AFM Booster Masterclass
Chapter 3 - Mergers & Acquisitions

Question 1: RTP May 2023

The following information is provided relating to the acquiring company Efficient Ltd. and the target company Healthy Ltd.:

Particulars	Efficient Ltd.	Healthy Ltd.
No. of Shares (FV ₹ 10 each)	20 Lakhs	15 Lakhs
Market Capitalization	₹ 800 Lakhs	₹ 1,200 Lakhs
P/E Ratio (times)	10	5
Reserves and Surplus	₹ 400 Lakhs	₹ 273 Lakhs
Promoter's Holding (No. of shares)	8.65 Lakhs	9 Lakhs

Board of Directors of both the companies have decided to give a fair deal to the shareholders and accordingly for swap ratio the weights are decided as 45%, 20% and 35% respectively for Earning, Book Value and Market Price of share of each company.

Required:

(i) Calculate the swap ratio and also calculate Promoter's holding % after acquisition.

(ii) What is the EPS of Efficient Ltd. after acquisition of Healthy Ltd.?

(iii) What is the expected market price per share and market capitalization of Efficient Ltd. after acquisition, assuming P/E ratio of Efficient Ltd. remains unchanged?

(iv) Calculate free float market capitalization of the merged firm.

Solution 1:

(i) Swap Ratio

	Efficient Ltd.	Healthy Ltd.
Market capitalisation	**800 lakhs**	**1200 lakhs**
No. of shares	20 lakhs	15 lakhs
Market Price per share	₹ 40	₹ 80
P/E ratio	10	5
EPS	₹ 4	₹ 16
Profit	₹ 80 lakh	₹ 240 lakh
Share capital	₹ 200 lakh	₹ 150 lakh
Reserves and surplus	₹ 400 lakh	₹ 273 lakh
Total	₹ 600 lakh	₹ 423 lakh
Book Value per share	₹ 30	₹ 28.20

Calculation of Swap Ratio

EPS	4 : 1 i.e.	4.0 ´ 45%	1.80
Book value	0.94 :1 i.e.	0.94 ´ 20%	0.188
Market price	2 : 1 i.e.	2.0 ´ 35%	0.70
		Total	2.688

Swap ratio is for every one share of Healthy Ltd., to issue 2.688 shares of Efficient Ltd.

Hence, total no. of shares to be issued 15 lakh x 2.688 = 40.32 lakh shares

Promoter's holding = 8.65 lakh shares + (9 x 2.688 = 24.192 lakh shares) = 32.842 lakh

i.e. Promoter's holding % is (32.842 lakh/60.32 lakh) x 100 = 54.45%.

Calculation of EPS, Market price, Market capitalization and free float market capitalization.

(ii) Total No. of shares — 20 lakh + 40.32 lakh = 60.32 lakh

EPS after merger — $\frac{Total\ Profit}{No.\ of\ Shares} = \frac{80\ lakh + 240\ lakh}{60.32} = \frac{320\ lakhs}{60.32}$

= ₹ 5.305

(iii) Expected market price — EPS X P/E Ratio

= ₹ 5.305 X 10 = ₹ 53.05

Market capitalization — = ₹ 53.05 per share X 60.32 lakh shares

= ₹ 3,199.98 lakh

(iv) Free float of market capitalization = ₹ 53.05 per share X (60.32 lakh X 45.55%)
= ₹ 1457.59 lakh

Question 2: MTP 1 May 2023 (March)

The Balance Sheet of M/s. Sundry Ltd. as on 31-03-2020 is follows:

(₹ in lakhs)

Liabilities	₹	Assets	₹
Share Capital	300	Fixed Assets	600
Reserves	200	Inventory	500
Long Term Loan	400	Receivables	240
Short Term Loan	300	Cash	60
Payables & Provisions	200		
Total	**1400**	**Total**	**1400**

Sales for the year was ₹ 600 lakhs. The sales are expected to grow by 20% during the year. The profit margin and dividend pay-out ratio are expected to be 4% and 50% respectively.
The company further desires that during the current year Sales to Short Term Loan and Payables and Provision should be in the ratio of 4 : 3. Ratio of fixed assets to Long Term Loans should be 1.5. Debt Equity Ratio should not exceed 1.5.
You are required to determine:

(i) The amount of External Fund Requirement (EFR)
(ii) The amount to be raised from Short Term, Long Term and Equity funds.

Solution 2:

(i) External Funds Requirement (EFR):

(₹ in lakhs)

	(₹)
Expected sales (₹ 600 + 20% of ₹ 600)	720.00
Profit margin @ 4%	28.80
Dividend payout ratio @ 50%	14.40
Balance to be ploughed back (A)	14.40
Additional funds required (₹ 1400 - ₹ 200*) x 0.20 (B)	240.00
Balance to be met from external source (B - A)	**225.60**

* As current liabilities shall also be increased proportionately with increase in sales.

