Question 39

XML bank was established in 2001 and doing banking business in India. The bank is facing very critical situation. There are problems of Gross NPA (Non -Performing Assets) at 40% & CAR/CRAR (Capital Adequacy Ratio/Capital. Risk Weight Asset Ratio) at 2%. The net worth of the bank is not good. Shares are not traded regularly. Last week, it was traded @ ₹ 4 per share.

RBI Audit suggested that bank has either to liquidate or to merge with other bank.

ZML Bank is professionally managed bank with low gross NPA of 5%. I t has net NPA as 0% and CAR at 16%. Its share is quoted in the market @ ₹ 64 per share. The Board of Directors of ZML Bank has submitted a proposal to RBI for takeover of bank XML on the basis of share exchange ratio.

The Balance Sheet details of both the banks are as follows:

Particulars	XML Bank (₹) (Amount in Crores)	ZML Bank (₹) (Amount in Crores)
Liabilities		
Paid up share capital (₹ 10)	70	250
Reserve and Surplus	35	2,750
Deposits	2,000	20,000
Other Liabilities	445	1,250
Total Liabilities	2,550	**24,250**
Assets		
Cash in hand and with RBI	200	1,250
Balance with other banks	0	1,000
Investments	550	7,500
Advances	1,750	13,500
Other Assets	50	1,000
Total Assets	2,550	**24,250**

It was decided to issue shares at Book Value of ZML Bank to the shareholders of XML Bank. All Assets & Liabilities are to be taken over at Book Value.

For the Swap Ratio, weights assigned to different parameters are as follows:

Gross NPA	40%
CAR	10%
Market Price	40%
Book Value	10%

You are required to:

1. Calculate swap ratio based on above rates.
2. Calculate number of shares are to be issued.

3. Prepare Balance Sheet after Merger.

(May 17, 10 Marks)

Solution 39

WN 1: Calculation of Book Value Per Share:		₹ in crores
	XML Bank (Target)	ZM Bank (Acquirer)
Total Assets (T/O at book value)	2,550	24,250
(-) Deposits	(2,000)	(20,000)
Other Liabilities	(445)	(1,250)
Net Book Value	105	3,000
(÷) No. of shares in crores	7	25
Book Value per share (BVPS)	15	120

WN 2: Determining Swap Ratio based on: (given)

Gross NPA $= \frac{5}{40} = 0.125$

CAR $= \frac{2}{16} = 0.125$

Market Price $= \frac{4}{64} = 0.0625$

Book Value $= \frac{15}{120} = 0.125$

1. Determining Swap Ratio based on above rates:

Basis	Swap Ratio (x)	Weights (W)	(x.w)
Gross NPA	0.125	0.4	0.05
CAR	0.125	0.1	0.0125
Market Price	0.0625	0.4	0.025
Book Value	0.125	0.1	0.0125
			0.1

∴ For every share of XML Bank, 0.1 shares of ML Bank shall be issued:

2. Number of shares to be issued: = Number of shares in XML Bank X Swap Ratio

$= \frac{70 \text{ cr}}{₹\ 10} \times 0.1 = 0.7$ crores shares

Balance sheet of ZML Bank (after merger) :₹ in crores

Liabilities :	
Paid up share capital (₹ 10 X 25.7 crores)	257.00
Reserves & Surplus	2750.00
Capital Reserves (Bal. Figure)	98.00
Deposits	22000.00
Other Liabilities	1695.00
Total	26,800.00

Assets :	
Cash in hand & with RBI	1450.00
Balance with other bank	1000.00
Investments	8050.00
Advances	15250.00
Other Assets	1050.00
Total	26800.00

Question 40

East Co. Ltd. is studying the possible acquisition of Fost Co. Ltd. by way of merger. The following data are available in respect of the companies:

	East Co. Ltd.	Fost Co. Ltd.
Earnings after tax (₹)	2,00,000	60,000
No. of equity shares	40,000	10,000
Market value per share (₹)	15	12

1. If the merger goes through by change of equity share and the exchange ratio is based on the current market price, what are the new earnings per share for East Co. Ltd. ·?
2. Fort Co. Ltd. wants to be sure that the merger will not diminish the earnings available to its shareholders. What should be the exchange ratio in that case?

(Nov 17, 8 Marks)

Solution 40

i. **Calculation of new EPS of East Co. Ltd.**

No. of equity shares to be issued by East Co. Ltd. to Fost Co. Ltd.

$$= 10{,}000 \text{ shares} \times \frac{₹\,12}{₹\,15} = 8{,}000 \text{ shares}$$

Total no. of shares in East Co. Ltd. after acquisition of Fost Co. Ltd.

