RESIDUAL

Question – 35

Mr. X, a financial analyst, intends to value the business of PQR Ltd. in terms of the future cash generating capacity. He has projected the following after tax cash flows :

Year :	1	2	3	4	5
Cash flows (₹ in lakh)	1,760	480	640	860	1,170

It is further estimated that beyond 5th year, cash flows will perpetuate at a constant growth rate of 8% per annum, mainly on account of inflation. The perpetual cash flow is estimated to be ₹ 10,260 lakh at the end of the 5th year.

Required:

(i) What is the value of the firm in terms of expected future cash flows, if the cost of capital of the firm is 20%.

(ii) The firm has outstanding debts of ₹ 3,620 lakh and cash/bank balance of ₹ 2,710 lakh. Calculate the shareholder value per share if the number of outs tending shares is 151.50 lakh.

(iii) The firm has received a takeover bid from XYZ ltd. of ₹ 225 per share. Is it a good offer?

[Given: PVIF at 20% for year 1 to Year 5: 0.833, 0.694, 0.579, 0.482, 0.402]

(Exam November – 2019) (8 Marks)

Solution:

(i) Value of Firm

Year	Cash Flow (₹ in lakhs)	PVF	PV (₹ in lakhs)
1	1760	0.833	1466.08
2	480	0.694	333.12
3	640	0.579	370.56
4	860	0.482	414.52
5	1170	0.402	470.34
PV of Cash flows upto year 5			3054.62

If PV of Terminal Value is considered with the growth rate (at the end of 5th year)

$$= \frac{10,260\ (1 + 0.08)}{0.20 - 0.08} = \frac{11,080,80}{0.12} = ₹\ 92,340 \text{ lakh}$$

Now, PV (at the beginning of the year)

= ₹ 92,340 × 0.402 = ₹ 37,120.68 Lakhs

So, Present Value of the firm

= ₹ 3,054.62 + ₹ 37,120.68 = ₹ 40,175.30 Lakhs

(ii) Value per Share

= Value of Firm – Value of Debt / No of shares

= (40,175.30 – 3,620)/151.50 = ₹ 241.29

(iii) Takeover bid of ₹ 225 per share seems to be not a good offer as it is lesser than the intrinsic value i.e. value per share of ₹ 241.29.

Question – 36

ICL is proposing to take over SVL with an objective to diversify. ICL's profit after tax (PAT) has grown @ 18 per cent per annum and SVL's PAT is grown @ 15 per cent per annum. 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	4,545	1,500
PBIT	2,980	720
Interest	750	25
Provisions for Tax	1,440	445
PAT	790	250
Dividends	235	125

	ICL		SVL	
Fixed Assets				
Land & Building (Net)	720		190	
Plant & Machinery (Net)	900		350	
Furniture & Fixtures (Net)	30	1,650	10	550

Current Assets		775		580
Less: Current Liabilities				
Creditors	230		130	
Overdrafts	35		10	
Provision for Tax	145		50	
Provision for dividends	60	470	50	240
Net Assets		1,955		890
Paid up share capital (₹ 10 per share)	250		125	
Reserve and Surplus	1,050	1,300	660	785
Borrowing		655		105
Capital Employed		1,955		890

Market price share (₹)	52	75

ICL's Land & Buildings are stated at current prices. SVL's Land & Buildings are revalued three years ago. There has been an increase of 30 per cent per year in the value of Land & Buildings.

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

ICL's Management wants to determine the premium on the shares over the current market price which can be paid on the acquisition of SVL.

You are required to determine the premium using:

(i) Net Worth adjusted for the current value of Land & Buildings plus the estimated average profit after tax (PAT) for the next five years.

(ii) The dividend growth formula.

(iii) ICL will push forward which method during the course of negotiations?

