1 - t) = 9% (1 - 0.3) = 6.30%

**Question 1:**

Krishna Ltd. is currently financed with ₹10,00,000, 7% bonds and ₹20,00,000 of common stock. The stock has a beta of 1.5, risk-free rate of return 4% and market risk premium 3.5%. The marginal tax rate for a company of this size is 35%.

Compute the WACC of Krishna Ltd.?

**Question 2**

Determine weighted average cost of capital using market value weights:

<i>Book value structure</i>	₹
Debentures (₹100 per debenture)	8,00,000
Preference shares (₹100 per share)	2,00,000
Equity shares (₹10 per share)	10,00,000
	20,00,000

Market prices of these securities are:

Debentures	: ₹110 per debenture
Preference shares	: ₹120 per share
Equity shares	: ₹22 per share

Based on external investment opportunities, the expected return on such debentures, preference shares and equity shares have been determined at 6.84%, 14.62% and 16.10% respectively.

**ANSWER**

**ANS 1)**

Cost of equity – CAPM Method:

$$K_e = R_f + \beta(R_m - R_f) \text{ Risk premium} = (R_m - R_f)$$

$$= 4 + 1.5(3.5)$$

$$= 9.25\%$$

Cost of debt:

$$K_d = I(I - 1)$$

$$= 7(1 - 0.35)$$

$$= 4.55\%$$

Calculation of WACC (book value basis):

Types of capital	₹	%	Cost of Capital	Product
Equity	20,00,000	66.67%	9.25%	616.70
7% Bonds	10,00,000	33.33%	4.55%	151.65
	30,00,000	100%		768.35

$$WACC = \frac{768.35}{100} = 7.68\%$$

**ANS 2)**

Calculation of WACC (*market value basis*):

<b>Types of capital</b>	<b>₹</b>	<b>%</b>	<b>Cost of Capital</b>	<b>Product</b>
Debentures	8,80,000	26.51%	6.84%	181.33
Preference shares	2,40,000	7.23%	14.62%	105.70
	22,00,000	66.27%	16.10%	1,066.95
	<b>33,20,000</b>	<b>100%</b>		<b>1,353.98</b>

$$WACC = \frac{1,353.98}{100} = 13.54\%$$



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**PRACTICE QUESTIONS**  
**FINANCIAL MANAGEMENT**  
**AMIT TALDA MENTORSHIP (ATM)**

1. A firm has Sales of ₹ 40 lakhs; Variable cost of ₹ 25 lakhs; Fixed cost of ₹ 6 lakhs; 10% debt of ₹ 30 lakhs; and Equity Capital of ₹ 45 lakhs.

Required:

Calculate operating and financial leverage.

2. The following data relate to RT Ltd.:

	(₹)
Earnings before interest and tax (EBIT)	10,00,000
Fixed cost	20,00,000
Earnings Before Tax (EBT)	8,00,000

Required: Calculate combined leverage.

## ANSWER

1.

### Calculation of Operating and Financial Leverage

	(₹)
Sales	40,00,000
Less: Variable cost	25,00,000
Contribution (C)	15,00,000
Less: Fixed cost	6,00,000
EBIT	9,00,000
Less: Interest	3,00,000
EBT	6,00,000

$$\text{Operating leverage} = \frac{C}{\text{EBIT}} = \frac{\text{₹ } 15,00,000}{\text{₹ } 9,00,000} = 1.67$$

$$\text{Financial leverage} = \frac{\text{EBIT}}{\text{EBT}} = \frac{\text{₹ } 9,00,000}{\text{₹ } 6,00,000} = 1.50$$

2.

Contribution:	
C	= S – V and
EBIT	= C – F
10,00,000	= C – 20,00,000
∴ C	= 30,00,000

[C – Contribution, S – Sales, V – Variable cost, F – Fixed cost]

Operating leverage (OL) = C/EBIT = 30,00,000/10,00,000 = 3 times

Financial leverage (FL) = EBIT/EBT = 10,00,000/8,00,000 = 1.25 times

Combined leverage (CL) = OL × FL = 3 × 1.25 = 3.75 times

**PRACTICE QUESTIONS**  
**FINANCIAL MANAGEMENT**  
**AMIT TALDA MENTORSHIP (ATM)**

1. The data relating to two companies are as given below:

	<b>Company A</b>	<b>Company B</b>
Equity Capital	6,00,000	3,50,000
12% Debentures	4,00,000	6,50,000
Output per annum (Units)	60,000	15,000
Selling Price per unit	30	250
Fixed Costs per annum	7,00,000	14,00,000
Variable Cost per unit	10	75

You are required to calculate the operating leverage, financing leverage & combined leverage.

## **ANSWER**

Computation of Operating Leverage, Financial Leverage & Combined Leverage of two companies:

	<b>Company A</b>	<b>Company B</b>
Output (units) per annum	60,000	15,000
	Rs.	Rs.
Selling Price per unit	30	250
Sales Revenue	18,00,000 (60,000 × 30)	37,50,000 (15,000 × 250)
Less: Variable Costs	6,00,000 (60,000 × 10)	11,25,000 (15,000 × 75)
Contribution	12,00,000	26,25,000
Less: Fixed Costs	7,00,000	14,00,000
EBIT	5,00,000	12,25,000
Less: Interest @ 12%	48,000 (4,00,000 × 12%)	78,000 (6,50,000 × 12%)
PBT	4,52,000	11,47,000
Operating Leverage (Contribution/EBIT)	2.4 (12,00,000/5,00,000)	2.14 (26,25,000/12,25,000)
Financial Leverage (EBIT/PBT)	1.11 (5,00,000/4,52,000)	1.07 (12,25,000/11,47,000)
Combined Leverage (Operating × Financial)	2.66	2.29

Calculate the level of earnings before interest and tax (EBIT) at which the EPS indifference point between the following financing alternatives will occur.

(i) Equity share capital of ₹ 6,00,000 and 12% debentures of ₹ 4,00,000.

Or

(ii) Equity share capital of ₹ 4,00,000, 14% preference share capital of ₹ 2,00,000 and 12% debentures of ₹ 4,00,000.

Assume the corporate tax rate is 35% and par value of equity share is ₹ 10 in each case.

