

VALUATIONS

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Determinants of Goodwill

(1)

FMP

Capital Employed

NRR

(Normal Rate of Return)

① Consider past profits

↓
Average of past profits

Simple Average

Weighted Average

$$\frac{\text{Sum of all profits}}{\text{No of years}}$$

$$\frac{\sum \text{profits} \times \text{weights}}{\sum \text{weights}}$$

No trends in Past profits.

↓
Highest weight to most recent year and least weight to the earliest year

↓
past profits are in increasing trends / decreasing trends.

Past profits

- ① Exclude non-trade Income
- ② Exclude Extraordinary Gains & losses.

③ FMP is always past (Future effective tax rate)

④ Do not deduct dividend to ESH/PSH

⑤ Future adjustments to profits

(i) Increase in selling price without effect on demand

(ii) Increase in Expenses (operating exp wages / materials)

(iii) Growth / decline %

iv) Advantage from future contracts.

Capital Employed:

Assets - Liabilities

↓
Realisable value

↓
Settlement value

Adjustment

1) Exclude non-trade investments

2) Exclude Goodwill.

3) proposed dividend is not an outside liability.

Average Capital Employed = op - Capital Employed + CL Capital Employed

OR

op Capital Employed + $\frac{1}{2}$ CY PAT

cl Capital Employed - $\frac{1}{2}$ CY PAT

Close Capital Emp = op Capital + CY PAT

$$\begin{aligned}\text{Average Capital Employed} &= \frac{\text{op Cap Emp} + \text{cl Cap Emp}}{2} \\ &= \frac{2 \text{ opening Capital Emp} + \text{CY PAT}}{2}\end{aligned}$$

opening Capital Employed + $\frac{1}{2}$ CY PAT

* Fiction Assets - Realisable value = "0" (ZERO)

* Preference Share Capital - not an outside liability

Normal Rate of Return (NRR) - Industry specific

1) Dividend yield method

$$\text{NRR} = \frac{\text{Average dividend per share}}{\text{MPS}} \times 100$$

2) Earnings yield method

$$= \frac{\text{Average EPS}}{\text{MPS}} \times 100$$

Methods of Valuation of Goodwill

1) Average profits method =

$$\text{Goodwill} = \text{Fmp} \times \text{no of years purchase}$$

no of years the business is expected to sustain its Goodwill (7-10 years)

2) Super profits method:

$$\text{Goodwill} = \text{Super profits} \times \text{no of years purchase}$$

Fmp - excess of Normal profits

③ Annuity Method:

$$\text{Goodwill} = \text{Super profits} \times \text{PVAF}$$

④ Capitalisation Method:

$$\text{Goodwill} = \text{Normal Capital employed} - \text{Average Capital Employed}$$

$$\downarrow$$
$$\frac{\text{Fmp}}{\text{NIRR \%}}$$

Q1

Current Year profits:

② Retained Earnings = 109 11.30 Cr
(19.5 - 8.20)

⑤ Add back: Appropriations

i) General Reserve 5.50
(12 - 6.5)

ii) proposed Dividend 10.90
(10 + 0.90)

Current year profit 27.70
After Tax.

Terminal Capital Employed

① Assets:

Land / Bldg	25.00
Plant & machinery	80.25
Furniture & fittings	5.50
Vehicle	5.00
Investments (10 - 20%)	2.00
Stock	6.75
Debtors	4.9
Cash/Bank	10.4

② Current Liabilities

Provision for tax	6.40
Creditors	2.70
Bank Credit	13.30
16% Term Loan	18.00
16% Debentures	5.00
	<u>45.4</u>

③ Terminal Capital Employed 100 46

Q2 Average Capital Employed:

A: ASSETS

Sundry Fixed Assets
Investments (Ex Non Trade
Investment)
Stock
Debtors
Cash & Bank.

31. 03. 68.

31. 03. 69.

2400	2600
75	50
600	550
300	350
400	340
<u>3775</u>	<u>3890</u>

(B) Other Side Liabilities

Provision
Creditors
Bank Credit
18% Term loan
12% Debenture.

30	40
70	60
120	80
300	320
200	200
<u>720</u>	<u>700</u>
3009	3190

Capital Employed

Average Capital Employed

3097.50

20.51
Q3

Corrected profit

	2006	2007	2008	2009	2010
(a) profit given.	2170	2250	2370	2450	2110
(b) <u>Stock adjustment</u>					
Closing Stock	-420	-130	+20	-	-
Op. Stock.	20 (4000-3800)	420	130	-20	
(c) Depreciation.	-450	-395	-425	-290	-
(d) <u>Corrected profits</u>	1220	2205	2095	2140	2110
Emp =	<u>1220 + 2205 + 2095 + 2140 + 2110</u>				

Q4 Computation of Emp

5

① Average of past profits

Yr	profit	weight	profit x weight
07-08	(550,000)	1	- 550,000
08-09	982,000	2	+ 1,964,000
10) ✓ 09-10	11,70,000	3	+ 35,10,000
✓ 10-11	14,50,000	4	+ 58,60,000
15) ✓ 11-12	17,00,000	5	+ 85,00,000
		<u>15</u>	<u>1,92,24,000</u>

$$\text{Average PAT} = \frac{1,92,24,000}{15} = \underline{\underline{12,81,600}}$$

② Average PBT

$$\frac{12,81,600 \times 100}{60} = 21,36,000$$

③ Increase in M.D Remuneration
(-2,00,000)

④ Advantage from contract 4,00,000

E) Emp (Profit) 23,36,000

F) Emp past tax.
23,36,000 - 45% = 12,84,800

Terminal Capital Employed

① Assets

L/Budings	32,00,000
P/M	28,00,000
Stocks	32,00,000
Debtors	<u>20,00,000</u>
	<u>1,12,00,000</u>

② outside Liabilities

Provision Fund	5,10,000
Creditors	21,10,000
B/O-D	<u>18,60,000</u>
	<u>44,80,000</u>

$$\text{Terminal Capital Employed A-B} = \underline{\underline{67,20,000}}$$

Average Capital Employed = 67,20,000

Normal Rate of Return (NRR)

$$\text{Average Dividend \%} = \frac{10\% + 10\% + 15\% + 15\%}{4} = 12.5\%$$

$$\text{Average DPS} = 12.5 \times 100 = ₹ 12.5$$

$$\text{Market price per share} = ₹ 125$$

$$\text{NRR} = \frac{\text{DPS}}{\text{MPS}} \times 100 = \frac{12.5}{125} \times 100 = 10\%$$

Valuation of Goodwill - Super profit method

$$\text{① Firm} \quad 12,84,800$$

$$\text{② Normal profit} \\ (\text{NRR} \times \text{Paid Capital employed})$$

$$10\% \text{ of } 58,70,000 = \underline{5,87,000}$$

$$\text{③ Super profit} \rightarrow \underline{6,97,800}$$

$$\text{Goodwill} =$$

$$\text{No. of years} \times \text{Normal super profit} = \underline{20,93,400}$$
$$6,97,800 \times 3$$

Q5 Leverage effect of Goodwill

① Goodwill as per Equity funds:

② Goodwill as per Long Term funds

2 Leverage effect of Goodwill

Goodwill as per Long term funds

~~Firm~~ P.T.O

Goodwill as per long term Funds:

Fmip (post tax)

+ Interest on
L.T funds (Adjusted for tax)

Fmip for long term funds (post tax)

$$\rightarrow \text{Capital employed (Equity)} + \text{Long Term funds} \\ = \text{Capital employed (+) funds}$$

- NRR (LT Funds)

#

Future Maintainable profits

① Current year profits

In Lakh

① Related Earnings

30

② Add back appropriation

i) General Reserve

25

ii) proposed dividend

125

c Current Year PAT

180

~~③ Adjust ment to CY profits~~

d CURRENT YEAR PAT ₹ 360

③ Adjustment to CY profits

① Stock (300 x 50 / x 201)

30

② Exchange Gain/Loss

(i) Debts

1.40

35,000 x (39-35)

ii) Credit

60000 (39-33)

- 360

③

Corrected cy profit before tax

387.80

(D) Adjusments for Fmp

i) additional dep
5% (1250-650) -30

ii) ~~Investments~~

Return on Non trade Investments

(250 x 50%)
(Return 10%) - 12.50

iii) Non Recurring Gain & Losses

a) Govt Subsidy (60)

b) Research & Development Exp 12.5

(E)

Fmp Prefor. → 410.3

(F)

add: Trend adjusted for 10% 41.03

(G)

adj Fmp (prefor) 451.33

(H)

Tax adjustments @ 40% -180.53
270.80

(I)

Fmp Post Tax 270.80

Capital Employed

(A) ASSETS

	31.3.11	31.3.12
(a) Fixed Assets	1000	1250
(b) Investments	125	125
c Stocks	260	330
d Debtors	170	1114
e Bank	46	45
	1701	1861.40

(B) CURRENT Liabilities

(a) provision for Tax	11	13.-
(b) Creditors	35	48.60
(c) C-T Loans	180	165.-

Good will Capitalism Method:

9

A) Fmp (post tax)	270.80
B) NIRR @ 15% (Given in Question)	15%
C) Normal Capital employed	1805.33
d Average Capital Employed	1554.90
E) Good will	250.43

Good will as per L.T Funds

Fmp (LT Funds)

Fmp (post tax) 270.80

ADD: Interest on
LT Funds.
(Capital tax)

18% $\left(\frac{180 + 165}{2} \times 60\% \right)$ 18.63

Fmp for LT Funds 289.43

Capital Employed

a) Avg Capital employed
(Equal time) 1554.90

b) ADD: Long term fund
 $\frac{180 + 165}{2}$ 172.50

Capital employed as per
Long term fund 1727.40

Goodwill - L.T Funds

Fmp (as per LT fund) 289.43

NIRR 12%

Normal Capital employ 2411.92

Dividend (100 - 10)

NOTE: Adverse Leverage
effect on Goodwill

684.52 - 250.43

= 434.09

NOTE: Stock adjustment
only considered as
Closing Stock.
in absence of specific
information to
provide adjustment on
opening stock

Q6 Future maintainable profit.