(ii) Amount to be raised from different sources with following conditions:

- Sales to short term loans and payables & provisions 4:3
- Ratio of fixed assets to long term loans 1.5
- Debt equity ratio should not exceed 1.5

(1) Amount to be raised from short term funds:

	(₹ in lakhs)
New amount of short-term loans and payables & provision $\left(\frac{3}{4}\times 600\right)$	450
Less: Existing Amount of short-term loans and payables & provision	500
Amount to be raised from short term funds	Nil

(2) Amount to be raised from Long term funds:

	(₹ in lakhs)
New fixed assets (₹ 600 + 20% of ₹ 600)	720
New long-term loans (₹ 720/1.5)	480
Less: Existing long-term loans	400
Amount to be raised from Long term funds	80

(3) Amount to be raised from equity funds:

	(₹ in lakhs)

Amount to be raised from external sources	225.60
Less: Amount to be raised from short term funds	----
Less: Amount to be raised from Long term funds	80.00
Balance amount to be raised from equity funds	145.60

Alternative Solution

(i) External Funds Requirement (EFR)

EFR = $\left(\frac{TA}{S} - \frac{P}{S}\right) \times \ \Delta S$- N x Projected Sales x (1 - D)

Where,

TA = Total Assets

S = Current Sales

P = Payables and Provisions

ΔS = Change in Sales

N = Net Profit Margin Ratio

D = Dividend Payout Ratio

Accordingly,

EFR =$\left(\frac{1,400}{600} \ - \ \frac{200}{600}\right)$x 120 - 0.04 x 720 x 0.5

= ₹ 225.6 lakhs

(ii) Funds to be raised from Various Sources

(1) Short Term Funds

Let X be the new Short-Term Loan then meeting the given condition the Additional Requirement shall be computed as follows:

$\frac{4}{3} = \frac{600\times1.2}{200\times1.2+X}$

X = 300.00

Short-Term Loans required	₹ 300.00 lakhs
Less: Existing	₹ 300.00 lakhs
Additional requirement	0.00 lakhs

(2) Long term funds

Let Y be the new Long -Term Loans then meeting the given condition the Additional Requirement shall be computed as follows:

1.5 = $\frac{FA}{Long\ term\ loans}$

1.5 = $\frac{600\times1.2}{Y}$

Y = 480

New Long Term Loans	₹ 480.00 Lakhs
Existing	₹ 400.00 Lakhs
Additional	**₹ 80.00 Lakhs**

(3) Equity to be raised

EFR	₹ 225.60 Lakhs
Less: Short Term Loans	0.00 Lakhs
Long term	₹ 80.00 Lakhs
Equity to be raised	**₹ 145.60 Lakhs**

New DER = $\frac{Debt}{shareholder's\ fund}$

= $\frac{480}{300+145.60+(1.2\times200)}$

= 0.70

Condition is satisfied

Question 3: MTP 1 May 2023 (March)

Long Ltd., is planning to acquire Tall Ltd., with the following data available for both the companies:

	Long Ltd.	**Tall Ltd.**
Expected EPS	₹ 12	₹ 5
Expected DPS	₹ 10	₹ 3
No. of Shares	30,00,000	18,00,000
Current Market Price of Share	₹ 180	₹ 50

As per an estimate Tall Ltd., is expected to have steady growth of earnings and dividends to the tune of 6% per annum. However, under the new management the growth rate is likely to be enhanced to 8% per annum without additional investment.

You are required to:

(i) Calculate the net cost of acquisition by Long Ltd., if ₹ 60 is paid for each share of Tall Ltd.

(ii) If the agreed exchange ratio is one share of Long Ltd., for every three shares of Tall Ltd., in lieu of the cash acquisition as per (i) above, what will be the net cost of acquisition?

(iii) Calculate Gain from acquisition.

Solution 3:

(i) Net cost of acquisition shall be computed as follows:

Cash Paid for the shares of Tall Ltd. (₹ 60 × 18,00,000)	₹ 10,80,00,000
Less: Value of Tall Ltd., as a separate entity (18,00,000 × ₹50)	₹ 9,00,00,000
Net Cost of acquisition of Tall Ltd.	₹ 1,80,00,000

(ii) Net Cost of acquisition in case of exchange of shares:

Exchange ratio = 1 share of long Ltd for every 3 shares of Tall Ltd.

Number of shares to be issued in Long Ltd. (18,00,000/3)	= 6,00,000 shares
Total no. of shares in Long Ltd. after merger (30,00,000 + 6,00,000)	= 36,00,000
Calculation of cost of Equity of Tall Ltd.	= D1/P0 +g
Growth rate under new management after acquisition	= ₹ 3/50 + 0.06 = 12%
Value of Merged company assuming perpetual growth	= 8%
Value of merged company (₹ 180 x 30,00,000) + (₹ 3/ (0.12 - 0.08) x 18,00,000 = 54,00,00,000 + (75 X 18,00,000)	= ₹ 67,50,00,000
Value per share of merged company (67,50,00,000/36,00,000)	= ₹ 187.50 per share
Calculation of net cost of acquisition	
Gross cost of acquisition (6,00,000 x 187.50)	11,25,00,000
Less: CMP (18,00,000 x 50)	9,00,00,000
Net Cost of acquisition	2,25,00,000

Alternatively, Net Cost of Acquisition can also be computed as follows:

No. of shares issued to shareholders of Tall Ltd. in the ratio of 1:3	6,00,000
Existing price of one share of Long Ltd.	₹ 180
Value of consideration paid for acquisition of Tall Ltd.	₹ 10,80,00,000
Less: Existing Value of Tall Ltd., as a separate entity	₹ 9,00,00,000
Net Cost of acquisition of Tall Ltd.	₹ 1,80,00,000

(iii) Calculation of gain from acquisition:

Total Earnings of Long Ltd. (₹ 12 x 30,00,000)	₹ 3,60,00,000
Total Earnings of Tall Ltd. (₹ 5 x 18,00,000)	₹ 90,00,000
Combined Earnings	₹ 4,50,00,000
PE Ratio of Long Ltd. (180/12)	15
Value of Long Ltd. after acquisition	₹ 67,50,00,000
Less: Value of two companies separately	
Long Ltd. (₹ 180 x 30,00,000) ₹ 54,00,00,000 Tall Ltd. (₹ 50 x 18,00,000) ₹9,00,00,000	₹ 63,00,00,000
Gain from Acquisition	₹ 4,50,00,000

Question 4: MTP 2 May 2023 (April)

Following is the Balance Sheet of M/s. PK Ltd. as on 31-03-2015:

Particulars	**₹ in Lacs**
I. Equity & Liabilities	
Shareholders' Fund	
Equity Share Capital (₹ 10 each)	900.00

10% Preference Share Capital (₹ 100 each)	300.00
Reserves & Surplus	(500.00)
Non-Current Liabilities	
Term Loan	400.00
Current Liabilities	
Trade Payables	400.00
Total (I)	1500.00
II. Assets	
Non-Current Assets	1000.00
Current Assets :	
Inventory	300.00
Trade Receivables	100.00
Cash & Bank Balance	100.00
Total (II)	1500.00

M/s PK Ltd. did not perform well and has suffered sizeable losses during the last few years. However, it is now felt that the company can be nursed back to health by proper financial restructuring and consequently the following scheme of reconstruction have been designed :

(i) Equity shares are to be reduced to ₹ 2 per share fully paid.

(ii) Preference shares are to be reduced by ₹ 50 per share and rate of dividend on Preference shares is also reduced by 2%.

(iii) Trade Payables have agreed to forego 40% of their existing claims and for the balance 50% they have agreed to convert their claims into equity shares of ₹ 2 each, fully paid.

(iv) In order to make payment for Term Loan, the company issues 200 Lacs equity shares of ₹ 2 each at par. Entire sum is required to be paid on application.

(v) Non-Current Assets is to be revalued at ₹ 500 Lacs.

You are required:

(1) To show the impact of financial restructuring.

(2) To prepare Balance Sheet assuming the scheme of restructuring is implemented.

Solution 4:

(1) Impact of Financial Restructuring

Particulars	**₹ in Lac**
Benefits to PK Ltd.	
1. Reduction in Equity Share capital (90×8)	720
2. Reduction in Preference Share Capital (3×50)	150
3. Waiver of Trade payables (400 @ 40%)	160
(A) Total (1+2+3)	**1030**
Amount of ₹ 1030 Lacs utilised to write off losses & overvalued assets	
1. Losses	500
2. Over valued Non Current Assets (1000-500)	500
(B) Total (1+2)	**1000**
Amount unutilized transfer to Capital Reserve (A-B)	**30**

(2) Balance Sheet of PK Ltd. as on 31.03.2015 (after reconstruction)

Particulars	**₹ in Lac**
I. EQUITY & LIABILITIES	
Shareholder's Fund	
Equity Share Capital (₹ 2 each)	700.00
8% Preference Share Capital (₹ 50 each)	150.00
Reserves & Surplus (Capital Reserve)	30.00
Current Liabilities	
Trade Payable	120.00
Total (I)	**1000.00**
II. ASSETS	
Non-Current Asset	500.00
Current Assets	
Inventory	300.00

Trade Receivables	100.00
Cash & Bank balance	100.00
Total (II)	**1000.00**

Calculation of Equity Share Capital

1. Equity share capital after reconstruction	180.00
2. Issued in Cash (200×2)	400.00
3. Issued to Trade payables [50% of (60% of ₹ 400 Lacs)]	120.00
Total (1+2+3)	**700.00**

Question 5: MTP 2 May 2023 (April)

Explain some of the 'sell-side' imperatives in Mergers & Acquisitions.

Solution 5:

The following are some of the 'sell-side' imperatives

- Competitor's pressure is increasing.
- Sale of company seems to be inevitable because company is facing serious problems like:
  - No access to new technologies and developments
  - Strong market entry barriers. Geographical presence could not be enhanced
  - Badly positioned on the supply and/or demand side
  - Critical mass could not be realised
  - No efficient utilisation of distribution capabilities
  - New strategic business units for future growth could not be developed
  - Not enough capital to complete the project
- Window of opportunity: Possibility to sell the business at an attractive price
- Focus on core competencies
- In the best interest of the shareholders – where a large well known firm brings-up the proposal, the target firm may be more than willing to give-up.

Question 6: May 2023

Big Ltd. (BL), a listed company, is enjoying a price earnings ratio (PER) of 15 on an Earnings Per Share (EPS) of ₹ 5. The Total number of outstanding shares are 2,00,000.

BL is proposing to acquire Small Pvt. Ltd. (SPL) an unlisted company by issuing shares in the ratio 4:5 i.e. for 5 shares of SPL 4 shares of BL will be issued. The outstanding shares of SPL are 50,000. SPL will be listed before the actual merger to discover its value. The EPS of the merged entity will be 5.5.

No other information is available for SPL. You are required to calculate:

(i) Pre-merger EPS of SPL.

(ii) Expected Market Price per Share of SPL at the time of listing, if it expects a PER of 10 and,

(iii) Number of shares of BL to be issued to SPL if pre-merger EPS of BL is to be maintained.

