CA FINAL | P2: ADVANCED FINANCIAL MANAGEMENT | 15.02.2025

[SYLLABUS : Mergers, Startup]

TIME : 1 HR 45 MIN | TOTAL : 60 MARKS

SUGGESTED ANSWERS

PART A : MCQ 10 MARKS

Question : 1 **2 Marks**

a) Rs. 20.56/-

Question : 2 **1 Mark**

d) Rs. 226/-

Question : 3 **1 Mark**

b) Rs. 220/-

Question : 4 **2 Marks**

c) Rs. 50,00,000

Question : 5 **2 Marks**

d) Rs. 2.22/-

Question : 6 **1 Mark**

b) Unlike venture capitalists, angel investors focus more on the entrepreneur rather than the business's viability and typically provide capital from their own funds rather than managed investment pools.

Question : 7 **1 Mark**

b) A bridge leader is an external appointee who facilitates business growth and leadership transition, ensuring that young family members are adequately prepared to assume key leadership roles.

PART B : DESCRIPTIVE ANSWERS

Question : 1 **8 Marks**

Inventory Turnover Ratio = COGS / Closing Stock

X Ltd.	Y Ltd.
$5 = \frac{COGS}{15,00,000}$	$4 = \frac{COGS}{5,00,000}$
COGS = ₹75,00,000	COGS = ₹20,00,000
Gross Profit Ratio = 20% means COGS is 80% of Sales, then	
Sales = $\frac{75,00,000 \times 100}{80}$ = ₹93,75,000	Sales = $\frac{20,00,000 \times 100}{80}$ = ₹25,00,000

Statement of Profit

	X Ltd.	Y Ltd.
Sales	93,75,000	25,00,000
Less: Operating Exp.	80,62,500	19,50,000
EBIT	13,12,500	5,50,000
Less: Interest	1,20,000	1,44,000
EBT	11,92,500	4,06,000
Less: Tax@30%	3,57,750	1,21,800
EAT	8,34,750	2,84,200

	X Ltd.	Y Ltd.
No. of Shares	1,00,000	60,000
EPS (EAT/ No. of Shares)	8,34,750/1,00,000 = ₹8.34	2,84,200/60,000 = ₹4.74
Market Price Share (Market Capitalisation/ No. Shares)	75,00,000/ 1,00,000 = ₹75	90,00,000/ 60,000 = ₹150
PE Ratio (MPS/ EPS)	75/ 8.34 = 8.99	150/ 4.74 = 31.65

i) Swap Ratio = Target Co. / Acquirer Co.

	Acquirer Co. X Ltd.	Target Co. Y Ltd.	Weight		Swap Ratio
EPS	8.34	4.74	0.40	4.74/8.34 × 0.40	0.227
MPS	75	150	0.60	150/75 × 0.60	1.20
					1.427

ii) Post-Merger EPS

= $EAT_X + EAT_Y$ / No. of Shares of Both Cos.

= (834750 +284200) / 1,00,000+ (60,000 × 1.227)

= ₹ 6.03

iii) Post-Merger market price assuming same PE of X Ltd.

MPS = PE × EPS

= 8.99 × 6.03 = ₹54.21

iv) Gain or Loss to the share holders

	Pre-Merger EPS	Post-Merger EPS
X Ltd.	₹8.34	₹6.03
Y Ltd.	₹4.74	₹6.03 × 1.427 = ₹8.60

While Shareholders of X Ltd. will lose EPS of ₹2.31 (₹8.34 - ₹6.03) per share the shareholders of Y Ltd. stands to gain EPS of ₹3.86 (₹8.60 - ₹4.74) per share.

Question : 2 **8 Marks**

i) Swap Ratio

Gross NPA	5:40	5/40 × 30%	0.0375
CAR	5:16	5/16 × 28%	0.0875
Market Price	12:96	12/96 × 32%	0.0400
Book Value Per Share	12:120	12/120 × 10%	0.0100
			0.1750

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

Calculation of Book Value Per Share

Particulars	Weak Bank(W)	Strong Bank(S)
Share Capital (₹ Lakhs)	150	500
Reserves & Surplus (₹ Lakhs)	80	5,500
	230	6,000
Less: Preliminary Expenses (₹ Lakhs)	50	--
Net Worth or Book Value (₹ Lakhs)	180	6,000
No. of Outstanding Shares (Lakhs)	15	50
Book Value Per Share (₹)	12	120

ii) No. of equity shares to be issued:

= (150 / 10) × 0.1750 = 2.625 lakh shares

iii) Balance Sheet after Merger

Calculation of Capital Reserve

Book Value of Shares	₹180.00 lac
Less: Value of Shares issued	₹26.25 lac
Capital Reserve	₹153.75 lac

Balance Sheet

	₹ lac		₹ lac
Paid up Share Capital	526.25	Cash in Hand & RBI	2900.00
Reserves & Surplus	5500.00	Balance with other banks	2000.00
Capital Reserve	153.75	Investment	20100.00
Deposits	48000.00	Advances	30500.00
Other Liabilities	3390.00	Other Assets	2070.00
	57570.00		57570.00

iv) Calculation CAR & Gross NPA % of Bank ‘S’ after merger

CAR / CRWAR = Total Capital / Risky Weighted Assets = (6180 / 41100) × 100 = 15.04%

	Weak Bank	Strong Bank	Merged
CAR	5%	16%	
Total Capital	₹180 lac	₹6000 lac	₹6180 lac
Risky Weighted Assets	₹3600 lac	₹37500 lac	₹41100 lac

GNPA Ratio = (Gross NPA / Gross Advances) x 100 = (2750 / 30500) × 100 = 9.02%

	Weak Bank	Strong Bank	Merged
GNPA (given)	0.40	0.05	
Gross Advances	₹3500 lacs	₹27000 lacs	₹30500 lacs
Risky Weighted Assets	₹1400 lacs	₹1350 lacs	₹2750 lacs

Question : 3 **5 Marks**

i) Maximum exchange ratio acceptable to the shareholders of ABC Ltd.

Market Price of share of ABC Ltd. (₹3 × 8)	₹24
No. of Equity Shares	400 lakh
Market Capitalisation of ABC Ltd. (₹24 × 400 lakh)	₹9600 lakh
Combined Earnings (₹1200 + ₹400) lakh	₹1600 lakh
Combined Market Capitalisation (₹1600 lakh × 8)	₹12800 lakh
Market Capitalisation of ABC Ltd. (₹24 × 400 lakh)	₹9600 lakh
Balance for XYZ Ltd.	₹3200 lakh

Let D be the no. of equity shares to be issued to XYZ Ltd. then,

$$\frac{₹3200\text{ Lakh}}{\left(\frac{1600\text{ Lakh}}{D+400}\right)\times 8} = D$$

D = 133.333 lakh Shares

Exchange Ratio = 133.333 / 200 = 0.6666:1

ii) Minimum exchange ratio acceptable to the shareholders of XYZ Ltd.

Market Price of share of XYZ Ltd.	₹14.00
No. of Equity Shares	200 lakh
Market Capitalisation of XYZ Ltd. (₹14.00 × 200 lakh)	₹2800 lakh
Combined Earnings (₹1200 + ₹400) lakh	₹1600 lakh
Combined Market Capitalisation (₹1600 lakh × 10)	₹16000 lakh
Balance for ABC Ltd.	₹13200 lakh

Let D be the no. of equity shares to be issued to XYZ Ltd. then,

$$\frac{₹2800\text{ Lakh}}{\left(\frac{1600\text{ Lakh}}{D+400}\right)\times 10} = D$$

D = 84.8485 lakh Shares

Exchange Ratio = 84.8485 / 200 = 0.4242:1

Question : 4 **8 Marks**

i) Determination of EPS, P/E Ratio, ROE and BVPS of R Ltd. & S Ltd.

	R Ltd.	S Ltd.
EAT (₹)	5,33,000	2,49,600
N	200000	160000
EPS (EAT ÷ N)	2.665	1.56
Market Price Per Share	50	20
PE Ratio (MPS/EPS)	18.76	12.82
Equity Fund (Equity Value)	2400000	1600000
BVPS (Equity Value ÷ N)	12	10
ROE (EAT ÷ EF) or ROE (EAT ÷ EF)	0.2221 22.21%	0.156 15.60%

ii) Determination of Growth Rate of EPS of R Ltd. & S Ltd.

	R Ltd.	S Ltd.
Retention Ratio (1 – D/P Ratio)	0.80	0.70
Growth Rate (ROE × Retention Ratio) or	0.1777	0.1092
Growth Rate (ROE × Retention Ratio)	17.77%	10.92%

iii) Justifiable equity share exchange ratio

1. Market Price Based = MPS_S/MPS_R = ₹20/ ₹50 = 0.40:1 (lower limit)
2. Intrinsic Value Based = ₹25/ ₹50 = 0.50:1 (max. limit)

   Since, R Ltd. has higher EPS, PE, ROE and higher growth expectations the negotiated term would be expected to be closer to the lower limit, based on existing share price.