Average profit abt. Tax.			Weighted profits
06-07	-13,75,000	1	(13,75,000)
07-08	24,55,000	2	49,10,000
08-09	29,75,000	3	87,75,000
09-10	36,75,000	4	1,45,00,000
10-11	42,50,000	5	2,12,50,000
		<u>15</u>	<u>4,80,60,000</u>

Average PAT $\frac{4,80,60,000}{15} = \underline{\underline{32,04,000}}$

(B) Average PBT $\frac{32,04,000}{60} \times 100 = 53,40,000$

(C) Adjustments Fmp (5,00,000)

(i) M.D. Remuneration

(ii) Revenue from additional contract 10,00,000

(D) Net (Pre-tax) 58,40,000

(E) Tax @ 45% 26,28,000

Fmp post tax 32,12,000

(B) Terminal Capital employed:

(a) ASSETS

i) Building	10,00,000
ii) Machinery	70,00,000
(iii) Stock	30,00,000
(iv) Debtors	50,00,000
	<u>2,20,00,000</u>

(b) OUTSIDE Liabilities

(i) Provision for tax	12,75,00,000
ii) Creditors	52,75,000
iii) Bank o/p	46,90,000
	<u>4,12,00,000</u>

(c) Terminal Capital employed = 2,568,00,000

(d) Less $\frac{1}{2} \times$ Cy profit 2010-211

$\frac{1}{2} \times 42,50,000$

- 21,75,000

(e) Average Capital employed

1,46,25,000 F

NRR - Dividend yield Method:

$$NRR = \frac{DPS}{mips} \times 100$$

$$\text{Average Dividend per share} = \frac{10\% + 10\% + 15\% + 15\%}{4} = 12.5\%$$

$$\text{Average Dividend per share} = 12.5\% \times 100 = ₹12.50$$

$$mips = 125$$

$$NRR = \frac{12.5}{125} \times 100 = 10\%$$

Goodwill by "Super profits"

Fm p

32, 12, 00, 00

Normal profits

$$NRR \times \text{Average Capital Employed} = (10\% \times 1,46,75,000)$$

$$= \frac{14,67,500}{\cancel{17,44,500}}$$

$$\text{Goodwill Super profit} \rightarrow 17,44,500$$

$$\text{Goodwill (Super profit} \times 3 = 52,33,500$$

Q7

Corrected profit for Cy 2011-2012

(a) Cy profits (Given) 1100

(b) Depreciation

i) Premises & Land -8

2% of 400

(ii) Plant & machinery -30

10% of 3,000

(iii) Motor vehicles (-4)

20% of 40 x 1/12

(c) Bad debts (-40)

10% of 400

(d) Corrected Profit 742

$$\text{Average profits} = \frac{469 + 546 + 405 + 748}{4} = \underline{\underline{542}}$$

Terminal Capital employed

(A) Assets

i) Premises & Equip.	1200
ii) P/M	2400
iii) Vehicles (40-4)	36
iv) Raw material	920
v) WIP	130
vi) Finished Good	180
vii) Bad Debt (400-40)	360
viii) Investments	1500
ix) Cash/Bank	192
	<u>6918</u>

(B) Outside Liabilities

Cr. Term	300
Secured Loan	200
St. Debtors	2,000
Provision for Tax	300
	<u>2,800</u>

(C) Terminal Capital Employed:

$$1) \text{ Less } \frac{1}{2} \text{ of PAT} = \frac{1}{2} \times 748$$

Average Capital employed

$$\begin{array}{r} 4118 \\ - 374 \\ \hline 3744 \end{array}$$

NRR :- Dividend Yield Method:

$$\text{NRR of Simlat Company} = \frac{\text{DPS}}{\text{MPS}} \times 100$$

$$= \frac{20.1}{25} \times 100 = \underline{\underline{8\%}}$$

(+) Risk premium for inconsistent dividend 2%.
NRR for Domestic Co. 10%

Goodwill valuation - Super profit Method:

$$(A) \text{ Emp } 542$$

$$(B) \text{ Average profits } 10\% \text{ of Capital Employed } 3744$$

NOTE: Assumed that Dep on PGM is not provided for

Q8

P

Q

R.

Fmp

(a) Average profits (before deb-interest)	3.6	2.88	1.56
(b) Less: Debenture interest (0.4)		-	(0.2)
(c) Dep on Revaluation & Tangible Assets (0.40)		0.20	(0.2)
Fmp	2.8	3.08	1.16

Terminal Capital Employed(A) Assets

(a) Tangible Assets	20	10	12
(b) Current Assets	7	2.8	1.6
(c) Net Side liab. l/h.	27	12.8	13.60
(a) Creditors	4	3	2
(b) 10% debentures	4	-	2
	8	3	4
Terminal Capital Employ	19	9.8	9.60

Average Capital EmployedGoodwill Super profit method

(a) Fmp	2.8	3.08	1.16
(b) - Normal profit (WRR x Capital Employed)	1.9	0.98	0.96
10% of CE			
Super profit	6.90	2.10	0.14
Goodwill x 4	3.6	8.4	0.8

Q9 Same as Q8.

14

Q10 Fm p

	<u>A</u>	<u>B</u>
a) Average annual profit before deb interest	4,50,000	3,10,000
b) Debenture interest	(60,000)	(40,000)
c) Dep on development	(40,000)	+20,000
d) Claim -		-10,000
Fm p	<u>3,50,000</u>	<u>2,80,000</u>

Capital Employed

(A) Assets		
Tangible	21,00,000	12,00,000
C.A.	10,00,000	4,00,000
	<u>31,00,000</u>	<u>16,00,000</u>

(B) Outside liabilities		
Creditors	3,00,000	5,00,000
10% Deb	6,00,000	4,00,000
Claim	9,00,000	9,00,000

Capital Employed	<u>22,00,000</u>	<u>6,90,000</u>
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NIRR

Fm p	3,50,000	2,80,000
------	----------	----------

+ NRR + Normal profit

NRR x CE

15% of CE

Super profit

	5,25,000	
	3,30,000	1,035,500
	<u>20,000</u>	<u>1,76,500</u>

G and will x 4 percent
Purchase

	<u>80,000</u>	<u>7,06,000</u>
--	---------------	-----------------

Q11

15

Fmp

2008-09

2009-10

2010-11

(A) Corrected profits

a) profit given

2,50,000

2,80,000

3,30,000

(B) PBT

5,00,000

5,60,000

6,60,000

(C) Futurewrongly charged to
Revenue

26,000

d) Dep on @ 10%

= 2000

= 1800

= 1620

(E) Stock valuation

= 50,000

f) Debtors

= 10,000

corrected profit

5,18,000

5,58,200

5,68,380

weight

1

2

3

weighted profit →

5,18,000

11,16,400

17,05,140

(i) Average corrected
profit =

5,18,000

+ 11,16,400

+ 17,05,140

ii) Average profit =

556,590

J Adjustment to Fmp

1) Return on Non Trade Investment

(90% of 2,00,000 × 10%) (18,000)

2) Dep on valuation of
future $[10\% (50,000 + 14,580) \times 15\%]$ (- 969)

(K) Fmp (pre-tax) ⇒

537,621

(L) Fmp (post-tax) ⇒

2,68,810

* Dep on valuation on
machinery & vehicles is
not considered in
absence of % of
depreciation

Capital Employed

(A)

ASSETS

a) Machinery	3 45,000
b) Freehold prop.	517,500
c) Vehicle	1 15,000
d) Furniture	
(50,000 + 14,580) x 1.5	74,267
e) Investments	18,000
(200,000 x 10) - 10%	
(f) Stock	2,00,000
(g) Debtors	3,60,000
(h) Bank	60,000

(A) 16,89,767

(B) Liabilities

Bank loan	2,00,000 -
Creditors	3,00,000

(B) 5,00,000

(C) 20,000

(D) Car in Dream

D Total Capital Employed (A - B + C) = 12,09,767

E Less 1/2 Cy profit (PAT)

(50% of 5,68,320) x 1/2

1,42,095

(F) Average Capital Employed

10,67,672

Good will - Super profit method:

a) Emp 2 68, 810

(b) Normal profit 2 13, 534
20% of 10,67,672

c) Super profit 55 276

Good will = Super profit x 2

= 55 276 x 2 = 1,10,552

Valuation of Intangibles

↳ Capitalisation of Earnings.

(a) PAT	xxx.
(b) Less Expected Return on Tangible assets	(xxx)
(c) Return from Intangible Assets	xxx
(d) Capitalisation Ratio	x%.
(e) value of Intangible asset (c/d)	xxx.
(f) Less value of identified Intangible	(xxx.)
(1) value of Brand or Intangible	<u><u> </u></u>

Q 12.

(a) PAT	13.00
(b) Income Tax.	(3)-
(c) PAT	10
(d) Expected Return on Tangible assets.	(6)
(e) Return on Intangible assets	4/-
(f) Capitalisation Rate	25%
(g) value of Intangible assets. (e/f)	16
(h) value of identified Intangible assets	(10)
∴ value of Brand	<u><u>6</u></u>

Q

Q13.

	<u>In Lakhs</u>
a) P A T	2,500
b) Less: Expected Return on Tangible assets (18% x 10,000)	<u>-1800</u>
c) Return on Intangible assets →	700
d) Capitalisation Rate	25%
e) Total value of Intangible. (c/d x 100)	<u>2800</u>
f) Less: Value of identifiable intangible	<u>(1500)</u>
g) Value of Brand	<u><u>1300</u></u>

VALUATION OF SHARES

19

Net Asset Method

or

Breakup method

or

Book value.

or

Intrinsic value.

Yield Method

Dividend Yield

Earning Yield

PE MODEL

PE MODEL:

$$P/E = \frac{\text{Price}}{\text{Earnings}} = \frac{MPS}{EPS}$$

$$MPS = EPS \times PE$$

DIVIDEND YIELD METHOD

$$NRR = \frac{\text{Dividend per share}}{MPS} \times 100$$

$$MPS = \frac{DPS}{NRR}$$

EARNING YIELD METHOD

$$NRR = \frac{EPS}{MPS} \times 100$$

$$MPS = \frac{EPS}{NRR}$$

NET ASSETS METHOD:

$$\text{Value/Share} = \frac{\text{Net Assets attributable to ESH}}{\text{No. Equity Shares}}$$

Net asset attributable to ESH

(A) Assets (@ Realisable value)

(B) Less: Net side liabilities

C Net assets

D Less: Preference Share Capital

Net Asset attributable to ESH

20

* Assets includes Goodwill & Non Trade Investments

Net assets attributable to ESH

- a) Closing / Terminal Capital Employed
- (b) Add: Goodwill
- (c) Add: Non Trade Investment
-
- (d) Net assets.
- (e) Less: pref. share capital &
Dividend declared and not paid

Net assets attributable to ESH

No of Shares:

Case 1 - Partly paid up shares:

10,000 of Rs 10 fully paid up

10,000 of Rs 10 Rs 8 paid up

Assumption 1

Expecting calls on shares in
Near future.