Solution 6:

(i) **Pre Merger EPS**

No. of shares to be issued by BL to SPL (50,000 x 4/5)	40,000
Existing number of shares of BL	2,00,000
Total no. of shares Post Merger	2,40,000
EPS (Post Merger)	₹ 5.50
Post-Merger (Total Earning)	₹ 13,20,000
Less: Pre-Merger Earning of BL (2,00,000 x 5)	₹ 10,00,000
Pre-Merger Earning of SPL	₹ 3,20,000
Number of shares of SPL (Existing)	50,000
EPS (₹ 3,20,000/50,000)	₹ 6.40

(ii) Expected Market Price of SPL share at the day of listing

EPS x PE Ratio (6.40 x 10) = ₹ 64.00

(iii) Number of shares to be issued to SPL to maintain Pre-Merger EPS

$5.00 = 13,20,000/(2,00,000+X)$

$10,00,000 + 5X = 13,20,000$

$X = 64,000$

Thus, 64,000 shares to be issued by BL to SPL to maintain pre-merger EPS.

Alternatively, it can also be computed as follows:
Swap Ratio if EPS before merger is maintained by BL
Then, Swap Ratio =6.4 / 5 = 1.28
Number of shares of BL is to be issued to SPL is 50000 shares x 1.28 = 64000 shares

Question 7: RTP Nov 2023

The following is the Balance-sheet of GFC Ltd as at March 31st, 2021.

Liabilities	(₹ in lakhs)	Assets	(₹ in lakhs)
Equity shares of ₹ 100 each	600	Land and Building	200
14% preference shares of ₹ 100/ each	200	Plant and Machinery	300
13% Debentures	200	Furniture and Fixtures	50
Debenture interest accrued and payable	26	Inventory	150
Loan from bank	74	Sundry debtors	70
Trade creditors	340	Cash at bank	130
		Preliminary expenses	10
		Cost of issue of debentures	5
		Profit and Loss account	525
	1440		1440

The Company did not perform well and has suffered sizable losses during the last few years. However, it is felt that the company could be nursed back to health by proper financial restructuring. Consequently the following scheme of reconstruction has been drawn up:

(a) Equity shares are to be reduced to ₹ 25/- per share, fully paid up;

(b) Preference shares are to be reduced (with coupon rate of 10%) to equal number of shares of ₹ 50 each, fully paid up.

(c) Debenture holders have agreed to forgo the accrued interest due to them. In the future, the rate of interest on debentures is to be reduced to 9 percent.

(d) Trade creditors will forego 25 percent of the amount due to them.

(e) The company issues 6 lakh of equity shares at ₹ 25 each and the entire sum was to be paid on application. The entire amount was fully subscribed by promoters.

(f) Land and Building was to be revalued at ₹ 450 lakhs, Plant and Machinery was to be written down by ₹ 120 lakhs and a provision of ₹ 15 lakhs had to be made for bad and doubtful debts.

Required:

(i) Show the impact of financial restructuring on the company's activities.

(ii) Prepare the fresh balance sheet after the reconstruction is completed on the basis of the above proposals.

Solution 7:

Impact of Financial Restructuring

(i) Benefits to GFC Ltd.

₹ in lakhs

	₹ in lakhs
(a) Reduction of liabilities payable	
Reduction in equity share capital (6 lakh shares x ₹ 75 per share)	450
Reduction in preference share capital (2 lakh shares x ₹ 50 per share)	100
Waiver of outstanding debenture Interest	26
Waiver from trade creditors (₹ 340 lakhs x 0.25)	85
	661

(b) Revaluation of Assets	
Appreciation of Land and Building (₹ 450 lakhs - ₹ 200 lakhs)	250
Total (A)	911

(ii) Amount of ₹ 911 lakhs to be utilized to write off losses, fictitious assets and over- valued assets as follows:

Writing off profit and loss account	525
Cost of issue of debentures	5
Preliminary expenses	10
Provision for bad and doubtful debts	15

Revaluation of Plant and Machinery (₹ 300 lakhs – ₹ 180 lakhs)	120
Total (B)	675
Capital Reserve (A) – (B)	236

(iii) Balance sheet of GFC Ltd as at 31st March 2021 (after re-construction)
(₹ in lakhs)

Liabilities	Amount	Assets		Amount
12 lakhs equity shares of ₹ 25/- each	300	Land & Building		450
10% Preference shares of ₹ 50/- each	100	Plant & Machinery		180
Capital Reserve	236	Furnitures & Fixtures		50
9% debentures	200	Inventory		150
Loan from Bank	74	Sundry debtors	70	
Trade Creditors	255	Prov. for Doubtful Debts	-15	55
		Cash-at-Bank (Balancing figure)*		280
	1165			1165

*Opening Balance of ₹130/- lakhs + Sale proceeds from issue of new equity shares ₹150/- lakhs.

Question 8: MTP 1 Nov 2023 (September)

Following information is provided relating to the acquiring company M Ltd. and the target company R Ltd:

	M Ltd.	R Ltd.
Earnings after tax (₹ in lakhs)	4,000	8,000
No. of shares outstanding (lakhs)	400	2,000
P/E ratio (No. of times)	5	2.50

Required:
(i) What is the Swap ratio based on current market prices?
(ii) What is the EPS of M Ltd. after the acquisition?
(iii) What is the expected market price per share of M Ltd. after the acquisition, assuming its P/E ratio is adversely affected by 10%?
(iv) Determine the market value of the merged Co.
(v) Calculate gain/loss for the shareholders of the two independent entities, due to the merger.