Period (t)	1	2	3	4	5
FVIF (30%, t)	1.300	1.690	2.197	2.856	3.713
FVIF (15%,t)	1.15	2.4725	3.9938	5.7424	7.7537

(Exam November – 2020) (8 Marks)

Solution:

(i) Value per Share

Net worth = 785

(+) Revaluation in L & B

$[190\ (1.30)^3 - 190]$	
$[190 \times 2.197 - 190]$	227.43
Net Worth	₹ 1,012.43 Cr.
$(+)\ \left(\frac{250 \times 7.7535}{5}\right)$	₹ 387.685 Cr.
Value of SVL	₹ 1,400.115 Cr.
÷ No. of shares	12.50 Cr.
Value per share	₹ 112

$$\text{Premium} = \frac{112 - 75}{75} \times 100 = 49.33\%$$

(ii) Dividend Growth Model

$$K_e = \frac{D_1}{P_0} + g$$

$$D_0 = \frac{125}{12.5} = ₹\ 10$$

$$K_e = \frac{10\ (1.15)}{75} + 0.15$$

$$= 0.3033 \text{ or } 30.33\%$$

$$P_0 = \frac{10\ (1.18)}{0.3033 - 0.18} = ₹\ 95.70$$

$$\text{Premium} = \frac{97.70 - 75}{75} \times 100 = 27.60\%$$

(iii) ICL will push forward dividend growth model, due to lower premium.

Question – 37

M/s. Roly Ltd. wants to acquire M/s. Poly Ltd. The following is the Balance Sheet of Poly Ltd. as on 31st March, 2020:

Liabilities	₹	Assets	₹
Equity Capital (₹ 10 per share)	10,00,000	Cash	20,000

Retained Earnings	3,00,000	Debtors	50,000
12% Debentures	3,00,000	Inventories	2,00,000
Creditors and other liability	3,20,000	Plant & Machinery	16,50,000
Total	**19,20,000**	**Total**	**19,20,000**

Shareholders of Poly Ltd. will get one share of Roly Ltd. at current Market price of ₹ 20 for every two shares. External liabilities are expected to be settled at a discount of ₹ 20,000. Sundry debtors and Inventories are expected to realize ₹ 2,00,000.

Poly Ltd. will run as an independent unit. Cash Flow After Tax is expected to be ₹ 4,00,000 per annum for next 6 years. Assume the disposal value of the plant after 6 years will be ₹ 1,50,000.

Poly Ltd. requires a return of 14%

n	1	2	3	4	5	6
PVIF (14%, n)	0.877	0.769	0.675	0.592	0.519	0.456

Advise the Board of Directors on the financial feasibility of the Proposal.

(Exam Jan – 2021) (8 Marks)

Solution:

Calculation of Purchase Consideration

	₹
Issue of Share 50,000 × ₹ 20	10,00,000
External Liabilities settled	3,00,000
12% Debentures	3,00,000
	16,00,000
Less: Realization of Debtors and Inventories	2,00,000
Cash	20,000
	13,80,000

Net Present Value

= PV of Cash Inflow + PV of Demerger of Roly Ltd. – Cash Outflow

= ₹ 4,00,000 PVAF(14%,6) + ₹ 1,50,000 PVF(14%, 6) – ₹ 13,80,000

= ₹ 4,00,000 × 3.888 + ₹ 1,50,000 × 0.456 – ₹ 13,80,000

= ₹ 15,55,200 + ₹ 68,400 – ₹ 13,80,000

= ₹ 2,43,600

Since NPV of the decision is positive it is advantageous to acquire Poly Ltd.

Question – 38

Simple Ltd. and Dimple Ltd. are planning to merge. The total value of the companies are dependent on the fluctuating business conditions. The following information is given for the total value (debt + equity) structure of each of the two companies.

Business Condition	Probability	Simple Ltd. ₹ Lacs	Dimple Ltd. ₹ Lacs
High Growth	0.20	820	1050
Medium Growth	0.60	550	825
Slow Growth	0.20	410	590

The current debt of Dimple Ltd. is ₹ 65 lacs and of Simple Ltd. is ₹ 460 lacs.

Calculate the expected value of debt and equity separately for the merged entity.