Net asset available to ESH

Add. calls on shares

No of Equity Shares

Irrespective of paid up shares

Assumption 2.

Not expecting call on
shares in near future

Equivalent no of shares

Equivalent no of

Rs 'x' share =

Paid up Capital

x

value / shares :- Fully paid share Fully paid share

partly paid share :-

$$\text{Fully paid up share} - \text{unpaid capital / share} \times \frac{\text{Fully paid share} \times \text{paid up value}}{\text{Face value}}$$

Case 2 Shares of different nominal value.

10,000 of 10 fully paid up
10,000 of 5 fully paid up

$$\text{value per share of Rs } \times \text{Fully paid} = \frac{\text{NA attributable to ESH}}{\text{Equivalent no. of B. x share}}$$

$$\text{value / share of Rs } \times \text{Fully paid} = \frac{\text{value / share of } \times \frac{Y}{X}}{\text{Rs } \times \text{Fully paid up}}$$

Q 114 Assumption 1 - Calls will be made in future
2 - calls will not be made in future

Assumption 1

Assumption 2

Ⓐ Net assets attributable to ESH

Share Capital

A 10,00,000.-

B 8,00,000

C 5,00,000

23,00,000

23,00,000

9,00,000

9,00,000

Ⓑ Related Earnings

Ⓒ Calls on shares

B - 2,00,000

C 5,00,000

7,00,000

(B) No of Shares
 $\times (23,00,000/100)$

30,000

~~23,00,000~~
 23,000

22

C val/shares

Rs 100 Fully paid

130

139

Rs 80 paid up

~~100~~
 110

$139 \times \frac{80}{100} = 111$

Rs 50 paid up

80

$139 \times \frac{50}{100} = 69.5$

Q15 Intrinsic Value of Shares:

(A) Net assets available to ESH

ASSETS

(a) Fixed Assets

3700

3700

(b) Investments

100

100

(c) Stock

1000

1000

(d) Debtors

200

200

(e) Cash

400

400

5400

5400

(B) off side liabilities

Creditors

Term loan

800

800

1400

1400

2200

2200

81200

81200

(600)

(600)

(270)

(270)

2330

2330

(C) Net assets

Less: pref. share capital
 (+ unpaid dividend)
 (9% x 600 x 5)

~~Net assets attributable to ESH~~

Add: Call on shares

(2,00,000 x 4)

Net assets attributable to ESH

800

3130

2330

(D) No of Equity Shares

350

1500 + 1200

(E) Value/shares

Rs 10 fully paid up

3130

350

270

2330

270

Q16 Yield Based Calculation:

Yield on Capital Employed

Yr	Yield on Capital	Weight	Yield x weight
2007	16%	1	16
08	20%	2	40
09	22%	3	66
10	25% (375,000/1,500,000)	4	100
			<u>222</u>

$$\text{Average Yield} = \frac{222}{10} = \underline{\underline{22.2\%}}$$

$$\begin{aligned} \text{Value/Share} &= \frac{\text{Yield/Share}}{\text{NRR}} \\ &= \frac{22.2\% \times 100}{12\%} = \underline{\underline{185}} \end{aligned}$$

Yr	Dividend	Weight	Weight x Dividend
2007	12	1	12
2008	15	2	30
2009	18	3	54
2010	20	<u>4</u> <u>10</u>	<u>80</u> <u>176</u>

$$\text{Average Dividend} = \underline{\underline{17.6\%}}$$

$$\begin{aligned} \text{Value/Share} &= \frac{\text{DPF}}{\text{NRR}} = \frac{17.6\% \times 100}{12\%} \\ &= \underline{\underline{146.67}} \end{aligned}$$

Q11 $\text{Fair value/Share} = \frac{\text{NFA value/Share} + \text{Dividend yield value/Share}}{2}$

24

2) Compute Hw & Gw: Based on Super profit method

Fmp

(A) Corrected profit of 2011

(a) profit Given 4.1

(b) less: provision for Bonus claim (-1)

(c) Corrected profit 3.1

(13) Average profit = $\frac{3 + 3.5 + 4 + 3.10}{4}$
or Fmp = 3.4

Terminal Capital Employed

(A) ASSETS

(a) Fixed Assets 24

(b) Other Tangible assets 3

(c) Intangible assets 3

(B) OUTSIDE LIABILITIES

(a) Other Liabilities 10

(b) provision for Bonus 1

(C) Terminal Capital Employed (A-B) 19

(d) less: $\frac{1}{2}$ of profit ($\frac{1}{2}$ of 3.1)

(e) Average Capital Employed 17.45

Goodwill

(a) Fmp 3.4

(b) Normal profit (10% of 17.45) -1.745

(c) Super profit 1.655

(d) Goodwill x 2 = 4.985

in lakh

3.4

-1.745

1.655

4.985

Value/Share Break up Value Method:

27

- (a) Terminal Capital Employed 19
(b) Goodwill $5 + \left(\frac{5 + 4.965}{2} \right)$ 9.9875
(c) Net assets attributable to ESH 28.9875
(d) Equivalent No of Shares B to 1.60
(e) Value/Share of B to 18.11

$$\therefore \text{Value/Share of B to} = 18.11 \times \frac{6}{10} = \underline{10.866}$$

Dividend Yield Valuation Method

(a)

Yr	Dividend %	Weights	Weight x Div. %
2008	11	1	11
9	12	2	24
10	13	3	39
11	14	4	56
		<u>10</u>	<u>130</u>

$$\text{Average \%} = \frac{130}{10} = 13\%$$

(b)
$$\text{Value/Share} = \frac{\text{DPS}}{\text{NRR}}$$

$$\text{B to fully paid up} = \frac{13\% \times 10}{10\%} = \underline{13}$$

$$\text{B to fully paid up} = \frac{13\% \times 6}{10} = \underline{7.8}$$

Final Value per Share

$$\text{B to fully paid up} = \frac{18.11 + 13}{2} = \underline{15.50}$$

$$\text{B to fully paid up} = 8.66 + 7.8 = \underline{16.46}$$

Q18.

26

	<u>2008-09</u>	<u>2009-2010</u>	<u>2010-11</u>	<u>2011-12</u>
(1) profits (given)	16,00,000	18,00,000	21,00,000	22,00,000
(2) Adjustments				-100,000
Stocks				-20,000
Debtors				
Machinery	-	2,00,000		
Dep on Machinery		-20,000	-18,000	-16,200
(3) Corrected profit	16,00,000	19,80,000	20,82,000	20,63,800
(4) Return on Non Trade Investment			108,000	-216,000
			(15% of 14,40,000 x 50%)	
			(check adjt no 111 in question)	
(5) Non ownership loss	-	-	+40,000	-
	16,00,000	19,80,000	20,14,000	18,47,800
(6) Average profits		18,66,450		
(7) Dep on Revaluation of Plant & Machinery				
$\left[10\% \times \left(\frac{22,00,000 + 14,88,000}{2} \right) \right] \times 30$				-70374
Profit				<u>17,90,076</u>

Average Capital Employed:

(A) ASSETS	
Building	31,20,000
Machinery	30,49,540
Furniture	13,00,000
Vehicle	23,40,000
Trade Investments	144,000
$(10\% \text{ of } 16,00,000) \times 10\%$	10,00,000

(B) outside liabilities

Creditors	76,00,000
B/P	31,00,000
Bank loan	12,00,000
	<u>49,00,000</u>
(C) closing Capital Employer =	81,53,540
(D) 1/2 of profit (20,63,800)	-10,31,900

Good will by Super profits.

(A) FWP 17,90,076

(B) Normal profit

71,21,600 x 20%

(14,24,328)

(C) Super profit

3,69,748

2 Year purchase Goodwill $3,69,748 \times 2 = \underline{7,31,496}$

⇒ Intrinsic value / share

(A) Net assets attributable to ESH

(a) Clarip Capital employed 81,53,540

(b) Goodwill 7,31,496

(c) Non trade Investments 14,40,000
(16,00,000 - 10%)

(d) Less pref share capital - 20,00,000
83,25,036

(B) No. of Equity Share 4,00,000

(C) Intrinsic Value per share 20.81

Q19 Yield Base method

Value/share Yield/share
NRR

Computation of yield

in Lakhs

(a) PBIT 5

(b) Discont. Invest. (1.20)
(151.28)

(c) Average PBIT 3.80

(d) Less Tax rate 40% (1.52)

2.28

(f) Dividend: preferred shares (0.50)

Equity shares (1.00)

(g) undistributed profits 0.78

$$\begin{aligned} \text{Yield} &= 50\% \text{ preferred} + 5\% \text{ undistributed profit} \\ &= 50\% \text{ of } 1 + 5\% \text{ of } 0.78 \\ &= 0.539 \end{aligned}$$

Assuming face value per share = 10

$$\text{Yield/Share} = \frac{0.539}{1} = 0.539$$

Computation of NRR

(1) Fixed interest & Dividend Coverage Ratio

$$\begin{aligned} &\frac{\text{PAT} + \text{Interest (1-t)}}{\text{Interest (1-t)} + \text{Preferred Dividend}} \\ &= \frac{2.28 + 1.2(1-40\%)}{1.2(1-40\%) + 0.5} = \frac{3}{1.22} = 2.4590 \text{ (Adverse)} \end{aligned}$$

(B) Capital Gearing Ratio

Equity funds / Fixed interest & Dividend bearing securities

$$= \frac{10 + 4}{8 + 5} = \frac{14}{13} = 1.0769 \text{ (Favorable)}$$

NRR of 201 Limited

a) NRR of Similar Company = 12%

b) ~~Adjusted Ratio~~
Risk premium for adverse interest/dividend coverage Ratio - 1

c) Discount for favorable Capital Gearing Ratio - -1

$$\begin{aligned} \text{Value/Share} &= \frac{\text{Yield/Share}}{\text{NRR}} \\ &= \frac{0.539}{12\%} \end{aligned}$$

$$\text{Value Shares} = 4.5$$

Q20.