## ANSWER

### Computation of level of earnings before interest and tax (EBIT)

In case alternative (i) is accepted, then the EPS of the firm would be:

$$\begin{aligned} \text{EPS}_{\text{Alternative (i)}} &= \frac{(\text{EBIT} - \text{Interest}) (1 - \text{tax rate})}{\text{No. of equity shares}} \\ &= \frac{(\text{EBIT} - 0.12 \times ₹ 4,00,000) (1 - 0.35)}{60,000 \text{ shares}} \end{aligned}$$

In case the alternative (ii) is accepted, then the EPS of the firm would be

$$\text{EPS}_{\text{Alternative (ii)}} = \frac{(\text{EBIT} - 0.12 \times ₹ 4,00,000) (1 - 0.35) - (0.14 \times ₹ 2,00,000)}{40,000 \text{ shares}}$$

In order to determine the indifference level of EBIT, the EPS under the two alternative plans should be equated as follows:

$$\frac{(\text{EBIT} - 0.12 \times ₹ 4,00,000) (1 - 0.35)}{60,000 \text{ shares}} = \frac{(\text{EBIT} - 0.12 \times ₹ 4,00,000) (1 - 0.35) - (0.14 \times ₹ 2,00,000)}{40,000 \text{ shares}}$$

$$\text{Or } \frac{0.65 \text{ EBIT} - ₹ 31,200}{3} = \frac{0.65 \text{ EBIT} - ₹ 59,200}{2}$$

$$\text{Or } 1.30 \text{ EBIT} - ₹ 62,400 = 1.95 \text{ EBIT} - ₹ 1,77,600$$

$$\text{Or } (1.95 - 1.30) \text{ EBIT} = ₹ 1,77,600 - ₹ 62,400 = ₹ 1,15,200$$

$$\text{Or } \text{EBIT} = \frac{₹ 1,15,200}{0.65}$$

$$\text{Or } \text{EBIT} = ₹ 1,77,231$$

Z Ltd.'s operating income (before interest and tax) is ₹9,00,000. The firm's cost of debt is 10 per cent and currently firm employs ₹30,00,000 of debt. The overall cost of capital of firm is 12 per cent.

Required: Calculate cost of equity.

### ANSWER

$$\text{Value of a firm (V)} = \frac{\text{EBIT}}{\text{Overall cost of capital (K}_0\text{)}} \text{ or, } \frac{\text{₹9,00,000}}{0.12} = \text{₹75,00,000}$$

$$\begin{aligned} \text{Market value of equity (S)} &= \text{Value of the firm (V)} - \text{Value of Debts (D)} \\ &= \text{₹75,00,000} - \text{₹30,00,000} = \text{₹45,00,000} \end{aligned}$$

#### Calculation of Cost of Equity

$$\text{Overall Cost of Capital (K}_0\text{)} = K_e \left( \frac{S}{V} \right) + K_d \left( \frac{D}{V} \right)$$

$$\text{Or, } K_0 \times V = (K_e \times S) + (K_d \times D) \quad \text{Or, } K_e = \frac{(K_0 \times V) - (K_d \times D)}{S}$$

$$\text{Or, } = \frac{(0.12 \times \text{₹75,00,000}) - (0.10 \times \text{₹30,00,000})}{\text{₹45,00,000}} = \frac{\text{₹9,00,000} - \text{₹3,00,000}}{\text{₹45,00,000}} = 0.1333 \text{ or } 13.33\%$$

Note:

Answer can also be calculated from the formula of Cost of Equity  
Cost of Equity = Profit after interest (PBT) / Value of Equity \* 100  
= (9,00,000 - 3,00,000) / 45,00,000 \* 100  
= 13.33%

Interest = 30,00,000 \* 10% = 3,00,000

**PRACTICE QUESTIONS  
FINANCIAL MANAGEMENT  
AMIT TALDA MENTORSHIP (ATM)**

*A firm's details are as under:*

*Sales (@100 per unit)                      ₹ 24,00,000*

*Variable Cost                                      50%*

*Fixed Cost                                         ₹ 10,00,000*

*It has borrowed ₹ 10,00,000 @ 10% p.a. and its equity share capital is ₹ 10,00,000 (₹ 100 each).*

*Consider tax @ 50 %.*

**CALCULATE:**

- (a) Operating Leverage*
- (b) Financial Leverage*
- (c) Combined Leverage*

## ANSWER

---

	(₹)
Sales	24,00,000
<i>Less: Variable cost</i>	12,00,000
Contribution	12,00,000
<i>Less: Fixed cost</i>	10,00,000
EBIT	2,00,000
<i>Less: Interest</i>	1,00,000
EBT	1,00,000
<i>Less: Tax (50%)</i>	50,000

EAT	50,000
No. of equity shares	10,000
EPS	5

- (a) Operating Leverage =  $\frac{12,00,000}{2,00,000} = 6$  times
- (b) Financial Leverage =  $\frac{2,00,000}{1,00,000} = 2$  times
- (c) Combined Leverage =  $OL \times FL = 6 \times 2 = 12$  times.

**PRACTICE QUESTIONS**  
**FINANCIAL MANAGEMENT**  
**AMIT TALDA MENTORSHIP (ATM)**

The following data pertains to Yagya Ltd.:

Existing Capital Structure:

20 lakh equity shares of ₹10 each

Tax Rate 50%

Yagya Ltd. plans to raise additional capital of ₹200 lakh for financing an expansion project. It is evaluating two alternative financing plans:

(i) Issue of 20,00,000 equity shares of ₹10 each and

(ii) Issue of ₹200 lakh debentures carrying 14% interest.

You are required to compute indifference point.

### ANSWER

Capital structure:

Particulars	Alternative I	Alternative II
Existing equity share capital	2,00,00,000	2,00,00,000
New Finance:		
Equity Share Capital	2,00,00,000	-
14% Debentures	-	2,00,00,000
No. of equity shares	40,00,000	20,00,000

Calculation of indifferent point between Alternative I & Alternative II:

$$\frac{(EBIT - I)(1 - t) - D_p}{N_1} = \frac{(EBIT - I)(1 - t) - D_p}{N_2}$$

Let the EBIT be 'x'.

$$\frac{(x - 0)(1 - 0.5) - 0}{40,00,000} = \frac{(x - 28,00,000)(1 - 0.5) - 0}{20,00,000}$$

$$\frac{0.5x}{4} = \frac{0.5x - 14,00,000}{2}$$

$$x = 2x - 56,00,000$$

$$-x = -56,00,000$$

$$x = EBIT = 56,00,000$$

At EBIT of ₹56,00,000, EPS under both option will be same i.e. ₹0.7 per share.