(SM TYK – 15)

Solution:

Compute Value of Equity

Simple Ltd.

(₹ in Lacs)

	High Growth	Medium Growth	Slow Growth
Debit + Equity	820	550	410
Less: Debt	460	460	460
Equity	360	90	-50

Since the Company has limited liability the value of equity cannot be negative therefore the value of equity under slow growth will be taken as zero because of insolvency risk and the value of debt is taken at 410 lacs. The expected value of debt and equity can then be calculated as:

Simple Ltd.

(₹ in Lacs)

	High Growth		Medium Growth		Slow Growth		Expected Value
	Prob.	Value	Prob.	Value	Prob.	Value	
Debt	0.20	460	0.60	460	0.20	410	450
Equity	0.20	360	0.60	90	0.20	0	126
		820		550		410	576

Dimple Ltd.

(₹ in Lacs)

	High Growth		Medium Growth		Slow Growth		Expected Value
	Prob.	Value	Prob.	Value	Prob.	Value	
Equity	0.20	985	0.60	760	0.20	525	758
Debt	0.20	65	0.60	65	0.20	65	65
		1050		825		590	823

Expected Values

(₹ in Lacs)

Equity		Debt	
Simple Ltd.	126	Simple Ltd.	450
Dimple Ltd.	758	Dimple Ltd.	65
	884		515

Question – 39

R Ltd. and S Ltd. operating in same industry are not experiencing any rapid growth but providing a steady stream of earnings. R Ltd.'s management is interested in acquisition of S. Ltd. due to its excess plant capacity. Share of S Ltd. is trading in market at ₹ 3.20 each. Other data relating to S Ltd. is as follows:

Balance Sheet of S Ltd

Liabilities	Amount (₹)	Assets	Amount (₹)
Current Liabilities	1,59,80,000	Current Assets	2,48,75,000
Long Term Liabilities	1,28,00,000	Other Assets	94,00,000
Reserve & Surplus	2,79,95,000	Property Plants	
Share Capital		& Equipment	3,45,00,000

(80 Lakhs shares of ₹ 1.5 each)	1,20,00,000		
Total	**6,87,75,000**	**Total**	**6,87,75,000**

Particulars	R Ltd. (₹)	S Ltd. (₹)	Combined Entity (₹)
Profit after Tax	86,50,000	49,72,000	1,21,85,000
Residual Net Cash Flows per year	90,10,000	54,87,000	1,85,00,000
Required return on equity	13.75%	13.05%	12.5%

You are required to compute the following:

(i) Minimum price per share S Ltd. should accept from R Ltd.

(ii) Maximum price per share R Ltd. shall be willing to offer to S Ltd.

(iii) Floor Value of per share of S Ltd., whether it shall play any role in decision for its acquisition by R Ltd.

(Exam May – 2019) (8 Marks)

Solution:

(i) Calculation of Minimum price per share S Ltd. should accept from R Ltd.

$$\text{Value of S Ltd.} = \frac{\text{Residual Cash Flow}}{\text{Ke} - \text{g}} = \frac{54,87,000}{0.1305 - 0} = ₹\ 4,20,45,977$$

$$\text{Value per share of S Ltd.} = \frac{4,20,45,977}{80,00,000} = ₹\ 5.26$$

$$\text{Book Value of per share of S Ltd.} = \frac{3,99,95,000}{80,00,000} = ₹\ 4.99 \text{ or } ₹\ 5$$

Therefore, the minimum price per share S ltd. should accept from R Ltd. is ₹ 5 (current book value)

(ii) Calculation of Maximum price per share R Ltd. shall be willing to offer to S Ltd.

$$\text{Value of R Ltd.} = \frac{\text{Residual Cash Flow}}{\text{Ke} - \text{g}} = \frac{90,10,000}{0.1375 - 0} = ₹\ 6,55,27,273$$

Value of Combined entity = $\frac{1,85,00,000}{0.125-0}$ = ₹ 14,80,00,000

Value of synergy

= Value of Combined entity – Individual values of R Ltd. and S Ltd.