Solution 8:

(i)Swap ratio based on current market prices:

EPS before acquisition:	
M Ltd.: ₹ 4,000 lakhs / 400 lakhs:	₹ 10
R Ltd.: ₹ 8,000 lakhs / 2,000 lakhs:	₹ 4
Market price before acquisition:	
M Ltd.: ₹ 10 × 5	₹ 50
R Ltd.: ₹ 4 × 2.5	₹ 10
Swap ratio: 10/50 or 1/5 i.e.	0.20

(ii) EPS after acquisition:

$$\frac{₹(4{,}000+8{,}000)\,Lakhs}{(400+400)\ Lakhs} = ₹15$$

(iii) Market Price after acquisition:

EPS after acquisition:	₹ 15
P/E ratio after acquisition (5 × 0.9)	4.50
Market price of share (₹ 15 × 4.50)	₹ 67.50

(iv) Market value of the merged Co.:

₹ 67.50 × 800 lakhs shares — ₹ 540 Crores or ₹ 54,000 Lakhs

(v) Gain/loss per share:

		₹ Crore
	M Ltd.	R Ltd.
Total value before Acquisition	200.00	200.00
Value after acquisition	270.00	270.00

Gain (Total)	70.00	70.00
No. of shares (pre-merger) (lakhs)	400	2,000
Gain per share (₹)	17.50	3.50

Question 9: Nov 2023

The following information is provided relating to the acquiring Company R Ltd. And the target Company K Ltd.:

Particulars	R Ltd.	K Ltd.
Promoter Holding	50%	60%
Share Capital (₹ in lakh)	100	50
Free Reserves & Surplus (₹ in lakh)	400	250
Paid up value per share (₹)	100	10
Free Float Market Capitalization (₹ in lakh)	200	64
P/E Ratio (times)	20	8

For deciding the swap ratio, weights are assigned to different parameters by the Board of Directors of both the companies as follows:

Book value	20%
EPS	60%
Market Price	20%

You are required to calculate:

(i) Swap ratio based on above weights.

(ii) Book Value per share, EPS and expected market price of R Ltd. after acquisition of K Ltd. (Assuming PE multiple of K Ltd. remains unchanged and all assets and liabilities of K Ltd. are taken over at book value)

(iii) Revised promoter's holding (%) in R Ltd. after acquisition.

(iv) Post-acquisition Free Float Market Capitalization.

Solution 9:

(i) Swap Ratio

	R Ltd.		K Ltd.
Share Capital	100 Lakh		50 Lakh
Free Reserves	400 Lakh		250 Lakh
Total	500 Lakh		300 Lakh
No. of Shares	1 Lakh		5 Lakh
Book Value per share	₹ 500		₹ 60
Promoter's holding	50%		60%
Non promoter's holding	50%		40%
Free Float Market Cap.i.e. relating to Public's holding	200 Lakh		64 Lakh
Hence Total market Cap.	400 Lakh		160 Lakh
No. of Shares	1 Lakh		5 Lakh
Market Price	₹ 400		₹ 32
P/E Ratio	20		8
EPS	20		4
Profits (₹ 1 lakh X 20)	₹ 20 lakh		-
(₹ 4 lakh X 5)	-		₹ 20 lakh
Calculation of Swap Ratio			
Book Value	1 : 0.12 i.e.	0.12 x 20%	0.024
EPS	1 : 0.2	0.20 x 60%	0.120
Market Price	1 : 0.08	0.08 x 20%	0.016
		Total	0.160

Swap ratio is for every one share of K Ltd., to issue 0.16 shares of R Ltd. Hence, total no. of shares to be issued.

5 Lakh x 0.16 = 0.80 lakh shares

(ii) Book Value, EPS & Market Price

Total No of Shares	1 Lakh + 0.80 Lakh = 1.80 Lakh
Total Capital	₹ 100 Lakh + ₹ 80 Lakh = ₹ 180 Lakh

Reserves ₹ 400 Lakh + ₹ 220 Lakh = ₹ 620 Lakh

Book Value $\frac{₹180\ lakh + ₹620\ lakh}{1.80\ Lakh}$ = ₹ 444.44 per share

EPS = $\frac{Total\ Profit}{No.\ of\ Share} = \frac{20\ Lakh + 20\ Lakh}{1.80\ Lakh}$ = ₹ 22.22

Expected Market Price EPS (₹ 22.22) x P/E Ratio (8) = ₹ 177.76

(iii) Revised Promoter's holding

Promoter's Revised R Ltd. 50% i.e.	0.50 Lakh
Holding K Ltd. 60% i.e.	0.48 Lakh
Total	0.98 Lakh

Promoter's % = 0.98/1.80 x 100 = 54.44%

(iv) Post Acquisition Free Float Market Capitalization

Free Float Market Capitalization = (1.80 Lakh – 0.98 Lakh) x ₹ 177.76 = ₹ 145.76 Lakh

Question 10: MTP 2 May 2024 (April)

T plc wants to acquire L plc. The balance sheet of L plc as on 31st March 2022 is as follows:

Liabilities	£	Assets	£
Equity Capital (35,00,000 shares)	35,00,000	Cash	2,50,000
Retained earnings	15,00,000	Debtors	3,50,000
12% Debentures	15,00,000	Inventories	10,00,000
Creditors and other liabilities	16,00,000	Plants & Eqpt.	65,00,000
	81,00,000		81,00,000

Additional Information:

(i) Shareholders of L plc will get one share in T plc for every two shares. External liabilities are expected to be settled at £ 2.50 Million. Shares of T plc would be issued at its current price of £ 1.50 per share. Debenture holders will get 13% convertible debentures in the purchasing company for the same amount. Debtors and inventories are expected to realize £ 1 Million.