Verification: (Only for Understanding Purpose, not to written in exams)

Particulars	Alternative I	Alternative II
EBIT	56,00,000	56,00,000
(-) Interest	-	(28,00,000)
EBT	56,00,000	28,00,000
(-) Tax @ 50%	(28,00,000)	(14,00,000)

PAT/Profit available to equity shareholders	28,00,000	14,00,000
No. of equity shares	40,00,000	20,00,000
EPS	0.7	0.7

**PRACTICE QUESTIONS**  
**FINANCIAL MANAGEMENT**  
**AMIT TALDA MENTORSHIP (ATM)**

Calculate the level of Earnings Before Interest and Tax (EBIT) at which the EPS indifference point between the following financing alternative will occur:

- (a) Equity share capital of ₹12,00,000 and 12% debentures of ₹8,00,000.
- (b) Equity share capital of ₹8,00,000, 14% preference share capital of ₹4,00,000 and 12% debentures of ₹8,00,000.

Assume corporate tax is 35% and par value of equity share, preference shares and debentures are ₹100 in each case.

**ANSWER**

Calculation of indifference point between Option 1 & 2:

$$\frac{(EBIT - I)(1 - t) - D_p}{N_1} = \frac{(EBIT - I)(1 - t) - D_p}{N_2}$$

Let the EBIT be 'x'.

$$\frac{(x - 96,000)(1 - 0.35) - 0}{12,000} = \frac{(x - 96,000)(1 - 0.35) - 56,000}{8,000}$$

$$\frac{0.65x - 62,400}{12} = \frac{0.65x - 62,400 - 56,000}{8,000}$$

$$5.2x - 4,99,200 = 7.8x - 14,20,800$$

$$-2.6x = -9,21,600$$

$$x = EBIT = 3,54,462$$

**Question 1:**

A person is required to pay four equal annual payments of ₹ 4,000 each in his Deposit account that pays 10 per cent interest per year. Find out the future value of annuity at the end of 4 years.

**Question 2:**

A person is required to pay four equal annual payments of Rs.5,000 each in his deposit account that pays 8% interest per year. Find out the future value of annuity at the end of 4 years.

## ANSWERS

1.

$$FVA = A \left( \frac{(1+i)^n - 1}{i} \right) = ₹ 4,000 \left( \frac{(1+0.10)^4 - 1}{0.10} \right) = ₹ 4,000 \times 4.641 = ₹ 18,564$$

Future Value of Annuity at the end of 4 years = ₹ 18,564

Due to the Rounding off minor difference may come in the final answer.

2.

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

$$= ₹ 5,000 (4.507) = ₹ 22,535$$

Due to the Rounding off minor difference may come in the final answer.

1.

*Ascertain the compound value and compound interest of an amount of ₹ 75,000 at 8 percent compounded semiannually for 5 years.*

2.

*X is invested ₹ 2,40,000 at annual rate of interest of 10 percent. What is the amount after 3 years if the compounding is done?*

*(i) Annually*

*(ii) Semi-annually.*

## ANSWERS

1.

### Computation of Compound Value and Compound Interest

Semiannual Rate of Interest (i) =  $8/2 = 4\%$

$$n = 5 \times 2 = 10, \quad P = ₹ 75,000$$

$$\begin{aligned} \text{Compound Value} &= P (1+i)^n \\ &= 75,000 (1+4\%)^{10} \\ &= 75,000 \times 1.4802 \\ &= ₹ 1,11,015 \end{aligned}$$

$$\text{Compound Interest} = ₹ 1,11,015 - ₹ 75,000 = ₹ 36,015$$

2.

### Computation of Future Value

Principal (P) = ₹ 2,40,000

Rate of Interest (i) = 10% p.a.

Time period (n) = 3 years

Amount if compounding is done:

(i) **Annually**

$$\text{Future Value} = P (1 + i)^n$$

$$= ₹ 2,40,000 \left(1 + \frac{10}{100}\right)^3 = ₹ 2,40,000 (1 + 0.1)^3 = ₹ 2,40,000 \times 1.331 = ₹ 3,19,440$$

(ii) **Semi-Annually**

$$\text{Future Value} = 2,40,000 \left(1 + \frac{10}{100 \times 2}\right)^{3 \times 2}$$

$$= ₹ 2,40,000 (1 + 0.05)^6$$

$$= ₹ 2,40,000 \times (1.05)^6$$

$$= ₹ 2,40,000 \times 1.3401$$

$$= ₹ 3,21,624$$

**Question 1:**

Find the amount of an annuity if payment of ₹ 500 is made annually for 7 years at interest rate of 14% compounded annually.

**Question 2:**

₹2,000 is invested at the end of each month in an account paying interest 6% per year compounded monthly. What is the approximate amount/value of this investment after 10th payment?

## ANSWERS

1.

$$R = 500, n = 7, i = 0.14$$

$$FVA = R \times \left[ \frac{(1+i)^n - 1}{i} \right] = 500 \times 10.7304915 = 5,365.25$$

2.

$$FV \text{ of Annuity} = R \frac{(1+i)^n - 1}{i}$$

$$FV \text{ of Annuity} = 2000 \frac{(1+6\%/12)^{10} - 1}{6\%/12}$$

$$FV \text{ of Annuity} = 2000 \frac{(1+0.005)^{10} - 1}{0.005}$$

$$FV \text{ of Annuity} = 2000 \frac{1.051 - 1}{0.005}$$

$$FV \text{ of Annuity} = 20,456$$

A company has to make a choice between two projects namely A and B. The initial capital outlay of two Projects are ₹ 1,35,000 and ₹ 2,40,000 respectively for A and B. There will be no scrap value at the end of the life of both the projects. The opportunity Cost of Capital of the company is 16%. The annual incomes are as under:

Year	Project A	Project B	Discounting factor @ 16%
1	–	60,000	0.862
2	30,000	84,000	0.743
3	1,32,000	96,000	0.641
4	84,000	1,02,000	0.552
5	84,000	90,000	0.476

You are required to calculate for each project:

- (i) Discounted payback period
- (ii) Profitability index
- (iii) Net present value.