= ₹ 14,80,00,000 – (₹ 4,20,45,977 + ₹ 6,55,27,273)

= ₹ 4,04,26,750

Maximum price per share R Ltd. shall be willing to offer to S Ltd. shall be computed as follows:

$$= \frac{\text{Value of SLtd. as per Residual cash flows + Synergy benefits}}{\text{No. of Shares}}$$

$$= \frac{4,20,45,977 + 4,04,26,750}{80,00,000} = ₹ 10.31$$

(iii) Floor value of per share of S Ltd shall be ₹ 3.20 (current market price) and it shall not play any role in decision for the acquisition of S Ltd. as it is lower than its current book value.

Normal Probability Distribution Table

Number of Standard Deviations From Mean (Z)	Area to the Left or Right (One Tail)	Number of Standard Deviations From Mean (Z)	Area to The Left or Right (One Tail)
0.00	0.5000	1.55	0.0606
0.05	0.4801	1.60	0.0548
0.10	0.4602	1.65	0.0495
0.15	0.4404	1.70	0.0446
0.20	0.4207	1.75	0.0401
0.25	0.4013	1.80	0.0359
0.30	0.3821	1.85	0.0322
0.35	0.3632	1.90	0.0287
0.40	0.3446	1.95	0.0256
0.45	0.3264	2.00	0.0228
0.50	0.3085	2.05	0.0202
0.55	0.2912	2.10	0.0179
0.60	0.2743	2.15	0.0158
0.65	0.2578	2.20	0.0139
0.70	0.2420	2.25	0.0122
0.75	0.2264	2.30	0.0107
0.80	0.2119	2.35	0.0094
0.85	0.1977	2.40	0.0082
0.90	0.1841	2.45	0.0071
0.95	0.1711	2.50	0.0062
1.00	0.1557	2.55	0.0054
1.05	0.1469	2.60	0.0047
1.10	0.3570	2.65	0.0040
1.15	0.1251	2.70	0.0035
1.20	0.1151	2.75	0.0030
1.25	0.1056	2.80	0.0026
1.30	0.0986	2.85	0.0022
1.35	0.0885	2.90	0.0019
1.40	0.0808	2.95	0.0016
1.45	0.0735	3.00	0.0013
1.50	0.0668		

PAPER – 2: ADVANCED FINANCIAL MANAGEMENT

Part I – Multiple Choice Questions

Case Scenario -1

Short Bank Ltd. need funds for a period of 7 days. To meet this financial need, on 20th September, 2025, Short Bank Ltd. entered into an agreement with Long Bank Ltd. under which, Short Bank Ltd. will sell 8% GOI Bonds @6% p.a. for ₹ 5 crores (Face Value) with initial margin 2%. Each Bond Face Value is ₹ 1,00,000.

The maturity of this 8% GOI Bond is 31st December, 2029, originally issued on 1st January, 2025. Interest payable annually. The clean price of the bond is ₹ 99,420.

***Note:** Assume 360 days in a year.*

*From the information given above, choose the correct answer to the Question No. **1** to **3:***

1. *The arrangement entered by Long Bank Ltd. is _____and that by Short Bank Ltd. is _____.*

   (A) Repo, Reverse Repo

   (B) Lending, Repo

   (C) Reverse Repo, Borrowing

   (D) Reverse Repo, Repo ***(2 Marks)***

2. *Accrued Interest and dirty price of the bond as on 20th September, 2025 will approximately be ₹_____and ₹_____respectively.*

   (A) ₹ 5,822 and ₹ 1,05,242

   (B) ₹ 5,788 and ₹ 93,632

   (C) ₹ 7,954 and ₹ 1,07,374

   (D) ₹ 7,954 and ₹ 91,466 ***(2 Marks)***

3. *The proceeds of the 1st Leg of the transaction shall be approximately ₹_____ and the 2nd Leg proceeds of the transaction shall be ₹_____.*