29

Computation of yield

a) Average PBIT	= 7,20,000
b) Less: Debit Interest (12% of 5,00,000)	<u>- 60,000</u>
c) Average PBT	6,60,000
d) Less: Tax @ 40%	<u>- 2,64,000</u>
e) Average PAT	3,96,000
f) Dividend	
Preference Shares	- 60,000
Equity Shares	<u>- 2,70,000</u>
g) Undistributed profits	<u>66,000</u>

$$= 60\% \text{ of profit distributed} + 10\% \text{ of undistributed profit}$$

$$= 60\% \text{ of } 2,70,000 + 10\% \text{ of } 66,000$$

$$= 1,62,000 + 6,600 = 1,68,600$$

$$\text{Yield Share} = \frac{1,68,600}{18,000} = \underline{\underline{9.37}}$$

Computation of NRR① Fixed Interest & Dividend Coverage Ratio

$$\frac{\text{PAT} + \text{Interest} (1-t)}{\text{Interest} (1-t) + \text{Preference dividend}} = \frac{3,96,000 + 60,000 (1-0.4)}{60,000 (1-0.4) + 60,000}$$

$$= 4,32,000 / 96,000 = \underline{\underline{4.5 (F)}}$$

② Debt Equity Ratio

$$\text{Debt/Equity} = 5,00,000 / 13,00,000 + 5,00,000 = \underline{\underline{5/23 = 0.21 (F)}}$$

NRR of XYZ Co.

① NRR of Similar Company 15%

② Discount for favorable

i) Interest & dividend coverage (1)

ii) Debt Equity (1)

③ Risk Premium for dividend 1

$$\text{Yield/Share of 12% Eqn} = \frac{\text{Yield/Share}}{\text{NRR}}$$

$$= \frac{9.37}{12\%}$$

...

Q21) 14.59.

30

(I) To find value per share in 1 share

(A) Assets:

a) Goodwill	420.
b) Other fixed assets	11,166.
c) Current Assets	2910
d) Loan & advances	933
	<u>15,429</u>

(B) Liabilities

e) provisions	960.
f) Current liabilities	1242
g) Secured Loans	4500
	<u>6,702</u>

(C) Net assets = 8,727

Assumption

(A) Net assets attributable to
ESH

+ calls on shares
90 x 2

(B) Net Equity Shares @ Rs 10/-

(C) Value/Share of
Rs 10 each fully paid up

Value/Share of
Rs 10 fully paid

Rs 10 share, 8 paid up

Rs 5 share fully paid up

①	②
8727	8727
<u>180</u>	<u> </u>
8907	8727
$180 + 90 + \frac{150}{2}$	3270/10
<u>= 345</u>	<u>327</u>
$\sqrt{345}$	26.688
29.82	
25.82	26.688
$25.82 - 2$	$26.688 \times \frac{8}{10}$
<u>= 23.82</u>	<u>= 21.35</u>
$25.82 \times \frac{5}{10}$	$26.688 \times \frac{5}{10}$
<u>= 12.91</u>	<u>13.344</u>

(II) Dividend yield method:

Value/Share = $\frac{DPS}{NRR}$

A) 10 fully paid up = $\frac{20.10 \times 10}{15.10} = 13.33$

B) 10 8 paid up = $\frac{20.10 \times 8}{15.10} = 10.67$

C) 5 fully paid up = $\frac{20.10 \times 5}{15.10} = 6.67$

III Example / Method

$$\text{value/share} = \text{EPS} / \text{NRR}$$

$$\frac{\text{EPS of R 10 shares}}{\text{WAVES}} = \frac{\text{PAES}}{327} = \frac{1371}{327} = 4.193$$

$$\text{NRR} = 2\frac{1}{10} \times 100 = 20.1\%$$

value/shares

$$\text{① R 10 fully paid up} = \frac{4.193}{20.1\%} = 20.965$$

$$\text{② R 10, R 8 paid up} = 20.965 \times \frac{8}{10} = 16.772$$

$$\text{③ R 5, fully paid up} = 20.965 \times \frac{5}{10} = 10.483$$

Q 22 Valuation Shares:-

	B/s value	Replacement cost	Realistic value
<u>(A) Assets:</u>			
Fixed Assets	6,00,000	8,00,000	5,40,000
Stock	2,00,000	3,00,000	3,20,000
Debtors	3,40,000	3,40,000	3,36,000
Cash	1,00,000	1,00,000	1,00,000
	12,40,000	15,40,000	12,96,000
<u>(B) Net Side Liabilities</u>			
Creditors	3,00,000	3,00,000	3,00,000
Bank o/d	2,40,000	2,40,000	2,40,000
	5,40,000	5,40,000	5,40,000
<u>(C) Net Assets</u>			
	7,00,000	10,00,000	7,56,000
<u>(D) Net B ES</u>			
	400	400	400
<u>E value/share</u>	175	250	189.15

value/shares - PE model

value/shares = EPS $\times$ P/E

Average Earning = $\frac{30,000 + 74,000 + 70,000 + 60,000 + 62,000}{5}$

= 69200/-

Average EPS = $\frac{69200}{4000} = 17.3$

PE = 72 it means greater than 8, we can say it is 9.

value/shares = EPS $\times$ P/E
= $17.3 \times 9 = \underline{\underline{155.70}}$

Q23 computation of purchase consideration

	①	② (n/pxh)
① price/shares in R	60	78
Net share in R	5	5
purchase consideration	300	390
Issue price per share	150	150
No of share to be issued by PCT	2	2.60
No of share in PCT after merger	14 (12+2)	14.6 (12+2.60)
price after merger	72	72
EPS per share after merger	$\frac{72}{14} = 5.14$	$\frac{72}{14.6} = 4.93$
EPS before merger	9.00	9.00
Effect on EPS	+ 0.14	(- 0.07)

24

$$\text{Cm Dividend} = \text{Exp Dividend} + \text{DPS}$$

Computation

Imp	2009	2010	2011
A PAT	2,10,000	1,90,000	2,00,000
B PBT 50% Warrant Tax Rate is 50%	4,20,000	3,80,000	4,00,000
C. Adjustments for Corrected profits			
i) Machinery wrongly charged to P&L	50,000		
a) Depreciation Impact	(5,000)	(4,500)	(4,050)
ii) Closing stock opening stock		(-10,000)	10,000
iii) Debtors			(-500)
D Corrected PBT	4,65,000	3,65,500	4,00,950

(E) Adjustments for
Exp

i) Loss on sale of furniture	-	-	4000.
ii) Increase on Non trade Investments	(-12,000)	(-24,000)	(-24,000)
	4,53,000	3,41,500	3,80,950

$$\text{Average profit} = (4,53,000 + 3,41,500 + 3,80,950) / 3$$

$$= \underline{\underline{3,91,817}}$$

B Average & profit ~~profit~~: 3,91,817

(G) Increase in Exp
without increase in selling price -20,000

(H) R/P Exp.

i) Dep on inc increase in P/m

-30,000

4,18,817

Average Capital Employed

34

① ASSETS: a) p/m

$$(8,00,000 + 36450) \times 1.05 \quad 8,78,272$$

b) Land Building 10,50,000

Furniture 1,05,000

Vehicle 2,10,000

Trade investments.

$$(20\% \text{ of } 3,00,000) - 20\% \quad 48,000$$

Stocks. 2,10,000

Debtors. 1,90,000

Prepaid Expenses. 40,000

Advances. 45,000

Cash / Bank. 2,00,000

29,76,272

② Net Side Liabilities

Provision for tax. 2,00,000

Net Standing Exp 20,000

Creditors 1,50,000

Bank Loan. 50,000

Deposits 1,00,000

Unsecured loan. 15% 1,50,000

12% Debentures. 2,00,000

8,70,000

③ Net Assets. (A-B) 21,06,272

Average Capital Employed

$$= 21,06,272 - \frac{1}{2} \text{ of } (50\% \text{ of } 4,00,950)$$

$$= \underline{\underline{20,06,635}}$$

Computation of Goodwill Super profit method:

35

(1) fmp 202,580.

(2) Normal profit
10% of 260664
Super profits.

260664
1976

(3) Goodwill x3

5,928

Valuation of Shares

	(1)	(2)
(A) Clorg Capital Employed	2106,272	2106,272
(B) Goodwill	5928	5928
(C) Non trade Investments	240,000	240,000
less pre share capital	(30,000)	(30,000)
Divided (mean)	(-30,000)	(-30,000)
(E) Add (all on share (50000 x 2 + 30000 x 1)	130,000	
Not asset attributable to ESH	2152,200	2022,200
(F) No of Equity shares 80000 + 50000 36000 + 30000	163,000	150,000
(G) Cum dividend p/share Rs 10 full paid up (f/g)	13.2	13.48
Rs 10 Rs 8 paid up	13.2 - 2 = 11.2	13.48 x 8 10 = 10.78
Rs 5 fully paid up	13.2 - 5% = 6.6	13.48 x 5% 6.72
Rs 5, 4 paid up	6.6 - 1 = 5.6	13.48 x 4% 5.39

Ex dividend value / share

B 10 fully paid up	13.2 - 1 <u>12.2</u>	13.48 - 1 <u>12.48</u>
B 10 8 fully paid up	11.2 - 0.8 <u>10.4</u>	10.78 - 0.8 <u>9.78</u>
B 5 fully paid up	6.6 - 0.4 <u>6.1</u>	6.72 - 0.5 <u>6.22</u>
R 5, 4 paid up	5.6 - 0.4 <u>5.2</u>	5.39 - 0.4 <u>4.99</u>

Q25 Fmp

Assuming investment are non trade:

(a) Average profits Before tax	12,00,000.
(b) Less Return on non trade Investments 10% of 8,00,000	(50,000)
(c) Average trading profits before tax	11,50,000
(d) Taxation @ 50%.	(5,75,000)
Average trading profits after tax. (can be considered as Fmp as well)	<u>5,75,000</u>

(e) Approximations:

1) General Reserve 12.5%	(7,18,75)
2) 12% preference dividend 12% of 10,00,000/-	(1,20,000)
(f) Average profit available to EPS	<u>3,83,125</u>
(g) No. of shares	1,00,000
(h) Average yield / share	<u>3.83125</u>
EPS.	