**ANSWER**

**Working Notes:**

**(1) Computation of Net Present Values of Projects**

Year	Cash flows		Discounting	Discounted	
	Project A	Project B	factor @ 16 %	Project A	Project B
	₹	₹		₹	₹
	(1)	(2)	(3)	(3) × (1)	(3) × (2)
0	1,35,000	2,40,000	1.000	1,35,000	2,40,000
1	–	60,000	0.862	–	51,720
2	30,000	84,000	0.743	22,290	62,412
3	1,32,000	96,000	0.641	84,612	61,536
4	84,000	1,02,000	0.552	46,368	56,304
5.	84,000	90,000	0.476	<u>39,984</u>	<u>42,840</u>
Net present value				58,254	34,812

**(2) Computation of Cumulative Present Values of Projects Cash inflows**

Year	Project A		Project B	
	PV of cash inflows	Cumulative PV	PV of cash inflows	Cumulative PV
	₹	₹	₹	₹
1	–	–	51,720	51,720
2	22,290	22,290	62,412	1,14,132

3	84,612	1,06,902	61,536	1,75,668
4	46,368	1,53,270	56,304	2,31,972
5	39,984	1,93,254	42,840	2,74,812

(i) **Discounted payback period:** (Refer to Working note 2)

Cost of Project A = ₹ 1,35,000

Cost of Project B = ₹ 2,40,000

Cumulative PV of cash inflows of Project A after 4 years = ₹ 1,53,270

Cumulative PV of cash inflows of Project B after 5 years = ₹ 2,74,812

A comparison of projects cost with their cumulative PV clearly shows that the project A's cost will be recovered in less than 4 years and that of project B in less than 5 years. The exact duration of discounted payback period can be computed as follows:

	Project A	Project B
Excess PV of cash inflows over the project cost (₹)	18,270 (₹ 1,53,270 – ₹ 1,35,000)	34,812 (₹ 2,74,812 – ₹ 2,40,000)
Computation of period required to recover excess amount of cumulative PV over project cost (Refer to Working note 2)	0.39 year (₹ 18,270 / ₹ 46,368)	0.81 years (₹ 34,812 / ₹ 42,840)
Discounted payback period	3.61 year (4 – 0.39) years	4.19 years (5 – 0.81) years

(ii) **Profitability Index:** =  $\frac{\text{Sum of discount cash inflows}}{\text{Initial cash outlay}}$

Profitability Index (for Project A) =  $\frac{₹ 1,93,254}{₹ 1,35,000} = 1.43$

Profitability Index (for Project B) =  $\frac{₹ 2,74,812}{₹ 2,40,000} = 1.15$

(iii) **Net present value** (for Project A) = ₹ 58,254

(Refer to Working note 1)

**Net present value** (for Project B) = ₹ 34,812

Please Note: in Interpolation, (-) formula is used. You can use (+) formula as taught in lectures, you will get same answer.

ABC Ltd. is a small company that is currently analyzing capital expenditure proposals for the purchase of equipment; the company uses the net present value technique to evaluate projects. The capital budget is limited to ₹500,000 which ABC Ltd. believes is the maximum capital it can raise. The initial investment and projected net cash flows for each project are shown below. The cost of capital of ABC Ltd is 12%. You are required to COMPUTE the NPV of the different projects.

	<b>Project A</b> (₹)	<b>Project B</b> (₹)	<b>Project C</b> (₹)	<b>Project D</b> (₹)
<i>Initial Investment</i>	200,000	190,000	250,000	210,000
<i>Project Cash Inflows:</i>				
<i>Year 1</i>	50,000	40,000	75,000	75,000
<i>2</i>	50,000	50,000	75,000	75,000
<i>3</i>	50,000	70,000	60,000	60,000
<i>4</i>	50,000	75,000	80,000	40,000
<i>5</i>	50,000	75,000	100,000	20,000

**ANSWER**

**Calculation of net present value:**

<b>Period</b>	<b>PV factor</b>	<b>Project A (₹)</b>	<b>Project B (₹)</b>	<b>Project C (₹)</b>	<b>Project D (₹)</b>
0	1.000	(2,00,000)	(1,90,000)	(2,50,000)	(2,10,000)
1	0.893	44,650	35,720	66,975	66,975
2	0.797	39,850	39,850	59,775	59,775
3	0.712	35,600	49,840	42,720	42,720
4	0.636	31,800	47,700	50,880	25,440
5	0.567	28,350	42,525	56,700	11,340
<b>Net Present Value</b>		(19,750)	25,635	27,050	(3,750)

Equipment A has a cost of ₹75,000 and net cash flow of ₹20,000 per year for six years. A substitute equipment B would cost ₹50,000 and generate net cash flow of ₹14,000 per year for six years. The required rate of return of both equipments is 11 per cent. Calculate :

- Net Present Value and Profitability Index for the both equipments.
- Which equipment should be accepted and why ?

Present Values of Rupee 1 at 11% are :

Year	1	2	3	4	5	6
PV of 1	0.901	0.812	0.731	0.659	0.593	0.535

### ANSWER

#### **Equipment A :**

$$\begin{aligned}\text{NPV} &= 20,000 \times (\text{PVAF}_6, 0.11) - 75,000 \\ &= 20,000 \times 4.231 - 75,000 \\ &= 84,620 - 75,000 \\ &= ₹9,620\end{aligned}$$

$$\text{Profitability Index} = \text{Present Value of Cash Inflows} / \text{Initial Cost} = 84,620 / 75,000 = 1.128$$

#### **Equipment B:**

$$\begin{aligned}\text{NPV} &= 14,000 \times \text{PVAF}_6, 0.11 - 50,000 \\ &= 14,000 \times 4.231 - 50,000 \\ &= 59,234 - 50,000 \\ &= ₹9,234\end{aligned}$$

$$\text{Profitability Index} = \text{Present Value of Cash Inflows} / \text{Initial Cost}.$$

$$59,234 / 50,000 = 1.185$$

**As per NPV project A is to be preferred over project B. But as per PI technique Project B is to be preferred. The NPV decision should be preferred unless there is a capital rationing. If the firm has funds of ₹75,000 to invest, then project A should be adopted. This will result in increase in shareholders wealth to the extent of ₹9,620 against project B which will increase the wealth only by ₹9,234.**



**Question 1**

Sahu & Co. earns ₹ 6 per share having capitalization rate of 10 per cent and has a return on investment at the rate of 20 per cent. According to Walter's model, what should be the price per share at 30 per cent dividend payout ratio? Is this the optimum payout ratio as per Walter?