= 40,000 + 8,000 = 48,000

Total earnings after tax [after acquisition]

= 2,00,000 + 60,000 = 2,60,000

$$\text{EPS} = \frac{₹\,2{,}60{,}000}{48{,}000 \text{ equity shares}} = ₹\,5.42$$

ii. **Calculation of exchange ratio which would not diminish the EPS of Fost Co. Ltd. after its merger with East Co. Ltd.**

Current EPS:

$$\text{East Co. Ltd.} = \frac{₹\ 2,00,000}{40,000 \text{ equity shares}} = ₹\ 5$$

$$\text{Fost Co. Ltd} = \frac{₹\ 60,000}{10,000 \text{ equity shares}} = ₹\ 6$$

$$\text{Exchange ratio} = \frac{6}{5} = 1.20$$

Cross Tally

No. of new shares to be issued by East Co. Ltd. to Fost Co. Ltd.
= 10,000 X 1.20 = 12,000 shares

Total number of shares of East Co. Ltd. after acquisition
= 40,000 + 12,000 = 52,000 shares

$$\text{EPS (after merger)} = \frac{₹\ 2,60,000}{52,000 \text{ shares}} = ₹\ 5$$

Total earnings in East Co. Ltd. available to new shareholders of Fost Co. Ltd.
= 12,000 X ₹ 5 = ₹ 60,000

Question 41

Tatu Ltd. wants to takeover Mantu Ltd. and has offered a swap ratio of 1:2 (0.5 shares for every one share of Mantu Ltd.). Following information is provided

	Tatu Ltd.	Mantu Ltd.
Profit after tax	₹ 24,00,000	₹ 4,80,000
Equity shares outstanding (Nos.)	8,00,000	2,40,000
EPS	₹ 3	₹2
PE Ratio	10 times	7 times
Market price per share	₹ 30	₹ 14

You are required to calculate:

i. The number of equity shares to be issued by Tatu Ltd. for acquisition of Mantu Ltd.
ii. What is the EPS of Tatu Ltd. after the acquisition?
iii. Determine the equivalent earnings per share of Mantu Ltd.
iv. What is the expected market price per share of Tatu Ltd. after the acquisition, assuming its PE multiple remains unchanged?
v. Determine the market value of the merged firm.

(May 18, 8 Marks)

Solution

i. **The number of shares to be issued by Tatu Ltd.:**
The Exchange ratio is 0.5
So, new Shares = 2,40,000 X 0.5 = 1,20,000 shares.

ii. **EPS of Tatu Ltd. after acquisition:**

Total Earnings	(₹ 24,00,000 + ₹ 4,80,000)	₹ 28,80,000
No. of Shares	(8,00,000 + 1,20,000)	9,20,000

$$EPS = \frac{(₹\ 28,80,000)}{9,20,000} = ₹\ 3.13$$

iii. **Equivalent EPS of Mantu Ltd.:**

No. of new Shares	0.5
EPS	₹ 3.13
Equivalent EPS (₹ 3.13 X 0.5)	₹ 1.57

iv. **New Market Price of Tatu Ltd. (P/E remaining unchanged)**

Present P/E Ratio of a Ltd.	10 times
Expected EPS after merger	₹ 3.13
Expected Market Price (₹3.13 X 10)	₹ 31.30

v. **Market Value of merged firm:**

Total number of Shares	9,20,000
Expected Market Price	₹ 31.30
Total value (9,20,000 X 31.30)	₹ 2,87,96,000

Question 42

TK Ltd. and SK Ltd. are both in the same industry. The former is in negotiation for acquisition of the latter. Information about the two companies as per their latest financial statements are given below:

	TK Ltd.	SK Ltd.
₹ 10 Equity shares outstanding	24 lakhs	12 lakhs
Debt:		
10% Debentures (₹ Lakhs)	1,160	-
12.5% Institutional Loan (₹ Lakhs)	-	480
Earnings before interest, depreciation and tax (EBIDAT) (₹ Lakhs)	800.00	230.00
Market Price/Share (₹)	220.00	110.00

TK Ltd. plans to offer a price for SK Ltd. business, as a whole, which will be 7 times of EBIDAT as reduced by outstanding debt and to be discharged by own shares at market price.

SK Ltd. is planning to seek one share in TK Ltd. for every 2 shares in SK Ltd. based on the market price. Tax rate for the two companies may be assumed as 30%.

Calculate and show the following under both alternatives -TK Ltd.'s offer and SK Ltd.'s plan:

i. Net consideration payable.
ii. No. of shares to be issued by TK Ltd.
iii. EPS of TK Ltd. after acquisition.
iv. Expected market price per share of TK Ltd. after acquisition.
v. State briefly the advantages to TK Ltd. from the acquisition.

Calculations may be rounded off to two decimals points.