(ii) T plc has decided to operate the business of L plc as a separate division. The division is likely to give cash flows (after tax) to the extent of £ 2.50 Million per year for 6 years. T plc has planned that, after 6 years, this division would be demerged and disposed of for £ 1 Million.

(iii) The company's cost of capital is 16%.

Advise the Board of the company about the financial feasibility of this acquisition.

Net present values for 16% for £ 1 are as follows:

Years	1	2	3	4	5	6
PV	0.862	0.743	0.641	0.552	0.476	0.410

Solution 10:

Calculation of Purchase Consideration

	£
Issue of Share 17,50,000 x £1.50	26,25,000
External Liabilities settled	25,00,000
13% Debentures	15,00,000
	66,25,000
Less: Realization of Debtors and Inventories	10,00,000
Cash	2,50,000
	53,75,000

Net Present Value = PV of Cash Inflow + PV of Demerger of L plc – Cash Outflow

= £ 25,00,000 PVAF(16%,6) + £ 10,00,000 PVF(16%, 6) – £ 53,75,000

= £ 25,00,000 x 3.684 + £ 10,00,000 x 0.410 – £ 53,75,000

= £ 92,10,000 + £ 4,10,000 – £ 53,75,000

= £ 42,45,000

Since the NPV of the decision is positive it is advantageous to acquire L plc.

Question 11: May 2024

PQ Ltd., plans to acquire RS Ltd. The relevant financial details of the two firms prior to the merger announcement are:

	PQ Ltd.,	RS Ltd.,
Market price per share	₹100	₹50
Number of outstanding shares	20,00,000	10,00,000

The merger is expected to generate gains, which have a present value of ₹300 lakhs. The exchange ratio agreed to is 0.5.

You are required to calculate the true cost of the merger from the point of view of PQ Ltd.

Solution 11:

Shareholders of RS Ltd. will get 5 lakh share of PQ Ltd., so they will get:

$=\frac{5\ Lakh}{20\ Lakh + 5\ Lakh}$ = 20% of shares PQ Ltd.

The value of PQ Ltd. after merger will be:

= ₹ 100 x 20 lakh + ₹ 50 x 10 lakh + ₹ 300 lakh

= ₹ 2000 lakh + ₹ 500 lakh + ₹ 300 lakh = ₹ 2800 lakh

True Cost of Merger will be:

(₹ 2800 x 20%) ₹ 560 lakhs – ₹ 500 lakhs = ₹ 60 lakh

Question 12: May 2024

The equity shares of XYZ Ltd., are currently being traded at ₹34 per share in the market.

XYZ Ltd., has total 10,00,000 equity shares outstanding in number and promoters equity holding in the company is 30%.

ABC Ltd., wishes to acquire XYZ Ltd., because of likely synergies. The estimated present value of these synergies is ₹1,00,00,000.

Further ABC Ltd., feels that management of XYZ Ltd., has been overpaid. With better motivation, lower salaries and fewer perks for the top management, will lead to savings of ₹5,00,000 per annum. Top management with their families are promoters of XYZ Ltd., Present value of these savings would add ₹25,00,000 in value to the acquisition.

Following additional information is available regarding ABC Ltd.,

Earnings per share	₹5
Total number of shares outstanding	15,00,000
Market price of equity share	₹30

You are required to:

(i) Calculate the maximum price per equity share which ABC Ltd., can offer to pay for XYZ Ltd.

(ii) Calculate the minimum price per equity share at which the management of XYZ Ltd., will be willing to offer their controlling interest.

Solution 12:

(i) Calculation of maximum price per share at which ABC Ltd. can offer to pay for XYZ Ltd.'s share

Market Value (10,00,000 x ₹34)	₹3,40,00,000
Synergy Gain	₹1,00,00,000
Saving of overpayment	₹25,00,000
	₹4,65,00,000
Maximum Price (₹4,65,00,000/10,00,000)	₹46.50

Alternatively, it can also be computed as follows: Let ER be the swap ratio then,

30 $= \frac{34 \times 10,00,000 + 30 \times 15,00,000 + 1,00,00,000 + 25,00,000}{15,00,000 + 10,00,000 \times ER}$

ER = 1.55

MP = PE x EPS x ER = $\frac{30}{5}$ x ₹ 5 x 1.55 = ₹ 46.50

Or

MP = Market Price of Share of XYZ Ltd. x 1.55 = ₹ 30.00 x 1.55
= ₹ 46.50

(ii) Calculation of minimum price per share at which the management of XYZ Ltd.'s will be willing to offer for their controlling interest

Value of XYZ Ltd.'s Management Holding (30% of 10,00,000 x ₹ 34)	₹ 1,02,00,000

Add: PV of loss of remuneration to top management	₹ 25,00,000
	₹ 1,27,00,000
No. of Shares	3,00,000
Minimum Price (₹ 1,27,00,000/3,00,000)	₹42.33

Question 13: RTP Nov 2024

L Ltd., is planning to acquire T Ltd., with the following data available for both the companies:

	L Ltd.	T Ltd.
Expected EPS	₹ 12	₹ 5
Expected DPS	₹ 10	₹ 3
No. of Shares	30,00,000	18,00,000
Current Market Price of Share	₹ 180	₹ 50

As per an estimate T Ltd., is expected to have steady growth of earnings and dividends to the tune of 6% per annum. However, under the new management the growth rate is likely to be enhanced to 8% per annum without additional investment.