Question : 5 **5 Marks**

i) The price at which the shares can be repurchased

Let P be the buyback price decided by Abhishek Ltd.

Market Capitalisation after Buyback:

1.1P (Original Shares – Shares Bought back)

= $\left[1.1P\left(10 \text{ Lakhs} - (30\% \text{ of } 90 \text{ Lakhs})/P\right)\right]$ = 11 Lakhs × P – 27 lakhs × 1.1

= 11 lakhs × P – 29.7 lakhs

Market capitalization rate after buyback is 200 lakhs.

Thus, we have:

11 Lakhs × P – 29.7 lakhs = ₹200 lakhs or

P = Rs. 20.88

ii) Number of shares that can be re-purchased

The Number of shares to be bought back: = 27 Lakhs / 20.88 = 1.29 Lakhs (Approx)

iii) The impact of share re-purchase on the EPS

New Equity Shares = (10 – 1.29) lakhs = 8.71 lakhs

EPS = (3 × 10 lakhs) / 8.71 lakhs = 30L / 8.71L = ₹3.44

Thus, EPS of Abhishek Ltd., increases to ₹3.44.

Question : 6 **4 Marks**

A Unicorn is a privately held start-up company which has achieved a valuation US$ 1 billion. This term was coined by venture capitalist Aileen Lee, first time in 2013. Unicorn, a mythical animal represents the statistical rarity of successful ventures.

A start-up is referred as a Unicorn if it has following features:

i. A privately held start-up.
ii. Valuation of start-up reaches US$ 1 Billion.
iii. Emphasis is on the rarity of success of such start-up.
iv. Other common features are new ideas, disruptive innovation, consumer focus, high on technology etc.

However, it is important to note that in case the valuation of any start-up slips below US$ 1 billion it can lose its status of 'Unicorn'. Hence a start-up may be Unicorn at one point of time and may not be at another point of time.

Question : 7 **4 Marks**

In context of Start-up following challenges are faced in implementing Succession Planning.

1) **Founder mindset might be different than the corporate mindset** – The way founder's brains are wired is different from the way that a traditional corporate manager thinks, and this puts off seasoned corporate leaders from joining even matured start-ups.
2) **Premature for startups to implement business succession** - Certain startups are at early growth stage and too much of processes would lead to growth slow-down and hence they are not in a current stage for implementing business succession planning.
3) **Founders are the face of startups** – One cannot imagine a startup without a founder who initiated the idea and executed it and in his/ her absence succession planning can become difficult.

Question : 8 **8 Marks**

NPV for bond refunding

	₹
PV of annual cash flow savings (W.N. 2) (3,49,600 x PVIFA 8 %, 25) i.e. 10.675	37,31,980
Less: Initial investment (W.N. 1)	31,15,000
NPV	6,16,980

Recommendation: Refunding of bonds is recommended as NPV is positive.

Working Notes:

(i) Initial Investment:

(a)	**Call Premium**		
	Before tax (1,150 - 1,000) × 30,000	45,00,000	
	Less Tax @ 40%	18,00,000	
	After tax cost of call premium		27,00,000
(b)	**Floatation Cost**		4,25,000
(c)	**Overlapping Interest**		
	Before tax (0.14 × 2/12 × 3 Crores)	7,00,000	
	Less tax @ 40%	2,80,000	4,20,000
(d)	**Tax saving on unamortized discount on old bond (25/30 × 9,00,000 × 0.4)**		(3,00,000)
(e)	**Tax savings from unamortized floatation cost of old bonds (25/30 × 3,90,000 × 0.40)**		(1,30,000)
			31,15,000

(ii) Annual cash flow savings:

a. Old Bond

(i) Interest cost (0.14 × 3 crores) Less tax @ 40%	42,00,000 16,80,000	25,20,000
(ii) Tax savings from amortisation of discount (9,00,000/30 × 0.4)		(12,000)
(iii) Tax savings from amortization of floatation cost (3,90,000/30)		(5,200)
Annual after tax cost payment under old Bond (A)		25,02,800

b. New Bond

(i)	Interest Cost (0.12 × 3 crores)	36,00,000	
	Less Tax @ 40%	14,40,000	21,60,000
(ii)	Tax savings from amortisation of floatation cost 0.4 × 4,25,000/25		(6,800)
	Annual after tax payment under new Bond (B)		21,53,200
	Annual Cash Flow Saving (A) – (B)		3,49,600

ALL THE BEST

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