(Nov 18, 12 Marks)

Solution

As per TK Ltd.'s Offer

i. Net Consideration Payable

	₹ in Lakhs
7 times EBIDAT, i.e. 7 X ₹ 230 lakh	1,610
Less: Debt	480
	1,130

ii. No. of shares to be issued by TK Ltd.

$$= \frac{₹\ 1{,}130 \text{ Lakh}}{₹\ 220 \text{ (rounded off) (Nos.)}} = ₹\ 5{,}13{,}600 \text{ Lakhs}$$

iii. EPS of TK Ltd after acquisition

	₹ in Lakhs
Total EBIDT (₹ 800 lakh + ₹ 230 lakh)	1,030.00
Less: Interest (₹ 116 lakh + ₹ 60 lakh)	176.00
	854.00
Less: 30% Tax	256.20
Total earnings (NPAT)	597.80
Total No. of shares outstanding (24 lakh + 5,13,600)	29,13,600

Earnings Per Share (EPS)

$$= \frac{₹\ 597.80 \text{ Lakh}}{29{,}13{,}600} = ₹\ 20.52 \text{ Lakhs}$$

iv. Expected Market Price

	₹ in Lakhs
Pre-acquisition P/E multiple:	

EBIDAT	800.00
Less: Interest 1,160 X $\frac{10}{100}$	116.00
	684.00
Less: 30% Tax	205.20
	478.80
No. of shares (lakhs)	24
EPS	₹ 19.95
Hence, PE multiple (220/19.95)	11.03
Expected market price after acquisition (₹ 20.52 X 11.03)	₹ 226.34

As per SK Ltd.'s Offer

i. **Net consideration payable**
12 lakhs shares X ₹ 110 = ₹ 1,320 Lakhs

ii. **No. of shares to be issued by TK Ltd.**
$= \frac{₹\ 1{,}130 \text{ Lakhs}}{220} = 6 \text{ Lakhs}$

iii. **EPS of T Ltd after Acquisition**
NPAT (as per earlier calculations)
= 597.80 Lakhs
Total no. of shares outstanding
24 lakhs + 6 lakhs = 30 Lakh

Earnings Per Share (EPS)
$= \frac{₹\ 597.80 \text{ Lakh}}{30 \text{ Lakh}} = ₹\ 19.93 \text{ Lakhs}$

iv. **Expected Market Price**
₹ 19.93 X 11 = ₹ 219.23 Lakhs

v. **Advantages of Acquisition to TK Ltd.**
Since the two companies are in the same industry, the following advantages could accrue:
- Synergy, cost reduction and operating efficiency.
- Better market share.
- Avoidance of competition

Question 43

Given is the following information:

	Day Ltd.	Night Ltd.
Net Earnings	₹ 5 crores	₹ 3.5 crores
No. of Equity Shares	10,00,000	7,00,000

SFM GURU JOYFUL LEARNING

The shares of Day Ltd. and Night Ltd. trade at 20 and 15 times their respective P/E ratios.
Day Ltd. considers taking over Night Ltd. By paying ₹ 55 crores considering that the market price of Night Ltd. reflects its true value. It is considering both the following options:

i. Takeover is funded entirely in cash.
ii. Takeover is funded entirely in stock.

You are required to calculate the cost of the takeover and advise Day Ltd. on the best alternative.

(May 19, 8 Marks)

Solution
Working Notes:

	Day Ltd.	Night Ltd.
Net Earnings	₹ 5 crores	₹ 3.5 crores
No. of Equity Shares	10,00,000	7,00,000
EPS	50	50
P/E	20 times	15 times
MPS	₹ 1,000	₹ 750
Market Value	1,00,00,00,000	52,50,00,000

i. **If takeover is funded by Cash**
Since Market Price of Night Ltd. reflects its full value, cost of takeover to Day Ltd is 55 crore – 52.50 crore = ₹ 2.5 crore.

ii. **If the takeover is funded by stock**
Number of shares to be issued to Night Ltd.

$$= \frac{₹\ 55\ \text{Crore}}{₹\ 1,000} = 5,50,000\ \text{Lakhs}$$

Market Value of Merged Firm = ₹ 1,00,00,00,000 + ₹ 52,50,00,000
= ₹ 1,52,50,00,000 i.e. ₹ 152.50 Crore

Proportion that Night Ltd.'s shareholders get in Day Ltd.'s Capital Structure will be:

$$= \frac{5.5\ \text{Lakhs}}{5.5\ \text{Lakhs} + 10\ \text{Lakhs}} = 0.3548$$

True Cost of Merger = ₹ 152.50 Crore X 0.3548 – ₹ 55 Crore
= – ₹ 0.893 Crore

Since true cost is negative in case of funding from stock, Day Ltd. would better off by funding the takeover by stock.