Terminal Capital employed

(A) Asset

i) Building	32,00,000
ii) Plant	18,00,000
iii) Stock	4,50,000
iv) Debtors	3,60,000
v) Cash	1,00,000
	<u>59,10,000</u>

(B) off side liabilities

1) Creditors	8,00,000
2) Provisions	10,00,000
	<u>18,00,000</u>

Net asset = 41,10,000

Close Capital employed = 41,10,000/-

Valuation of Goodwill using Super profit method

a) Emp 575,000

b) Normal profits
10% of 41,10,000 = 41,10,000

Super profit 1,64,000

Goodwill is (3) x 5 = 4,92,000

Net asset value per share

(a) Close Capital employed 41,10,000

(b) Add: Goodwill 4,92,000

(c) Less: Trade Payables 5,20,000

(d) Less: pre-ference share Capital - 10,00,000

Net asset attributable to 41,22,000

Equity Share
holders

(e) No. of Equity Shares 1,00,000

(f) Net Asset value per share 41.22

Value / share - Earnings yield method

EPS / YRR = $\frac{3.83}{8\%} = 47.875$

Formula /

Q26 Fmp

38

	<u>2005-06</u>	<u>2006-07</u>	<u>2007-08</u>	<u>2008-09</u>
Profit Given	16,00,000	18,00,000	24,00,000	22,00,000
Stock Surplus				-1,00,000
Debtors				-20,000
Prepaid		2,00,000		
Depreciation		(20,000)	(18,000)	(16,200)
Corrected profits	<u>16,00,000</u>	<u>19,80,000</u>	<u>20,82,000</u>	<u>20,63,800</u>
Fmp - adjustments				
Return on tie trade		-1,08,000	(2,16,000)	(2,16,000)
Investments		(15.12,72,000)	15.12,14,40,00	(15.12,14,40,00)
Less Profit Loss on furniture.			40,000	
	<u>16,00,000</u>	<u>18,72,000</u>	<u>19,06,000</u>	<u>18,47,800</u>

Average profits $\rightarrow$ 18,06,450 $\leftarrow$

Less Dep on Revaluation
P/Prepaid

$((22,00,000 + 14,52,000) \times 30\%) \times 10$

- 70,374

Fmp $\rightarrow$

17,36,076

Average Capital Employed

(F) Assets

Buildup 31,21,000
 Machinery $((22,00,000 + 14,52,000) + 30\%)$ 30,49,540
 Furniture 13,00,000

Debtors
 Bank

17,80,000

320,000

1,30,53,540

(B) w/o side liability

Goodwill	31,000,000
BIP	6,000,000
Bank Loan	<u>12,000,000</u>
	<u>49,000,000</u>

(C) Closing Capital Employed

(a) Less 1/2 of profits

1/2 of 20,63,800 10,31,900

(E) Average Capital Employed = 71,21,640

Calculation of Goodwill by Super profits method

(A) Fmp 17,36,076

(B) Normal profit.
(NRR x Average Capital Employed)

14,24,328
3,11,748

Super profit

Goodwill 2 x (S) =

6,23,496

623,500

Intrinsic value per share

(A) Closing Capital Employed	81,53,540
(B) Goodwill	6,23,500
(C) Non trade Investments	1440,000
(d) Less: preference share	- 20,00,000
(e) Net assets attributable to Equity	<u>82,17,040</u>
(F) No of Equity share	<u>4,00,000</u>
(g) Intrinsic value/share	<u>20.54</u>

F

Q21 Frip

40

	<u>2009</u>	<u>2010</u>	<u>2011</u>
(A) profit After Tax	220,500	322,500	2,400,000
(B) profit before Tax	441,000	645,000	4,800,000
(C) claim	-	-	-8250
(d) Add back provisions no longer Required ($2,99,250 / 95 \times 100 \times \frac{5}{100}$)			15,750
(E) Corrected profit	4,41,000	6,45,000	4,87,500
(F) Non recurring / profits are to be eliminated 10.1.2010.		64,500	
(G) Average profit before Tax	4,41,000	5,80,500	4,87,500
(H) Less Tax @ 50%		5,03,000	
Frip $\Rightarrow$ (Post tax)		254,500	
		<u>2,151,500</u>	

Average Capital employed

(A) ASSETS

a) Free hold

50,400

8%

6,30,000

(B) M/pack

150,000

(C) Stock

270,000

(d) Debtors

315,000

(e) Bank

315,000

3,45,000 + 700,000

18,60,000

(B) Out side liabilities

Sundry Creditors

2,39,250

~~St. Debtors~~

~~3,00,000~~

Claims

8,250

2,47,500

(C) Closing Capital employed = A - B = C = 16,12,500

(d) Average Capital employed = 16,12,500 - 1/3 of 18,60,000

Less: pref. share Capital - 150,000

Not asset attributable to
ESH

13,40,675

Calculation of Goodwill by Super profits method

(A) Fmp 2,51,500

(B) Normal profit - 1,34,063
10% of 13,40,675

Super profit 1,17,437

Goodwill $3 \times \text{sp} = 1,17,437 \times 3 = \underline{\underline{3,52,311}}$

valuation value / share

closing Capital Employed

(A) Closing Capital Employed 16,12,500

(B) Goodwill 3,52,311

(C) ~~pref. share Capital~~ (1,50,000)

(D) Not assets available to ESH 18,14,811

(E) No. of Equity Shares 4,500

(F) value / share 403.29

Q 28

Valuation of Business

42

Yr	in lacs	PV (20, n)	DCF (CF x PV)
2003	2,000.	0.833	
2004	2130	0.695	
2005	2268.45	0.579	
2006	2414.90	0.482	
2007	2645.41	0.402	
2008	2896.72	0.335	
2009	3174.91	0.280	
2010	3473.24	0.233	

Value of Business →

9355.50

Q 29. CF at year 0 (in lacs)

(a) Fixed Asset	45
(b) Stock	470
(c) Investments	212
(d) Compensation for franchising	-130
(e) Credit loan	(400)
(f) Return to shareholders	48
Net CF / %	<u>149</u>

Maximum value of 1500 is used

Yr	Incremental CF	DCF 20%	DCF
0	149	1	149
1	300	0.833	
2	200	0.695	
3	300	0.579	
4	450	0.482	
5	500	0.402	
6	600	0.335	
7	700	0.280	
8	900	0.233	
9	800	0.194	
10	900	0.162	

2013.90

We could CF of Kiddies independently

1	120	0.833
2	160	0.695
3	200	0.579
...		
9	660	0.194
10	800	0.162

Diff. between combined
individual

2013.90

1295.74

Sum =

712.16

(2) of Capital employed

	7320	7080	7520
(£) Avg Capital Employed	7200	7300	8000

Goodwill Computation

Imp	1000	1760	2120
-----	------	------	------

Normal profit-

12 1/2 % of Capital Employed

Super profit-

Goodwill $\times 5 =$

	900	912.50	1000
	100	847.50	1120
			$= 689.17$
			$689.17 \times 5 = \underline{\underline{3445.85}}$

VALUATION

Three General Approaches to Valuation are:

- 1) Cost Approach: e.g. Adjusted Book Value
- 2) Market Approach: e.g. Comparables
- 3) Income Approach: e.g. Discounted Cash Flow

VALUATION OF TANGIBLE FIXED ASSETS

Para 9 of AS 10 has stated the components of cost as below:

- a. The cost of an item of fixed asset comprises its purchase price, including import duties and other non-refundable taxes or levies, any trade discounts and rebates are deducted in arriving at the purchase price.
- b. Any directly attributable cost of bringing the asset to its working condition for its intended use;
- c. Administration and other general overhead expenses are usually excluded from the cost of fixed assets because they do not relate to a specific fixed asset.
- d. The expenditure incurred on start-up and commissioning of the project, including the expenditure incurred on test runs and experimental production, is usually capitalised as an indirect element of the construction cost.
- e. If the interval between the date a project is ready to commence commercial production and the date at which commercial production actually begins is prolonged, all expenses incurred during this period are charged to the profit and loss statement.

Improvement: Expenditure which increase the future benefits from the existing asset is treated as cost of improvement. This cost of improvement or of any addition or extension which becomes integral part of the existing fixed asset is to be added to the value of the asset.

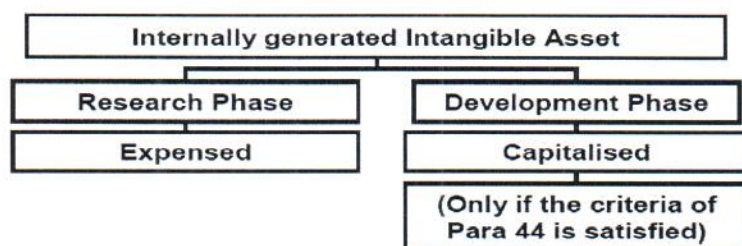
Revaluation: Revaluation of fixed assets may be made to show the assets at their current costs, particularly in context of the historical cost losing relevance in inflationary situation. Increase in value of fixed assets is shown as revaluation reserve which is not distributable. The loss on revaluation, however, transferred to profit and loss account.

Impairment of assets: When the recoverable amount of an asset falls below its carrying amount, as per AS 28, the carrying amount has to be reduced to the recoverable amount and the loss on impairment should be charged to profit and loss account in addition to the depreciation. If subsequently the recoverable amount rises the reversal, i.e., addition shall be made to the already reduced carrying amount

VALUATION OF INTANGIBLES (AS 26): Meaning - An intangible asset is an identifiable non-monetary asset, without physical substance, held for use in the production or supply of goods or services, for rental to others, or for administrative purposes.

When to Recognize - An intangible asset should be recognised if, and only if:

- (a) It is probable that the future economic benefits that are attributable to the asset will flow to the enterprise; and
- (b) The cost of the asset can be measured reliably. If the intangible asset is **internally generated**:



Subsequent expenditure on an intangible asset after its purchase or its completion should be added to the cost of the intangible asset if:

(a) It is probable that the expenditure will enable the asset to generate future economic benefits in excess of its originally assessed standard of performance; and (b) the expenditure can be measured and attributed to the asset reliably.