   (A) ₹5,15,52,000 and ₹5,16,12,150

   (B) ₹5,15,68,580 and ₹5,16,28,743

   (C) ₹5,15,52,000 and ₹5,61,12,150

   (D) ₹5,51,52,000 and ₹5,61,12,150 ***(2 Marks)***

Case Scenario - II

The Inter Banking Rates on 28th June, 2025 were as follows:

Spot US$1 = ₹86.50/55

1 Month forward premium 5/8

On 1st May, 2025, Mr. M an exporter enters into a forward contract with DMP Bank to sell US $ 2,50,000 on 31st July, 2025 at the rate US $1 = 86.80. However, Mr. M received the amount on 28th June, 2025.

Mr. M requested the bank to take the delivery of the remittance on 30th June, 2025 i.e. before due date.

Note 1. Consider 365 days in a year.

Note 2. Prevelling Prime Lending Rate is 15% p.a.

From the information given above, choose the correct answer to the Question No. ***4*** *to* ***6:***

4. *Swap loss is _____.*

   (A) ₹12,500

   (B) ₹32,500

   (C) ₹45,000

   (D) ₹25,000 ***(2 Marks)***

5. *Interest on outlay of funds shall be approximately _____.*

   (A) ₹955 payable by Mr. M

   (B) ₹414 payable by Mr. M

   (C) ₹955 payable by DMP Bank

   (D) ₹414 payable by DMP Bank ***(2 Marks)***

6. *What is the net conversion rate per US $ realised by Mr. M?*

   (A) ₹ 86.6738

   (B) ₹ 86.3662

   (C) ₹ 86.3738

   (D) ₹ 86.6662 ***(2 Marks)***

Case Scenario -III

You are submitted the following information in respect of Mr. Z's portfolio:

Share /Bond	***Cost (₹)***	***Dividend/Interest (₹)***	***Market Price (₹)***	***Beta***
A Ltd.	*40,000*	*4,000*	*41,000*	*0.60*
B Ltd.	*50,000*	*5,000*	*52,500*	*0.80*
C Ltd.	*80,000*	*3,000*	*1,10,000*	*0.60*
GOI Bonds	*1,70,000*	*17,000*	*1,61,500*	*0.01*

Average Return of the portfolio is 15.70% per annum.

***Note**: Calculate upto two decimal points.*

*From the information given above, choose the correct answer to the following Question No. **7** to **9**:*

7. *Expected return on market portfolio (R_m) is -*

   (A) 14.38%

   (B) 15.34%

   (C) 15.88%

   (D) 16.32% ***(2 Marks)***

8. *Risk-free rate of return (as per simple average) is -*

   (A) 15.42%

   (B) 15.52%

   (C) 15.62%

   (D) 15.72% ***(2 Marks)***

9. *Expected rate of return on shares of C Ltd. is -*

   (A) 12.38%

   (B) 13.54%

   (C) 14.12%

   (D) 15.74% ***(2 Marks)***

Case Scenario - IV

Ujwal Bank Ltd. (UBL) and Suraksha Bank Ltd. (SBL) are Scheduled Banks to merge.

UBL is strong Private Sector Bank with stable capital adequacy, while SBL has negative CRAR due to heavy NPAs.

Data of both the Banks is as follows:

Particulars	***UBL***	***SBL***
Book Value per share (₹)	*50*	*25*
Market Price per share (₹)	*200*	*50*
CRAR%	*12*	*(-) 2*
NPA%	*2*	*12*
No. of shares in thousands	*50000*	*20000*
Price Earning Ratio (PE Ratio)	*20*	*10*

Weights for swap ratio are Book Value per share 20%, Market Price per share 40%, CRAR (%) 20% and balance for NPA%.