Question 44

ABB Ltd. has a surplus cash balance of ₹ 180 lakhs and wants to distribute 50% of it to the equity shareholders. The company decides to buyback equity shares. The company estimates that its equity share price after re–purchase is likely to be 15% above the buyback price. if the buyback route is taken.

Other information is as under:

i. Number of equity shares outstanding at present (Face value ₹ 10 each) is ₹ 20 lakhs.
ii. The current EPS is ₹ 5.

You are required to calculate the following:

i. The price at which the equity shares can be re–purchased, if market capitalization of the company should be ₹ 400 lakhs after buy back.
ii. Number of equity shares that can be re – purchased.
iii. The impact of equity shares re–purchase on the EPS, assuming that the net income remains unchanged.

(May 19, 8 Marks)

Solution

i. **Let P be the buyback price decided by ABB Ltd.**

Market Capitalisation after Buyback

$$400 \text{ lakhs} = 1.15P \text{ (Original Shares – Shares Bought Back)}$$

$$= 1.15P \left(20 \text{ Lakhs} - \frac{50\% \text{ of } 180 \text{ Lakhs}}{P}\right)$$

$$= 23 \text{ Lakhs} \times P - 90 \text{ Lakhs} \times 1.15$$

$$= 23 \text{ Lakhs } P - 130.50 \text{ Lakhs}$$

$$= \text{Again, } 23 \text{ Lakhs } P - 130.50 \text{ Lakhs}$$

$$\text{Or } 23 \text{ Lakhs } P = 400 \text{ Lakhs} + 130.50 \text{ Lakhs}$$

$$\text{Or } P = \frac{503.50}{23} = 21.89 \text{ per Share}$$

ii. **Number of Shares to be Bought Back:**

$$\frac{₹\ 90 \text{ lakhs}}{21.89} = 4.111 \text{ lakhs (Approx.) or } 411147 \text{ shares}$$

iii. **Shares after buyback**

$$= 20 \text{ lakhs} - 4.111 \text{ lakhs} = 15.889 \text{ lakhs}$$

$$\textbf{Or } 20{,}00{,}000 - 4{,}11{,}147 = 15{,}88{,}853 \text{ shares}$$

$$\therefore \text{EPS} = \frac{5 \times 20 \text{ lakhs}}{15.889 \text{ lakhs}} = ₹\ 6.29$$

Thus, EPS of ABB Ltd., increases to ₹ 6.29.

So, EPS of ABB Ltd. is increased by ₹ 1.29 (6.29 – 5.00)

Question 45

A Ltd., a listed company is considering merger of B ltd. Which is also a listed company, with itself by means of a stock swap (exchange). B Ltd. has agreed to a plan under which A Ltd. Will offer the current market value of B ltd. shares.

Additional Information:

Particulars	A Ltd.	B Ltd.
Earnings after Tax (₹)	10,00,000	2,50,000
Number of Shares outstanding	4,00,000	2,00,000
Current market price (₹) Per share	50	20

On the basis of above information, you are required to calculate the following:

i. What is the pre – merger Earnings per Share (EPS) and P/E ratios of both the companies?

ii. If B Ltd.'s P/E is 10, what is its current market price per share? What is the exchange ratio? What will A Ltd.'s post – merger EPS be?

iii. What must the exchange ratio be for A Ltd.'s Pre – merger and Post – merger EPS to be same?

(Nov 19, 8 Marks)

Solution

i. **Before Merger**

	A Ltd.	B Ltd.
Earning after tax (₹)	10,00,000	2,50,000
No. of shares outstanding	4,00,000	2,00,000
EPS	₹ 2.50	₹ 1.25
Current Market Price/Share	₹ 50	₹ 20
P/E Ratio	20	16

ii. **If B Ltd.'s P/E Ratio is 10**

Then, it's Current Market Price = 10 X ₹ 1.25 = ₹ 12.50

Exchange Ratio = 12.50: 50 i.e. 1 share of A Ltd. for every 4 shares of B Ltd.

No. of shares to be issued = 50,000

A Ltd. Post-Merger EPS

Post-Merger Earning (10,00,000 + 2,50,000)	₹ 12,50,000
No. of Equity Shares after Merger (4,00,000 + 50,000)	4,50,000
EPS	₹ 2.78

iii. **Calculation of Exchange Ratio for A Ltd.'s pre-merger and post-merger EPS to be the same**

$$= \frac{\text{Total earnings}}{\text{Pre-merger EPS of A Ltd.}} = \frac{₹\ 12,50,000}{₹\ 2.50}$$

= 5,00,000 shares

Now, number of shares to be issue to B Ltd.

= 5,00,000 – 4,00,000 = 1,00,000 shares

Therefore, the share exchange ratio is 1,00,000: 2,00,000 or 1:2. It means for every two shares in B Ltd., one share should be issued from A Ltd.