Brand Valuation

- **No valuation** shall be made for **internally generated brand**.
- When the **brand is acquired separately**, the valuation would be made **at initial cost of acquisition** (with subsequent addition to cost, if any).

All identifiable intangible assets including Patents, Copyrights, Know-how and Designs which are acquired separately valuation would be made at initial cost of acquisition (with subsequent addition to cost, if any).

The depreciable amount of an intangible asset should be allocated on a systematic basis over the best estimate of its useful life. There is a rebuttable presumption that the useful life of an intangible asset will not exceed ten years from the date when the asset is available for use.

Amortization should commence when the asset is available for use.

Future maintainable profit is ascertained taking either simple or weighted average of the past profits or by fitting trend line. If the past profits do not have any definite trend, average is taken to arrive at the future maintainable profit. If the past profits show increasing or decreasing trend, then more weights are given to the profit figures of the immediate past years and less weight to the profit figures of the furthest past.

The following adjustments from past profits are generally made:

- Elimination of abnormal loss arising out of strikes, lock-out, fire, etc. Profit/loss figures which contain abnormal loss should either be ignored or eliminated. Similarly, if there is any abnormal gain included in past profits that needs elimination.
- Interest/dividend or any other income from non-trading assets needs elimination because 'capital employed' used for valuation of goodwill comprises only of trading assets.
- If there is a change in rate of tax, tax charged at the old rate should be added back and tax should be charged at the new rate.
- Effect of change in accounting policies should be neutralised to have profit figures which are arrived at on the basis of uniform policies.

Valuation of Shares: For transactions concerning relatively small blocks of shares which are quoted on the stock exchange, generally the ruling stock exchange price (average price) provides the basis.

Principally two basic methods are used for share valuation; one on the basis of net assets and the other on the basis of earning capacity or yield

Net Asset Basis: According to this method, value of equity share is

$$\frac{\text{Net assets available to equity shareholders}}{\text{Number of equity shares}}$$

Yield Basis: Broadly, the following steps are envisaged in a yield based valuation considering the rate of return:

- (i) Determination of future maintainable profit;
- (ii) Ascertaining the normal rate of return;
- (iii) Finding out the capitalisation factor or the multiplier;
- (iv) Multiplying the future maintainable profit, by the multiplier; and
- (v) Dividing the results obtained in (iv) by the number of shares.

The steps necessary to arrive at the future maintainable profits of a company are: (a) calculation of past average taxed earnings, (b) projection of the future maintainable taxed profits, and (c) adjustment of preferred rights.

Mean between asset and yield based valuation: Average of book value and yield based value incorporates the advantages of both the methods. That is why such average is called the fair value of share.

Valuation of Preference Shares: For valuation of preference shares the following factors are generally considered:

- (i) Risk free rate plus small risk premium (i.e. market expectation rate).
- (ii) Ability of the company to pay dividend on a regular basis.
- (iii) Ability of the company to redeem preference share capital.

The value of each preference shares can be derived as below:

$$\frac{\text{Preference dividend rate}}{\text{Market expectation rate}} \times 100$$

Valuation of Business: Value of business is different from that of the aggregate value of assets.

Two alternative approaches are available for business valuation:

- (i) going concern and
- (ii) liquidation.

The following methods are used for business valuation taking it as a going concern:

- (i) Historical cost valuation
- (ii) Current cost valuation (iii) Economic valuation (iv) Asset valuation.

For piecemeal sale of the business, only 'net realisable value' basis is appropriate.

Historical cost valuation: It is also called book value method. All assets are taken at their respective historical cost. Value of goodwill is ascertained and added to such historical cost of assets.

Historical cost value of business = Historical cost of all assets + Value of goodwill.

Current cost valuation: Current cost of assets is taken for this purpose instead of historical cost.

Economic valuation: Under this method value of the business is given by the sum of discounted value of future earnings or cash flows.

Fair value: NAV on the basis of fair value of assets and liabilities is computed in the same way as computed on the basis of book value except that the fair values of assets and liabilities are considered instead of balance sheet values. The implication of fair value also varies with the objective of valuation, whether the objective is to find the going concern value or the liquidation value.

Earning based valuation of business: Earning based valuation of business = Earning capacity value per share X number of equity shares + Preference share capital + Debt capital.
(Book values of preference capital and debt capital should be taken)

Market value model: This is simply the aggregate of the market capitalization and market value of preference capital and debt capital. Market capitalization means market value of equity multiplied by the number of outstanding share.

1. Find out the average capital employed of ND Ltd. from its summarized Balance Sheet as at 31st March, 2012:

Liabilities	(` in lakhs)	Assets	(` in lakhs)
Share Capital:		Fixed Assets:	
Equity shares of ` 10 each	50.00	Land and buildings	25.00
9% Pref. shares fully paid up	10.00	Plant and machinery	80.25
Reserve and Surplus:		Furniture and fixture	5.50
General reserve	12.00	Vehicles	5.00
Profit and Loss	19.50	Investments	10.00
Secured loans:		Current Assets:	
16% debentures	5.00	Stock	6.75
16% Term loan	18.00	Sundry Debtors	4.90
Cash credit	13.30	Cash and bank	10.40
Current Liabilities and			
Sundry creditors	2.70		
Provision for taxation	6.40		
Proposed dividend on:			
Equity shares	10.00		
Preference shares	<u>0.90</u>		
	<u>147.80</u>		<u>147.80</u>

Non-trade investments were 20% of the total investments. Balances as on 1.4.2011 to the following accounts were:

Profit and Loss account ` 8.20 lakhs, General reserve ` 6.50 lakhs.

2.

Balance Sheets of X Ltd.

As on 31st March 20X8 and 31st March 20X9

Liabilities	31.3.X8	31.3.X9	Assets	31.3.X8	31.3.X9
Share Capital	18,00	18,00	Sundry fixed Assets	24,00	26,00
General Reserve	6,00	6,00	Investments	1,00	2,00
Profit & Loss A/c	7,50	9,50	Stock	6,00	5,50
12% Debentures	2,00	2,00	Sundry Debtors	3,00	3,50
18% Term Loan	3,00	3,20	Cash and Bank	4,00	3,40
Cash Credit	1,20	80	Preliminary Expenses	70	10
Sundry Creditors	70	60			
Tax Provision	<u>30</u>	<u>40</u>			
	<u>38,70</u>	<u>40,50</u>		<u>38,70</u>	<u>40,50</u>

Non-trade investments were 75% of the total investments. Find capital employed as on 31.3.X8 and as on 31.3.X9 and average capital employed.

3. PPX Ltd. gives the following information about past profits:

Year	Profits (‘000 Rs.)
2006	21,70
2007	22,50
2008	23,70 ✓
2009 ✓	24,50
2010	21,10

On scrutiny it is found (i) that upto 2008, PPX Ltd. followed FIFO method of finished stock valuation thereafter adopted LIFO method, (ii) that upto 2009 it followed straight line depreciation and thereafter adopted written down value method.

Given below the details of stock valuation: (Figures in Rs. ‘000)

Year	Opening Stock		Closing Stock	
	FIFO	LIFO	FIFO	LIFO
2006	40,00	39,80	46,00	41,20
2007	46,00	41,20	49,20	47,90
2008	49,20	47,90	38,90	39,10
2009	38,90	39,10	42,00	38,50
2010	42,00	38,50	45,00	43,10

Straight line and written down value depreciation were as follows:

Year	Straight Line (‘000 Rs.)	W.D. V (‘000 Rs.)
2006	12,10	17,00
2007	14,15	18,10
2008	15,00	19,25
2009	16,70	19,60
2010	18,00	19,40

Determine future maintainable profits that can be used for valuation of goodwill.

4. The following summarized Balance Sheet of X Ltd. is given:

**X Ltd.
Summarised Balance Sheet as on 31st March, 2012**

Liabilities		Assets	
5,000 shares of ` 100 each fully paid	50,00,000	Goodwill	4,00,000
Bank overdraft	18,60,000	Land and building at cost	32,00,000
Creditors	21,10,000	Plant and machinery	28,00,000
Provision for taxation	5,10,000	Stock	32,00,000
Profit and Loss Appropriation	<u>21,20,000</u>	Debtors considered	<u>20,00,000</u>
	<u>1,16,00,000</u>		<u>1,16,00,000</u>

In 2001 when the company commenced operation the paid up capital was same. The Loss/Profit for each of the last 5 years was:- years 2007-2008 - Loss (` 5,50,000); 2008-2009 ` 9,82,000; 2009-2010 ` 11,70,000; 2010-2011 ` 14,50,000; 2011-2012 ` 17,00,000;

Although income-tax has so far been paid @ 40% and the above profits have been arrived at on the basis of such tax rate, it has been decided that with effect from the year 2011-2012 the Income-tax rate of 45% should be taken into consideration. 10% dividend in 2008-2009 and 2009-2010 and 15% dividend in 2010-2011 and 2011-2012 have been paid. Market price of shares of the company on 31st March, 2012 is ₹ 125. With effect from 1st April, 2012 Managing Director's remuneration has been approved by the Government to be ₹ 8,00,000 in place of ₹ 6,00,000. The company has been able to secure a contract for supply of materials at advantageous prices. The advantage has been valued at ₹ 4,00,000 per annum for the next five years.

Ascertain goodwill at 3 year's purchase of super profit (for calculation of future maintainable profit weighted average is to be taken).