**Question 2**

Goldi locks Ltd. was started a year back with equity capital of ₹ 40 lakhs. The other details are as under:

Earnings of the company	₹ 4,00,000
Price Earnings ratio	12.5
Dividend paid	₹ 3,20,000
Number of Shares	40,000

Find the current market price of the share. Use Walter's Model.

Find whether the company's D/ P ratio is optimal, use Walter's formula.

**Question 3**

The following information pertains to M/s XY Ltd.

Earnings of the Company	₹ 5,00,000
Dividend Payout ratio	60%
No. of shares outstanding	1,00,000
Equity capitalization rate	12%
Rate of return on investment	15%

- (i) What would be the market value per share as per Walter's model?  
(ii) What is the optimum dividend payout ratio according to Walter's model and the market value of Company's share at that payout ratio?

#### Question 4

The following information is supplied to you:

	₹
Total Earnings	2,00,000
No. of equity shares (of 100 each)	20,000
Dividend paid	1,50,000
Price/Earning ratio	12.5

- (i) Ascertain whether the company is the following an optimal dividend policy.
- (ii) Find out what should be the P/E ratio at which the dividend policy will have no effect on the value of the share.
- (iii) Will your decision change, if the P/E ratio is 8 instead of 12.5?



**Question 5**

The earnings per share of a company is ₹ 10 and the rate of capitalization applicable to it is 10 per cent. The company has three options of paying dividend i.e. (i) 50%, (ii) 75% and (iii) 100%.

Calculate the market price of the share as per Walter's model if it can earn a return of (a) 15, (b) 10 and (c) 5 per cent on its retained earnings.





**Question 6**

The following information is collected from the annual reports of J Ltd:

Profit before tax	₹ 2.50 crore
Tax rate	40 percent
Retention ratio	40 percent
Number of outstanding shares	50,00,000
Equity capitalization rate	12 percent
Rate of return on investment	15 percent

What should be the market price per share according to Gordon's model of dividend policy?

**Question 7**

The following information is given for QB Ltd.

Earnings per share	₹ 12
Dividend per share	₹ 3
Cost of capital	18%
Internal Rate of Return on investment	22%
Retention Ratio	75%

Calculate the market price per share using

- (i) Gordon's formula
- (ii) Walter's formula



### **Question 8**

X Ltd., has 8 lakhs equity shares outstanding at the beginning of the year. The current market price per share is ₹ 120. The Board of Directors of the company is contemplating ₹ 6.4 per share as dividend. The rate of capitalization, appropriate to the risk-class to which the company belongs, is 9.6%:

(i) Based on M-M Approach, calculate the market price of the share of the company, when the dividend is – (a) declared; and (b) not declared.

(ii) How many new shares are to be issued by the company, if the company desires to fund an investment budget of ₹ 3.20 crores by the end of the year assuming net income for the year will be ₹ 1.60 crores?





### **Question 9**

RST Ltd. has a capital of ₹ 10,00,000 in equity shares of ₹ 100 each. The shares are currently quoted at par. The company proposes to declare a dividend of ₹ 10 per share at the end of the current financial year. The capitalization rate for the risk class of which the company belongs is 12%. What will be the market price of the share at the end of the year, if:

(i) A dividend is not declared?

(ii) A dividend is declared?

(iii) Assuming that the company pays the dividend and has net profits of ₹ 5,00,000 and makes new investments of ₹ 10,00,000 during the period, how many new shares must be issued? Use the MM model.





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*XYZ is a company having share capital of ₹ 10 lakhs of ₹ 10 each. It distributed current dividend of 20% per annum. Annual growth rate in dividend expected is 2%. The expected rate of return on its equity capital is 15%. CALCULATE price of share applying Gordon's growth Model.*

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$$P = \frac{D_0(1+g)}{K_e - g}$$
$$= \frac{2(1+0.02)}{0.15 - 0.02} = ₹ 15.69$$

*The following information is given below in case of Aditya Ltd.:*

*Earnings per share = ₹60*

*Capitalisation rate = 15%*

*Return on investment = 25%*

*Dividend payout ratio = 30%*

*(i) COMPUTE price per share using Walter's Model.*

ANSWER

- (i) **As per Walter's Model, Price per share is computed by using the following formula:**

$$P = \frac{D + \frac{r}{K_e}(E - D)}{K_e}$$

Where,

P = Market Price of the share.

E = Earnings per share.

D = Dividend per share.

$K_e$  = Cost of equity/ rate of capitalization/ discount rate.

r = Internal rate of return/ return on investment

Applying the above formula, price per share

$$P = \frac{18 + \frac{0.25}{0.15}(60 - 18)}{0.15}$$

$$\text{Or, } P = \frac{18 + 70}{0.15} = ₹ 586.67$$

1.

The average annual consumption of material is 20,000 kg. at a price of ₹2 per kg. The storage cost is 16% on average inventory and the cost of placing one order is ₹50. Determine Economic Order Quantity. Calculate Number of orders to be placed in a year.

2.

A manufacturer requires 9,600 units of a certain component annually. This is currently purchased from a regular supplier at ₹ 50 per unit. The cost of placing an order is ₹60 per order and the annual carrying cost is ₹5 per price. What is the economic order quantity (EOQ) for placing order?

Recently the supplier has expressed his willingness to reduce the price to ₹48, if the total requirements are obtained from him in two equal orders and to ₹47, if the entire quantity required is purchased in one lot. Analyze the cost of the three options and recommend the best course.