You are required to:

(i) Calculate the net cost of acquisition by L Ltd., if ₹ 60 is paid for each share of T Ltd.

(ii) If the agreed exchange ratio is one share of L Ltd., for every three shares of T Ltd., in lieu of the cash acquisition as per (i) above, what will be the net cost of acquisition?

(iii) Calculate Gain from acquisition.

Solution 13:

(i) Net cost of acquisition shall be computed as follows:

Cash Paid for the shares of T Ltd. (₹ 60 × 18,00,000)	₹ 10,80,00,000
Less: Value of T Ltd., as a separate entity (18,00,000 × ₹ 50)	₹ 9,00,00,000
Net Cost of acquisition of Tall Ltd.	₹ 1,80,00,000

(ii) Net Cost of acquisition in case of exchange of shares:

Exchange ratio = 1 share of L Ltd for every 3 shares of T Ltd.

Number of shares to be issued in L Ltd. (18,00,000/3)	= 6,00,000 shares
Total no. of shares in L Ltd. after merger (30,00,000 + 6,00,000)	= 36,00,000
Calculation of cost of Equity of T Ltd.	= D1/P0 +g
Growth rate under new management after acquisition	= ₹ 3/50 + 0.06 = 12%
Value of Merged company assuming perpetual growth	= 8%
Value of merged company	
(₹ 180 x 30,00,000) + [₹ 3/ (0.12 - 0.08)] x18,00,000	
= ₹ 54,00,00,000 + [₹ 75 X 18,00,000]	= ₹ 67,50,00,000
Value per share of merged company (₹ 67,50,00,000/36,00,000)	= ₹ 187.50 per share

Net cost of acquisition

Gross cost of acquisition (6,00,000 x ₹187.50)	₹ 11,25,00,000
Less: CMP (18,00,000 x ₹ 50)	₹ 9,00,00,000
Net Cost of acquisition	₹ 2,25,00,000

Alternatively, Net Cost of Acquisition can also be computed as follows:

No. of shares issued to shareholders of T Ltd. in the ratio of 1:3	6,00,000
Existing price of one share of L Ltd.	₹ 180
Value of consideration paid for acquisition of T Ltd.	₹ 10,80,00,000
Less: Existing Value of T Ltd., as a separate entity	₹ 9,00,00,000
Net Cost of acquisition of T Ltd.	₹ 1,80,00,000

(iii) Calculation of gain from acquisition:

Total Earnings of L Ltd. (₹ 12 x 30,00,000)	₹ 3,60,00,000
Total Earnings of T Ltd. (₹ 5 x 18,00,000)	₹ 90,00,000
Combined Earnings	₹ 4,50,00,000
PE Ratio of L Ltd. (180/12)	15
Value of L Ltd. after acquisition	₹ 67,50,00,000
Less: Value of two companies separately	

L Ltd. (₹ 180 x 30,00,000)	₹ 54,00,00,000	
T Ltd. (₹ 50 x 18,00,000)	₹ 9,00,00,000	₹ 63,00,00,000
Gain from Acquisition		₹ 4,50,00,000

Question 14: MTP 1 Nov 2024 (September)

During the audit of the Weak Bank (W), RBI suggested that the Bank should either merge with another bank or may close down. Strong Bank (S) has submitted a proposal for the merger of Weak Bank with itself. The relevant information and Balance Sheets of both the companies are as follows:

Particulars	Weak Bank (W)	Strong Bank (S)	Assigned Weights (%)
Gross NPA (%)	8	1	30%
Capital Adequacy Ratio (CAR)	5	16	28%
Market price per Share (MPS) (₹)	12	96	32%
Book value			10%
Trading on Stock Exchange	Irregular	Frequent	

Balance Sheets (₹ in Lakhs)

Particulars	Weak Bank (W)	Strong Bank (S)
Paid-up Share Capital (₹ 10/share)	300	1000
Reserves & Surplus	160	11000
Deposits	8000	88000
Other Liabilities	1780	5000
Total Liabilities	10240	105000
Cash in Hand & with RBI	800	5000
Balance with Other Banks	-	4000
Investments	2200	38000
Advances	7000	54000
Other Assets	140	4000
Preliminary Expenses	100	-
Total Assets	10240	105000

You are required to prepare the Balance Sheet after the merger duly supported by adequate workings.

Solution 14:

Working Notes:

To prepare Revised Balance Sheet we need to calculate swap ratio, number of shares to be issued to Weak Bank and Capital Reserve or Goodwill on merger as follows:

(1) Calculation of Book Value per Share

Particulars	Weak Bank (W)	Strong Bank (S)
Share Capital (₹ Lakhs)	300	1,000
Reserves & Surplus (₹ Lakhs)	160	11,000
	460	12,000
Less: Preliminary Expenses (₹ Lakhs)	100	--
Net Worth or Book Value (₹ Lakhs)	360	12,000
No. of Outstanding Shares (Lakhs)	30	100
Book Value Per Share (₹)	12	120

(2) Swap Ratio

Gross NPA	1:8	1/8 x 30%	0.0375
CAR	5:16	5/16 x 28%	0.0875
Market Price	12:96	12/96 x 32%	0.0400
Book Value Per Share	12:120	12/120x 10%	0.0100
			0.1750

Thus, for every share of Weak Bank, 0.1750 share of Strong Bank shall be issued.