5. The following is the extract from the Balance Sheets of Popular Ltd.:

Liabilities	As at 31.3.2011 `in lakhs	As at 31.3.2012 `in lakhs	Assets	As at 31.3.2011 `in lakhs	As at 31.3.2012 `in lakhs
Share capital	500	500	Fixed assets	550	650
General reserve	400	425	10% investment	250	250
Profit and Loss account	60	90	Stock	260	300
18% term loan	180	165	Debtors	170	110
Sundry creditors	35	45	Cash at bank	46	45
Provision for tax	11	13	Fictitious assets	10	8
Proposed dividend	<u>100</u>	<u>125</u>			
	<u>1,286</u>	<u>1,363</u>		<u>1,286</u>	<u>1,363</u>

Additional information:

- Replacement values of fixed assets were ₹ 1,100 lakhs on 31.3.11 and ₹ 1,250 lakhs on 31.3.2012 respectively.
- Rate of depreciation adopted on fixed assets was 5% p.a.
- 50% of the stock is to be valued at 120% of its book value.
- 50% of investments were trade investments.
- Debtors on 31st March, 2012 included foreign debtors of \$ 35,000 recorded in the books at ₹ 35 per U.S. Dollar. The closing exchange rate was \$ 1 = ₹ 39.
- Creditors on 31st March, 2012 included foreign creditors of \$ 60,000 recorded in the books at \$ 1 = ₹ 33. The closing exchange rate was \$ 1 = ₹ 39.
- Profits for the year 2011-12 included ₹ 60 lakhs of government subsidy which was not likely to recur.
- ₹ 125 lakhs of Research and Development expenditure was written off to the Profit and Loss Account in the current year. This expenditure was not likely to recur.
- Future maintainable profits (pre-tax) are likely to be higher by 10%.
- Tax rate during 2011-12 was 50%, effective future tax rate will be 40%.
- Normal rate of return expected is 15%.

One of the directors of the company Arvind, fears that the company does not enjoy goodwill in the prevalent market circumstances.

Critically examine this and establish whether Popular Co. has or has not any goodwill.

If your answers were positive on the existence of goodwill, show the leverage effect it

has on the company's result.

Industry average return was 12% on long-term funds and 15% on equity funds.

6. The Balance Sheet of D Ltd. on 31st March, 2011 is as under:

Liabilities		Assets	
1,25,000 shares of ` 100 each fully paid up	1,25,00,000	Goodwill	10,00,000
Bank overdraft	46,50,000	Building	80,00,000
Creditors	52,75,000	Machinery	70,00,000
Provision for taxation	12,75,000	Stock	80,00,000
Profit and loss account	<u>53,00,000</u>	Debtors (all considered good)	50,00,000
	<u>2,90,00,000</u>		<u>2,90,00,000</u>

In 1989, when the company started its activities the paid up capital was the same. The

Profit/Loss for the last five years is as follows:

2006-2007: Loss (13,75,000), 2007-2008: Profit ` 24,55,000, 2008-2009: Profit ` 29,25,000, 2009-2010: Profit ` 36,25,000, 2010-2011: Profit ` 42,50,000.

Income-tax rate so far has been 40% and the above profits have been arrived at on the basis of such tax rate. From 2010-2011, the rate of income-tax should be taken at 45%. 10% dividend in 2007-2008, 2008-2009 and 15% dividend in 2009-2010 and 2010-2011 has been paid. Market price of this share on 31st March, 2011 is ` 125. With effect from 1<sup>st</sup> April, 2011, the Managing Directors remuneration will be ` 20,00,000 instead of ` 15,00,000. The company has secured a contract from which it can earn an additional ` 10,00,000 per annum for the next five years.

Calculate the value of goodwill at 3 years purchase of super profit. (For calculation of future maintainable profits weighted average is to be taken).

7. The summarized Balance Sheet of Domestic Ltd. as on 31st March, 2012 is as under:

(All figures are in lacs)

Liabilities		Assets	
Equity Shares ` 10 each Reserves (including provision for taxation of 300 lacs)		3,000 Goodwill	744
5% Debentures		1,000 Premises and Land at cost	400
Secured Loans		2,000 Plant and Machinery	3,000
Sundry Creditors		200 Motor Vehicles	40
Profit & Loss A/c		300 (purchased on 30/09/2011)	
Balance from previous B/S	3	Raw materials at cost	920
		Work-in-progress at cost	130
Profit for the year (After taxation)	<u>1,100</u>	1,132 Finished Goods at cost	180
		Book Debts	400

		Investment (meant for replacement of Plant and Machinery)	1,600
		Cash at Bank and Cash in hand	192
		Discount on Debentures	10
		Underwriting	16
		<u>7,632</u>	<u>7,632</u>

The resale value of Premises and Land is ` 1,200 lacs and that of Plant and Machinery is ` 2,400 lacs. Depreciation @ 20% is applicable to Motor Vehicles. Applicable depreciation on Premises and Land is 2%, and that on Plant and Machinery is 10%. Market value of the Investments is ` 1,500 lacs. 10% of book debts is bad. In a similar company the market value of equity shares of the same denomination is ` 25 per share and in such company dividend is consistently paid during last 5 years @ 20%. Contrary to this, Domestic Ltd. is having a marked upward or downward trend in the case of dividend payment.

Past 5 years' profits of the company were as under:

2006-07		` 67 lacs
2007-08	(-)	` 1,305 lacs (loss)
2008-09		` 469 lacs
2009-10		` 546 lacs
2010-11		` 405 lacs

The unusual negative profitability of the company during 2007-08 was due to the lock out in the major manufacturing unit of the company which happened in the beginning of the second quarter of the year 2006-07 and continued till the last quarter of 2007-08.

Value the Goodwill of the Company on the basis of 4 years' purchase of the Super Profit. (Necessary assumption for adjustment of the Company's inconsistency in regard to the dividend payment may be made).

8. From the following particulars of three companies, ascertain the value of goodwill. Terms and conditions are as follows:
- Assets are to be revalued.
 - Goodwill is to be valued at four years' purchase of average super profits for three years. Such average is to be calculated after adjustment of depreciation at ten per cent on the amount of increase/decrease on revaluation of fixed assets. Income tax is to be ignored.
 - Normal profit on capital employed is to be taken at 10 per cent, capital employed being considered on the basis of net revalued amounts of tangible assets.

The summarized Balance Sheets and relevant information are given below:

(C in lakh)							
Liabilities	P Ltd.	Q Ltd.	R Ltd.	Assets	P Ltd.	Q Ltd.	R Ltd.
Equity shares of 10 each	12.00	14.00	6.00	Goodwill	-	1.00	-
Reserves	2.00	1.00	2.00	Net tangible block	16.00	12.00	10.00
10 % Debentures	4.00	-	2.00	Current assets	6.00	5.00	2.00
Trade creditors	<u>4.00</u>	<u>3.00</u>	<u>2.00</u>				
	<u>22.00</u>	<u>18.00</u>	<u>12.00</u>		<u>22.00</u>	<u>18.00</u>	<u>12.00</u>

	P Ltd.	Q Ltd.	R Ltd.
Revaluation of tangible block	20,00,000	10,00,000	12,00,000
Revaluation of current assets	7,00,000	2,80,000	1,60,000
Average annual profit for three years before charging debenture	3,60,000	2,88,000	1,56,000

9. From the following particulars of two companies, ascertain the value of goodwill. Terms and conditions are as follows:
- Assets are to be revalued.
 - Goodwill is to be valued at four years' purchase of average super profits for three years. Such average is to be calculated after adjustment of depreciation at ten per cent on the amount of increase/decrease on revaluation of fixed assets. Income tax is to be ignored.
 - Normal profit on capital employed is to be taken at 10 per cent, capital employed being considered on the basis of net revalued amounts of tangible assets.

The summarized Balance Sheets and relevant information are given below:

Liabilities	Ram Ltd.	Sam Ltd.	Assets	Ram Ltd.	Sam Ltd.
Equity shares of Rs.10 each	12.00	14.00	Goodwill	-	1.00
Reserves	2.00	1.00	Net tangible Block	16.00	12.00
10 percent debentures	4.00	-	Current assets	6.00	5.00
Trade and expenses creditors	<u>4.00</u>	<u>3.00</u>			
	<u>22.00</u>	<u>18.00</u>		<u>22.00</u>	<u>18.00</u>

	Ram Ltd.	Sam Ltd.
Revaluation of tangible block	20,00,000	10,00,000
Revaluation of current assets	7,00,000	2,80,000
Average annual profit for three years before charging debenture interest	3,60,000	2,88,000

10. The following are the summarized Balance Sheets of two companies, A Ltd., and B Ltd. as on 31-03-2011:

Liabilities	A Lt	B Lt	Assets	A Lt	B Lt
Equity shares of ` 10 each	15,00,000	10,00,000	Goodwill	2,00,000	1,00,000
Reserves	3,00,000	2,00,000	Net tangible block	17,00,000	14,00,000
10% Debentures	6,00,000	4,00,000	Current Assets	8,00,000	6,00,000
Creditors	<u>3,00,000</u>	<u>5,00,000</u>			
	<u>27,00,000</u>	<u>21,00,000</u>		<u>27,00,000</u>	<u>21,00,000</u>

Additional information:

- (i) Assets are to be revalued as follows:

	A Lt	B Lt
Revaluation of Tangible Block	21,00,000	12,00,000
Revaluation of Current Assets	10,00,000	4,00,000

	A Lt	B Lt
Average annual profit for three years before charging debenture interest	4,50,000	3,10,000

- (iii) Goodwill is to be valued at four year's purchase of average super profits for three years.

Average is to be calculated after adjustment of depreciation at 10% on the amount of increase/decrease on revaluation of fixed assets. In the case of B Ltd. a claim of `10,000, which was omitted, is to be adjusted against its average profit. Income tax is to be ignored.

- (iv) Normal profit on capital employed is to be taken at 15%, capital employed being considered on the basis of revalued amount of tangible assets.

Ascertain the value of goodwill of A Ltd. and B Ltd.

11. The Balance Sheet of Steel Ltd. as on 31st March, 2011 is given below:

Liabilities		Assets	
Share capital:		Fixed assets:	
Equity shares of ` 10 each	6,00,000	Goodwill	70,000
Less: Calls in arrear		Machinery	3,00,000
(` 2 for final call)	<u>20,000</u>		
	5,80,000	Freehold properties	4,50,000
7% Preferences shares of ` 10 each fully paid	3,00,000	Vehicles	1,00,000
Reserves and surplus:		Furniture	50,000
General reserve	3,50,000	Investments	2,00,000
Profit and loss account	1,50,000	Current Assets:	
Current liabilities:		Stock-in-trade	2,50,000
Sundry creditors	3,00,000	Sundry debtors	4,00,000
Bank loan	2,00,000	Cash at bank	60,000

18,80,000

18,80,000

Additional Information:

- (i) On 1.4.2008 a new furniture costing ₹ 20,000 was purchased and wrongly charged to revenue. No rectification has yet been made for the same. Depreciation charged on furniture is @ 10% on reducing balance system.
- (ii) Fixed assets are worth 15% above their book value.
- (iii) Stock is overvalued by 50,000 and 10% Debtors are doubtful.
- (iv) Of the investments, 10% is trade investment and the balance is non-trade investment. Trade investments are to be valued at 10% below cost. A uniform rate of dividend of 10% is earned on all investments.
- (v) Profits after tax are as follows:

2008-09	2,50,000
2009-10	2,80,000
2010-11	3,30,000

- (vi) In a similar business normal return on capital employed is 20%.