3.

The Complete Gardener is deciding on the economic order quantity for two brands of lawn fertilizer; Super Grow and Nature's Own. The following information is collected:

	Fertilizer	
	<b>Super Grow</b>	<b>Natures Own</b>
Annual demand	2,000 bags	1,280 bags
Relevant ordering cost per purchase order	₹1,200	₹1,400
Annual relevant carrying cost per bag	₹480	₹560

Required :

(i) Compute EOQ for Super Grow & Nature's Own.

(ii) For the EOQ, what is the sum of the total annual relevant ordering costs and total annual relevant carrying costs for Super Grow and Nature's Own?

(iii) For the EOQ , Compute the number of deliveries per year for Super Grow & Nature's Own.

## ANSWERS

1.

$$\begin{aligned} \text{EOQ} &= \sqrt{\frac{2 \times \text{Annual consumption} \times \text{Ordering cost}}{\text{Carrying cost p.u. p.a}}} \\ &= \sqrt{\frac{2 \times 20,000 \text{ kg} \times 50}{2 \times 16 \%}} \\ &= \sqrt{\frac{20,00,000}{0.32}} \end{aligned}$$

$$\text{EOQ} = 2,500 \text{ Kg}$$

$$\text{No. of orders} = \frac{\text{Annual consumption}}{\text{Re-ordering /EOQty}} = \frac{20,000 \text{ kg}}{2,500 \text{ kg}} = 8 \text{ orders in year}$$

2.

$$\begin{aligned} \text{EOQ} &= \sqrt{\frac{2 \times \text{Annual consumption} \times \text{Ordering cost}}{\text{Carrying cost p.u. p.a}}} \\ &= \sqrt{\frac{2 \times 9,600 \text{ units} \times 60}{5}} \\ &= \sqrt{\frac{11,52,000}{5}} \end{aligned}$$

$$\text{EOQ} = 480 \text{ units}$$

Total cost at EOQ level

		Rs.
Material cost	(9,600 units × 50)	4,80,000
(+) Ordering cost	$\left\{ \frac{9,600 \text{ units}}{480 \text{ units}} \times 60 \right\}$	1,200
(+) Carrying cost	$\left\{ \frac{480 \text{ units}}{2} \times 5 \right\}$	1,200
		<b>4,82,400</b>

Total cost, if entire quantity is purchased in two lot:

		Rs.
Material cost	(9,600 units × 48)	4,60,800
(+) Ordering cost	$\left\{ \frac{9,600 \text{ units}}{4800 \text{ units}} \times 60 \right\}$	120
(+) Carrying cost	$\left\{ \frac{4800 \text{ units}}{2} \times 5 \right\}$	12,000

		<b>4,72,920</b>
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Total cost, when two orders are placed in one lot:

		Rs.
Material cost	(9,600 units × 47)	4,51,200
(+) Ordering cost	$\left\{ \frac{9,600 \text{ units}}{9,600 \text{ units}} \times 60 \right\}$	60
(+) Carrying cost	$\left\{ \frac{9,600 \text{ units}}{2} \times 5 \right\}$	24,000
		<b>4,75,260</b>

**Analysis** : It advised to place 2 orders in lot size of 4,800 units, as total cost is minimum.

3.

	<b>Super Grow</b>	<b>Nature's Own</b>
EOQ	$\sqrt{\frac{2 \times 2,000 \text{ bags} \times 1,200}{480}}$	$\sqrt{\frac{2 \times 1,280 \text{ bags} \times 1,400}{560}}$
	100 bags	80 bags
Total Ordering & Carrying cost	$\sqrt{2 \times 2,000 \times 1,200 \times 480}$	$\sqrt{2 \times 1,280 \times 1,400 \times 560}$
	<b>₹48,000</b>	<b>₹44,800</b>
No. of deliveries	$\frac{2,000 \text{ bags}}{100 \text{ bags}}$	$\frac{1,280 \text{ bags}}{80 \text{ bags}}$
	20 deliveries	16 deliveries

From the following information, you are required to calculate Maximum Level, Minimum Level and Re-Ordering Level for materials X and y:

	X	Y
Normal usage per week	150	200
Re-ordering quantity	900	1,500
Maximum usage per week	225	250
Minimum usage per week	75	100
Re-ordering period (weeks)	12 to 18	6 to 12

### ANSWERS

Re-order level	(Maximum usage × Maximum delivery period)	
X	(225 units × 18 weeks)	4,050 units
Y	(250 units × 12 weeks)	3,000 units
Minimum level	Re-order level – (Normal usage × Average delivery period)	
X	4,050 units – (150 units × 15 weeks)	1,800 units
Y	3,000 units – (200 units × 9 weeks)	1,200 units
Maximum level	(Re-order level + Re-ordering qty) – (Minimum usage × Minimum delivery period)	
X	(4,050 units + 900 units) – (75 units × 12 weeks)	4,050
Y	(3,000 units + 1,500 units) – (100 units × 6 weeks)	3,900

M/s Tubes Ltd. are the manufactures of picture tubes for TV. The following are the details of their operation during 2009:

Average monthly market demand	2,000 tubes
Ordering cost	₹100 per order
Inventory carrying cost	20% per annum
Cost of tubes	₹500 per tube
Normal usage	100 tubes per week
Minimum usage	50 tubes per week
Maximum usage	200 tubes per week
Lead time to supply	6 – 8 weeks

Compute from the above:

- (1) Economic order quantity. If the supplier is willing to supply quarterly 1,500 units at a discount of 5%, is it worth accepting?
- (2) Maximum level stock
- (3) Minimum level stock
- (4) Reorder level