(3) No. of equity shares to be issued:

$\frac{300}{10} \times 0.1750 = 5.25$ lakh shares

(4) Calculation of Capital Reserve

Book Value of Shares	₹ 360.00 lac
Less: Value of Shares issued	₹ 52.50 lac
Capital Reserve	₹ 307.50 lac

Balance Sheet after Merger

	₹ lac		₹ lac
Paid up Share Capital	1052.50	Cash in Hand & RBI	5800.00
Reserves & Surplus	11000.00	Balance with other banks	4000.00
Capital Reserve	307.50	Investment	40200.00
Deposits	96000.00	Advances	61000.00
Other Liabilities	6780.00	Other Assets	4140.00
	115140.00		115140.00

Question 15: MTP 2 Nov 2024 (October)

ICL is proposing to take over SVL with an objective to diversify. While ICL growth rate is 18%, the SVL growth rate is 15%. Both the companies pay dividend regularly. The summarized Profit & Loss Account of both the companies are as follows:

₹ in Crores

Particulars	ICL	SVL
Net Sales	9090	3000
PBIT	5960	1440
Interest	1500	50
Provision for Tax	2880	890
PAT	1580	500
Dividends	470	304.35

	ICL		SVL	
Fixed Assets				
Land & Building (Net)	1440		380	
Plant & Machinery (Net)	1800		700	
Furniture & Fixtures (Net)	60	3300	20	1100
Current Assets		1550		1160
Less: Current Liabilities				
Creditors	460		260	
Overdrafts	70		20	
Provision for Tax	290		100	
Provision for dividends	120	940	100	480
Net Assets		3910		1780
Paid up Share Capital (₹ 10 per share)	500		250	
Reserves and Surplus	2100	2600	1320	1570
Borrowing		1310		210
Capital Employed		3910		1780

Market Price Share (₹)	175	98
Cost of Equity	25%	20%

ICL's Land & Buildings are stated at current prices. SVL's Land & Buildings are revalued three years ago. There has been an increase of 7.65 per cent per year in the value of Land & Buildings.

SVL is expected to grow @ 18 per cent each year, after merger.

ICL is interested to do justice to the shareholders of both the Companies. For the swap ratio weights are assigned to different parameters by the Board of Directors as follows:

Net Worth Per Share*	25%
EPS (Earning per share)	30%
Share price as per Dividend Growth Model	20%
Market Price per share	25%

* After required adjustment.

You are required to suggest the swap ratio based on above weights and total number of shares.
Note: Round off calculations upto two decimal points.

Solution 15:
Working Notes:

(i) Computation of Net Worth Per Share of SVL

Total Assets (Fixed assets + Current Assets) (₹ Crores)	2260
Less: Liabilities (Current Liabilities + Borrowings) (₹ Crores)	690
Net Assets Value (₹ Crores)	1570
Current Value of Land after growing for three years @ 30% = 380 X 1.2475 (₹ Crores)	474.05*
Less: Book Value (₹ Crores)	380.00
Increase in the Value of land (₹ Crores)	94.05
Adjusted NAV (1570 + 94.05) (₹ Crores)	1664.05
No. Shares (Crores)	25
Net Worth Per Share	₹ 66.56

* Alternatively, this value can also be computed as ₹ 475 Crores.

(ii) Computation of Net Worth Per Share of ICL
Share Capital + Reserves and Surplus = ₹ 2600 Crore
Total Number of Shares = 50 Crore
Net Worth Per Share = ₹ 2600 Crore/ 50 Crore = ₹ 52.00

(iii) Earning Per Share (EPS)

	ICL	SVL
PAT	₹ 1580 Crore	₹ 500 Crore
No. of Shares	50 Crore	25 Crore
EPS	₹ 31.60	₹ 20.00

(iv) Share price as per Dividend Growth Model

	ICL	SVL
Total Dividend	₹ 470 Crore	₹ 304.35 Crore
No. of Shares	50 Crore	25 Crore
Dividend Per Share (D0)	₹ 9.40	₹ 12.17
Expected Dividend (D1)	₹ 9.40 (1 + 0.18) = ₹ 11.09	₹ 12.17 (1 + 0.15) = ₹ 14.00
Value of Per Share as Growth Model	$\frac{11.09}{0.25-0.18}$ = ₹ 158.43	$\frac{14.00}{0.20-0.15}$ = ₹ 280

Calculation of Swap Ratio

Net Worth Per Share	1 : 1.28 i.e.	1.28 × 25%	0.32
EPS	1 : 0.63 i.e.	0.63 × 30%	0.19
Share price as per Dividend Growth Model	1 : 1.77 i.e.	1.77 × 20%	0.35
Market Price	1 : 0.56 i.e.	0.56 × 25%	0.14
		Total	1.00

Swap ratio is for every one share of SVL, to issue 1 share of ICL. Hence, total no. of shares to be issued 25 crores.

Question 16: Nov 2024
AMN Ltd. has surplus cash of ₹ 200 lakhs and wants to distribute 30% of it to the shareholders. The company decides to buy back shares. The Finance officer of the company estimates that it share price after repurchase is likely to be 15% above the buyback price if the buyback route is taken. The number of shares outstanding at present is 15 lakhs and the current EPS is ₹3.00.
Bought Back price is to be rounded off to one decimal point.
You are required to determine.
(i) The price at which the shares can be repurchased, if the market capitalisation of the company should be ₹250 lakhs after buyback.

(ii) The number of shares that can be repurchased.

(iii) The impact of share repurchase on the EPS, assuming that net income is the same.