From the information given above, choose the correct answer to the Question No. ***10*** *to* ***12:***

10. *The swap ratio based on information given shall be for 1 share of UBL _____shares of SBL.*

    (A) 1.07

    (B) 0.20

    (C) 0.86

    (D) 1.73 ***(2 Marks)***

11. *Based on swap ratio total number of shares issued by UBL to SBL shall be_____ (in Thousands).*

    (A) 21,400 shares

    (B) 24,000 shares

    (C) 17,200 shares

    (D) 4,000 shares ***(2 Marks)***

12. *Post merger Earning Per Share (EPS) of UBL shall be ₹_____.*

    (A) ₹ 11.11

    (B) ₹ 12.50

    (C) ₹ 8.50

    (D) ₹ 10.00 ***(2 Marks)***

Scenario - V

PQR Ltd. is considering two new products A and B, only one of which can be added to its production line. Product A is sure seller. It is certain that 2,00,000 units of product A with the firm's maximum capacity can be manufactured and sold each year with a contribution margin of 5 per unit.

Product B with a contribution margin of ₹ 10 per unit is potentially more profitable.

However, there is uncertainty about its marketability and following sales forecast has been prepared:

Sales units of B (per annum)	***Probability***
50,000	*0.25*
1,00,000	*0.50*
1,50,000	*0.25*

Fixed cost per year is ₹ 6,00,000,

From the information given above, choose the correct answer to the following Question No. ***13*** *to* ***15:***

13. *If Company select product A, the profit of the company is -*

    (A) ₹ 2,00,000

    (B) ₹ 4,00,000

(C) ₹ 6,00,000

(D) ₹ 10,00,000 **(2 Marks)**

14. If company select product B and sale 1,40,000 units, the profit of the company is-

(A) ₹ 4,00,000

(B) ₹ 8,00,000

(C) ₹ 10,00,000

(D) ₹ 12,00,000 **(2 Marks)**

15. If company select product B, the expected value of profit of the company is -

(A) ₹ 2,00,000

(B) ₹ 4,00,000

(C) ₹ 8,00,000

(D) ₹ 10,00,000 **(2 Marks)**

ANSWER TO PART – I CASE SCENARIO BASED MCQS

MCQ No.	Correct Option
1.	(D)
2.	(A)
3.	(B)
4.	(B)
5.	(A)
6.	(D)
7.	(C)
8.	(B)
9.	(D)
10.	(B)
11.	(D)
12.	(A)
13.	(B)
14.	(B)
15.	(B)

Part II – Descriptive Questions

*Question No.**1** is compulsory.*

*Candidates are also required to answer any **four** from the remaining **five** questions.*

Working notes should form part of the respective answer.

Question 1

(a) M/s. Wealth Builders, an Asset Management Company (AMC), launched a dividend bonus scheme on 1st April 2019. The fund demonstrated strong performance over the years.

Key events are as follows:

- *On 30th September 2021, the fund declared a bonus of 1:4 (one bonus unit for every four existing units held).*
- *On 30th September 2023, a second bonus of 2: 5 (two bonus units for every five existing units held) was declared.*

Ms. Investor made a lump-sum investment of ₹ 25 lakhs in the scheme at its inception and remained invested throughout. As of 31st March 2025, her investment has generated an average annual yield of 16.8%.

The Net Asset Value (NAV) of the scheme on various dates is provided below:

Particulars	***30.09.2021***	***30.09.2023***	***31.03.2025***
NAV (in ₹)	*78*	*88*	*110*

Required:

Determine the opening NAV per unit as on 1st April 2019 for Ms. Investor's holding. ***(6 Marks)***

("Round off all intermediate and final calculations to two decimal places.")

(b) T Ltd., a listed company on stock exchange, currently has 84% promoter holding i.e. 126 Lakh shares. Profit after Tax is ₹ 9.60 Crores. Free Float market capitalization is ₹ 38.40 Crores. As per SEBI guidelines promoters have to restrict their holding to 75% to avoid delisting from the stock exchange. Board of Directors has decided not to delist the share but to comply with the SEBI guidelines by issuing bonus shares to minority shareholders

while maintaining the same P/E Ratio.