**ANSWER**

$$\begin{aligned} \text{Annual consumption} &= \text{Normal usage} \times \text{No. weeks in year} \\ &= 100 \text{ tubes} \times 52 \text{ weeks} \\ &= 5,200 \text{ tubes} \end{aligned}$$

$$\begin{aligned} \text{EOQ} &= \sqrt{\frac{2 \times \text{Annual consumption} \times \text{Ordering cost}}{\text{Carrying cost p.u.p.a}}} \\ &= \sqrt{\frac{2 \times 5,200 \text{ tubes} \times 100}{500 \times 20\%}} \\ &= \sqrt{\frac{10,40,000}{100}} \end{aligned}$$

$$\text{EOQ} = 101.98 \text{ tubes (say 102 tubes)}$$

Total cost at EOQ level

		₹
Material cost	(5,200 tubes × ₹500)	26,00,000
(+) Ordering	$\left[ \frac{5,200 \text{ tubes}}{102 \text{ tubes}} \times 100 \right]$	5,098
(+) Carrying cost	$\left[ \frac{102 \text{ tubes}}{2} \times 500 \times 20\% \right]$	5,100
		26,10,198

Total cost, at quarterly supply of 1,500 tubes at 5% discount

		₹
Material cost	(5,200 tubes × ₹475)	24,70,000
(+) Ordering	$\left[ \frac{5,200 \text{ tubes}}{1,500 \text{ tubes}} \times 100 \right]$	347
(+) Carrying cost	$\left[ \frac{1,500 \text{ tubes}}{2} \times 475 \times 20\% \right]$	71,250
		25,41,597

Analysis: Accept offer of quarterly supply of 1,500 tubes at 5% discount as it will save ₹ 68,601 (26,10,198 – 25,41,597)

Re-order level	(Maximum usage × Maximum delivery period)
	(200 tubes × 8 weeks)
	1,600 tubes
Minimum level	Re-order level - (Normal usage × Average delivery period)
	1,600 tubes – (100 tubes × 7 weeks)
	900 tubes

Maximum level	$(\text{Re-order level} + \text{Re-ordering qty}) - (\text{Maximum usage} \times \text{Maximum delivery period})$
	$(1,600 \text{ tubes} + 102 \text{ tubes}) - (50 \text{ tubes} \times 6 \text{ weeks})$
	1,402 tubes

1.

Z Ltd. has an estimated cash payments of Rs. 8,00,000 for a one month period and the payments are expected to steady over the period. The fixed cost per transaction is Rs. 250 and interest rate on marketable securities is 12% p.a.

Calculate:

(1) Optimal cash balance

(2) The optimal transaction size

2.

N Ltd. has a separate account for cash disbursement. An estimated cash payments of Rs. 2,62,500 for one month period and the payments are expected to steady over the period. The fixed cost per transaction is Rs. 25 and interest rate on marketable securities yields. 7.5% p.a.

Calculate:

(1) Optimal cash balance

(2) No. of transactions

**ANSWER**

1.

$$\text{Optimal cash balance} = \sqrt{\frac{2 \times \text{Annual Cash disbursements} \times \text{Transaction cost}}{\text{Opportunity cost noe rupee per annum}}}$$

$$\text{Optimal cash balance} = \sqrt{\frac{2 \times 96,00,000 \times 250}{1 \times 12\%}}$$

$$= \sqrt{\frac{4,80,00,00,000}{0.12}}$$

$$= \text{Rs. } 2,00,000$$

$$\text{No. of transaction} = \sqrt{\frac{\text{Annual Cash disbursements}}{\text{Optimal cash balance}}} = \frac{96,00,000}{2,00,000} = 48 \text{ in a year}$$

2.

$$\text{Optimal cash balance} = \sqrt{\frac{2 \times \text{Annual Cash disbursements} \times \text{Transaction cost}}{\text{Opportunity cost noe rupee per annum}}}$$

$$= \sqrt{\frac{2 \times 31,50,000 \times 25}{1 \times 7.5\%}}$$

$$= \text{Rs. } 45,826$$

$$\text{No. of transaction} = \sqrt{\frac{\text{Annual Cash disbursements}}{\text{Optimal cash balance}}} = \frac{31,50,000}{45,826} = 68.74 \text{ say } 69 \text{ in a year}$$

XYZ Co. Ltd. is a pipe manufacturing company. Its production cycle indicates that materials, are introduced in the beginning of the production cycle; wages and overhead accrue evenly throughout the period of the cycle. Wages are paid in the next month following the month of accrual. (Time Lag = 1 month). Work in process includes full units of raw materials used in the beginning of the production process and 50% of wages and overheads are supposed to be conversion costs.

Details of production process and the components of working capital are as follows:

Production of pipes	12,00,000 units
Duration of the production cycle	One month
Raw material inventory help	One month consumption
Finished goods inventory help for	Two month
Credit allowed by creditors	One month
Credit given to debtors	Two month
Cost price of raw materials	₹60 per unit
Direct wages	₹10 per unit
Overheads	₹20 per unit
Selling price of finished pipes	₹100 per unit

Required to calculate the amount of working capital required for the company.

## ANSWER

Statement showing working capital estimation:

Particulars	Norms	Calculations	₹
Current Assets:			
Raw Material Stock	1 month	$\left[7,20,00,000 \times \frac{1}{12}\right]$	60,00,000
WIP Stock	1 month	$\left[9,00,00,000 \times \frac{1}{12}\right]$	75,00,000
Finished Goods Stock	2 month	$\left[10,80,00,000 \times \frac{2}{12}\right]$	1,80,00,000
Debtors (on cost)	2 month	$\left[10,80,00,000 \times \frac{2}{12}\right]$	1,80,00,000
			4,95,00,000

Particulars	Norms	Calculations	₹
Current Liabilities;			
Creditors	1 month	$\left[7,20,00,000 \times \frac{1}{12}\right]$	60,00,000
Outstanding Wages	1 month	$\left[1,20,00,000 \times \frac{1}{12}\right]$	10,00,000
			70,00,000
Working Capital (A) – (B)			4,25,00,000

The following information is available for a component in use at TQR Ltd.