You are required to calculate:

(i) P/E Ratio

(ii) Bonus Ratio

(iii) Market price of share after Bonus issue

(iv) Post bonus Free Float Market Capitalization. ***(4 Marks)***

(c) Ms. Priya initiated the following option strategy on Omega Industries Limited's equity shares:

Transactions executed:

(1) Bought one European Call Option with the following terms:

- *Premium paid : ₹ 42 per share*
- *Strike Price : ₹ 620*
- *Maturity : 3 months*

(2) Bought one European Put Option with the following terms:

- *Premium paid : ₹ 8 per share*
- *Strike Price : ₹ 480*
- *Maturity : 3 months*

Additional Information:

- *Current Market Price (CMP) of Omega Industries: ₹ 550 per share*
- *Lot size: 150 shares per contract*
- *Ms. Priya holds the positions until expiration*

Required:

(i) Calculate the net profit/loss in the following scenarios at expiration

- *Share price remains unchanged at ₹ 550*
- *Share price declines to ₹ 380*
- *Share price appreciates to ₹ 680*

(ii) Determine the upper and lower breakeven points for this strategy.

(4 Marks)

(Note: Round off all intermediate and final calculations to four decimal places.)

Answer

(a)

(a)	Average Yield	0.168
(b)	Investment	₹ 25,00,000
(c)	Gain over a period of 6 years (a*b*6)	₹ 25,20,000
(d)	Market Value as on 31.03.2025 (b + c)	₹ 50,20,000
(e)	NAV as on 31.03.2023	110
(f)	Total units as on 31.03.2025 (d/e)	45636.36
(g)	No of units as on 31.03.2023 Pre bonus = 45636.36*5/ (5 + 2)	32597.40
(h)	No of units as on 31.09.2019 Pre bonus = 32597.40*4/ (4 + 1)	26077.92

Issue Price as on 01.04.2019

Investment ₹ 25,00,000/ Units purchased 26077.92 (b/h) = ₹ 95.87

Alternatively, it can also be computed as follows:

Units on 01.04.2019	X
Units after bonus on 30.09.2021 (1:4)	1.25X
Units after bonus on 30.09.2023 (2:5)	1.75X
Average yield	0.168
Investment	₹ 25,00,000
Gain for 5 years (25,00,000 x 0.168 x 6)	₹ 25,20,000
Total Value (₹ 25,00,000 + ₹ 25,20,000)	₹ 50,20,000

Where, 1.75X x ₹ 110 = ₹ 50,20,000

Therefore, X = 26077.92 units

Issue Price on 01.04.2019:

= ₹ 25,00,000 / 26077.92 units = ₹ 95.87

Alternatively, it can also be computed as follows:

Average Yield = 16.80%

Investment = ₹ 25,00,000

Gain over a period of 6 years = ₹ 25,00,000*0.168*6 = ₹ 25,20,000

Thus, Maturity Value on 31.03.25 shall be ₹ 50,20,000

No. of units = $\frac{50,20,000}{110}$ = 45,636.36

Now let B be the NAV on 01.04.19 then

Units acquired on 01.04.19 = $\frac{25,00,000}{B}$

Units added on 30.09.21 = $\frac{25,00,000}{B} \times \frac{1}{4} = \frac{6,25,000}{B}$

Units added on 31.12.23 = $\frac{31,25,000}{B} \times \frac{2}{5} = \frac{12,50,000}{B}$

Thus, total units can be shown as follows:

$$\left[\frac{2500000}{B} + \frac{625000}{B} + \frac{1250000}{B}\right] = 45,636.36$$

B = ₹ 95.87

Thus, the issue Price of units under Bonus Plan shall be ₹ 95.87.

(b) (i) P/E Ratio:

	% of holding	No. of Shares
Promoter's Holding	84%	126 Lakh
Minority Holding	16%	24 Lakh
Total Shares	100%	150 Lakh

Free Float Market Capitalization = ₹ 38.40 crores

Hence Market price $\frac{₹ 38.40 \text{ crores}}{24.00 \text{ Lakh}}$ = ₹ 160 per share