Normal usage	150 units per month
Maximum usage	250 units per month
Minimum usage	50 units per month
Economic Order Quantity (EOQ)	1,000 units
Lead time for orders	1 to 2 months

Calculate following parameters for the component:

- (i) Re-order level
- (ii) Maximum level
- (iii) Minimum level
- (iv) Average level

## **ANSWERS**

$$\begin{aligned} Re - \text{order level} &= (\text{Maximum usage} \times \text{Maximum delivery period}) \\ &= (250 \times 2) \\ &= 500 \end{aligned}$$

$$\begin{aligned} \text{Minimum level} &= Re - \text{order level} - (\text{Normal usage} \times \text{Average delivery period}) \\ &= 500 - (150 \times 1.5) \\ &= 275 \end{aligned}$$

$$\begin{aligned} \text{Maximum level} &= (Re - \text{order level} + Re - \text{ordering qty.}) \\ &\quad - (\text{Minimum usage} \times \text{Minimum delivery period}) \\ &= (500 + 1,000) - (50 \times 1) \\ &= 1,450 \end{aligned}$$

$$\begin{aligned} \text{Average level} &= \frac{\text{Minimum Level} + \text{Maximum Level}}{2} \\ &= (275 + 1,450) / 2 \\ &= 862.5 \end{aligned}$$

*A company has prepared the following projections for a year:*

<i>Sales</i>	<i>21,000 units</i>
<i>Selling Price per unit</i>	<i>₹ 40</i>
<i>Variable Costs per unit</i>	<i>₹ 25</i>
<i>Total Costs per unit</i>	<i>₹ 35</i>
<i>Credit period allowed</i>	<i>One month</i>

*The Company proposes to increase the credit period allowed to its customers from one month to two months. It is envisaged that the change in the policy as above will increase the sales by 8%. The company desires a return of 25% on its investment.*

*You are required to examine and advise whether the proposed Credit Policy should be implemented or not.*

## ANSWER

### Statement showing Evaluation of Credit Policies

	Particulars	Present Policy (1 month)	Proposed Policy (2 months)
A.	Expected Profit:		
	(a) Net Credit Sales (Sales units × ₹ 40)	8,40,000	9,07,200
	(b) Less: Total Cost:		
	Variable (Sales units × ₹ 25)	5,25,000	5,67,000
	Fixed Cost	<u>2,10,000</u>	<u>2,10,000</u>
		<u>7,35,000</u>	<u>7,77,000</u>
	(c) Expected Profit [(a)-(b)]	<u>1,05,000</u>	<u>1,30,200</u>
B.	Opportunity Cost of Investment in Receivables	<u>15,313</u>	<u>32,375</u>
C.	Net Benefits [A-B]	<u>89,687</u>	<u>97,825</u>

**Recommendation:** Proposed Policy should be implemented since the net benefit under this policy are higher than those under present policy.

#### Working Note: Calculation of Opportunity Cost

$$\text{Opportunity Cost} = \text{Total Cost} \times \frac{\text{Collection Period}}{12} \times \text{Rate of Return}$$

$$\text{Present Policy} = ₹ 7,35,000 \times \frac{1}{12} \times \frac{25}{100} = ₹ 15,313$$

$$\text{Present Policy} = ₹ 7,77,000 \times \frac{2}{12} \times \frac{25}{100} = ₹ 32,375$$

*CALCULATE the cost of equity capital of H Ltd., whose risk-free rate of return equals 10%. The firm's beta equals 1.75 and the return on the market portfolio equals to 15%.*

$$K_e = R_f + \beta (R_m - R_f)$$

$$K_e = 0.10 + 1.75 (0.15 - 0.10)$$

$$= 0.10 + 1.75 (0.05) = 0.1875 \text{ or } 18.75\%$$

A company produces a single product and sells it at ₹200 each. The variable cost of the product is ₹120 per unit and the fixed cost for the year is ₹96,000.

Calculate:

- (i) P/V ratio
- (ii) Sales at break-even point
- (iii) Sales units required to earn a target net profit of ₹1,20,000.
- (iv) Profit at sales of ₹7,00,000.

**ANSWER**

Sales – Variable cost = Contribution p. u.

$$200 - 120 = 80$$

$$(i) P/V \text{ ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100 = \frac{80}{200} \times 100 = 40\%$$

$$(ii) BEP \text{ (in value)} = \frac{\text{Fixed cost}}{\frac{P}{V} \text{ ratio}} = \frac{96,000}{40\%} = 2,40,000$$

(iii) Sales units required to earn a target net profit of ₹1,20,000.

Particulars	₹
Sales	5,40,000
Less: Variable cost	(3,24,000)
Contribution	2,16,000
Less: Fixed cost	(96,000)
Profit	1,20,000



$$\text{Sales} = \frac{2,16,000}{40\%} = 5,40,000$$

$$\text{Sales units} = \frac{5,40,000}{200} = 2,700$$

(iv) Profit at sales of ₹7,00,000:

Particulars	₹
Sales	7,00,000
Less: Variable cost	(4,20,000)
Contribution	2,80,000
Less: Fixed cost	(96,000)
Profit	1,84,000



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The sales turnover and profit during two periods were as follows:

Period-1 Sales : ₹20 lakh and Profit: ₹2 lakh

Period-2 Sales : ₹30 lakh and Profit : ₹4 lakh

Calculate:

(i) P/V ratio

(ii) Sales required to earn a profit of ₹5 lakh and

(iii) Profit when sales are ₹10 lakh.

## ANSWER

$$(i) P/V \text{ ratio} = \frac{\text{Change in profit}}{\text{Change in sales}} \times 100$$

$$= \frac{4,00,000 - 2,00,000}{30,00,000 - 20,00,000} \times 100$$

$$= 20\%$$

Particulars	Period 1	Period 2
Sales 100%	20,00,000	30,00,000
Less: Variable cost (80%)	(16,00,000)	(24,00,000)
Contribution 20%	4,00,000	(6,00,000)
Less: Fixed cost	(2,00,000)	(2,00,000)
Profit	2,00,000	4,00,000

(ii) Sales to earn a profit of ₹5,00,000:

Particulars	Period 1
Sales 100%	35,00,000
Less: Variable cost (80%)	(28,00,000)
Contribution 20%	7,00,000
Less: Fixed cost	(2,00,000)
Profit	5,00,000

$$\text{Required sales} = \frac{7,00,000}{20\%} = 35,00,000$$

(iii) Profit when sales are ₹10,00,000:

Particulars	Period 1
Sales 100%	10,00,000
Less: Variable cost (80%)	(8,00,000)
Contribution 20%	2,00,000
Less: Fixed cost	(2,00,000)
Profit	Nil