You are required to calculate the value of goodwill on the basis of 2 years' purchase of super profits based on the average profit of last 3 years, assuming tax rate of 50%.

VALUATION OF INTANGIBLE

12. From the following information determine the possible value of brand under the potential earning model:

	₹ in lakhs)
(a) Profit before tax	13.00
(b) Income tax	3.00
(c) Tangible Fixed Asset	20.00
(d) Identifiable Intangible other than brand model	10.00
(e) Expected return on tangible fixed assets	6.00

Appropriate capitalization factor for intangibles is 25%.

13. From the following information, determine the possible value of brand as per potential earning model:

	in lakhs
(i) Profit After Tax (PAT)	2,500
(ii) Tangible fixed assets	10,000
(iii) Identifiable intangible other than brand	1,500
(iv) Weighted average cost of capital (%)	14%
(v) Expected normal return on tangible assets weighted average cost (14%) + normal spread 4%	18%
(vi) Appropriate capitalisation factor for intangibles	25%

Valuation of Shares

14. From the following data, compute the 'Net Assets' value of each category of equity shares of Smith Ltd.: Shareholders funds

10,000 'A' Equity shares of ` 100 each, fully paid

10,000 'B' Equity shares of ` 100 each, ` 80 paid

10,000 'C' Equity shares of ` 100 each, ` 50 paid

Retained Earnings ` 9,00,000

15. Balance Sheet of John Engg. Ltd. as on 31.12.2009 is given below:

Balance Sheet		(Figures in 000)	
Liabilities	Rs.	Assets	R
Share Capital -			
1,50,000 Equity Shares of Rs.10 each	15,00	Sundry Fixed Assets	22,00
2,00,000 Equity Shares of Rs. 10		Investments	4,00
each Rs. 6 paid up	12,00	Stock	8,00
9% Cum Pref. Shares	6,00	Debtors	4,00
18% Term Loan	14,00	Cash & Bank	4,00
Sundry Creditors	8,00	P & L A/c	13,00
	55,00		55,00

Other Information:

(1) Current Cost of Sundry Fixed Assets Rs. 37,00 thousand and stock Rs.10,00 thousand,

(2) Investments could fetch only Rs. 100 thousand,

(3) 50% debtors are doubtful,

(4) Preference dividend was in arrear for the last five years. Find out the intrinsic value per share of John Engg. Ltd.

16. From the following figures calculate the value of the share of Rs.100 on
(i) yield on capital employed basis, and
(ii) dividend basis, the market expectation being 12%.

Year	Capital employed (Rs.)	Profit (Rs.)	Dividend %
2007	5,50,000	88,000	12
2008	8,00,000	1,60,000	15
2009	10,00,000	2,20,000	18
2010	15,00,000	3,75,000	20

17. The summarized Balance Sheet of RNR Limited as on 31.12.2011 is as follows:

Liabilities	(` in lakhs)	Assets	(` in lakhs)
1,00,000 equity shares	10	Goodwill	5
` 10 each fully paid		Fixed assets	15
1,00,000 equity shares		Other tangible assets	5

₹ 6 each, fully paid up	6	Intangible assets (market Value)	3
Reserves and Surplus	4	Miscellaneous expenditure	
Liabilities	<u>10</u>	the extent not written off	<u>2</u>
	<u>30</u>		<u>30</u>

Fixed assets are worth ₹ 24 lakhs. Other Tangible assets are revalued at ₹ 3 lakhs. The company is expected to settle the disputed bonus claim of ₹ 1 lakh not provided for in the accounts. Goodwill appearing in the Balance Sheet is purchased goodwill. It is considered reasonable to increase the value of goodwill by an amount equal to average of the book value and a valuation made at 3 years' purchase of average super-profit for the last 4 year.

After tax, profits and dividend rates were as follows:

Year	PAT (₹ in lakhs)	Dividend %
2008	3.0	11%
2009	3.5	12%
2010	4.0	13%
2011	4.1	14%

Normal expectation in the industry to which the company belongs is 10%.

Akbar holds 20,000 equity shares of ₹ 10 each fully paid and 10,000 equity shares of ₹ 6 each, fully paid up. He wants to sell away his holdings.

- Determine the break-up value and market value of both kinds of shares.
- What should be the fair value of shares, if controlling interest is being sold?

18. The following is the summarized Balance Sheet of N Ltd. as on 31st March, 2012:

Balance Sheet

Liabilities		Assets	
4,00,000 Equity shares of ₹ 10 each fully paid	40,00,000	Goodwill	6,00,000
13.5% Redeemable preference shares of ₹ 100 each fully paid	20,00,000	Building	24,00,000
General Reserve	16,00,000	Machinery	22,00,000
Profit and Loss Account	3,20,000	Furniture	10,00,000
Bank Loan (Secured against fixed assets)	12,00,000	Vehicles	18,00,000
Bills Payable	6,00,000	Investments	16,00,000
Creditors	3,20,000	Stock	11,00,000
	<u>1,28,20,000</u>	Debtors	18,00,000
		Bank Balance	<u>3,20,000</u>
			<u>1,28,20,000</u>

Further information:

- Return on capital employed is 20% in similar businesses.
- Fixed assets are worth 30% more than book value. Stock is overvalued by ₹ 1,00,000, Debtors are to be reduced by ₹ 20,000. Trade investments, which constitute 10% of the total investment are to be valued at 10% below cost.
- Trade investments were purchased on 1.4.2011. 50% of non-Trade Investments were purchased on 1.4.2010 and the rest on 1.4.2011. Non-Trade Investments yielded 15% return on cost.
- In 2009-2010 new machinery costing ₹ 2,00,000 was purchased, but wrongly

charged to revenue. This amount should be adjusted taking depreciation at 10% on reducing value method.

(v) In 2010-2011 furniture with a book value of ₹ 1,00,000 was sold for ₹ 60,000.

(vi) For calculating goodwill two years purchase of super profits based on simple average profits of last four years are to be considered. Profits of last four years are as under:

2008-2009 ₹ 16,00,000, 2009-2010 ₹ 18,00,000, 2010-2011 ₹ 21,00,000,
2011-2012 ₹ 22,00,000.

(vii) Additional depreciation provision at the rate of 10% on the additional value of Plant and Machinery alone may be considered for arriving at average profit.

Find out the intrinsic value of the equity share. Income-tax and Dividend tax are not to be considered.

19. Capital structure of Lot Ltd. as at 31.3.2010 as under:

(Rs. in lakhs)

Equity share capital	10
10% preference share capital	5
15% debentures	8
Reserves	4

Lot Ltd. earns a profits of Rs. 5 lakhs annually on an average before deduction of interest on debentures and income tax which works out to 40%.

Normal return on equity shares of companies similarly placed is 12% provided:

(a) Profit after tax covers fixed interest and fixed dividends at least 3 times.

(b) Capital gearing ratio is .75.

(c) Yield on share is calculated at 50% of profits distributed and at 5% on undistributed profits.

Lot Ltd. has been regularly paying equity dividend of 10%.

20. The Capital Structure of M/s XYZ Ltd., on 31st March, 2012 was as follows:

Equity Capital – 18,000 Shares of ₹ 100 each	18,00,000
12% Preference Capital – 5,000 Shares of ₹ 100 each	5,00,000
12% Secured Debentures	5,00,000
Reserves	5,00,000
Profit earned before Interest and Taxes during the year	7,20,000
Tax Rate	40%

Generally the return on equity shares of this type of Industry is 15%.

Subject to:

(a) The profit after tax covers Fixed Interest and Fixed Dividends at least 4 times.

(b) The Debt Equity ratio is at least 2;

(c) Yield on shares is calculated at 60% of distributed profits and 10% of undistributed profits;

The Company has been paying regularly an Equity dividend of 15%. The risk premium for Dividends is generally assumed at 1%. Find out the value of Equity shares of the Company.

21. The following abridged Balance Sheet as at 31st March, 2012 pertains to Glorious Ltd.

Liabilities	` in lakhs	Assets	` in lakhs
Share Capital:		Goodwill, at cost	420
180 lakhs Equity shares of ` 10 each, fully paid up	1,800	Other Fixed Assets	11,166
90 lakhs Equity shares of ` 10 each, ` 8 paid up	720	Current Assets	2,910
150 lakh Equity shares of ` 5 each, fully paid-up	750	Loans and Advances	933
Reserves and Surplus	5,628	Miscellaneous	171
Secured Loans	4,500		
Current Liabilities	1,242		
Provisions	960		
	<u>15,600</u>		<u>15,600</u>

You are required to calculate the following for each one of the three categories of equity shares appearing in the above mentioned Balance Sheet:

- Intrinsic value on the basis of book values of Assets and Liabilities including goodwill;
- Value per share on the basis of dividend yield.

Normal rate of dividend in the concerned industry is 15%, whereas Glorious Ltd. has been paying 20% dividend for the last four years and is expected to maintain it in the next few years; and

- Value per share on the basis of EPS.

For the year ended 31st March, 2012 the company has earned ` 1,371 lakhs as profit after tax, which can be considered to be normal for the company. Average EPS for a fully paid share of ` 10 of a Company in the same industry is ` 2.

22. The directors of a public limited company are considering the acquisition of the entire share capital of an existing company X Ltd engaged in a line of business suited to them. The directors feel that acquisition of X will not create any further risk to their business interest.

The following is the summarized Balance Sheet of X Ltd., as at 31st December, 2011:

Liabilities		Assets	
Share Capital:		Fixed assets	6,00,000
4,000 equity shares of ` 100 each fully	4,00,000	Current assets:	
General reserve	3,00,000	Stock	2,00,000
Bank overdraft	2,40,000	Sundry debtors	3,40,000
Sundry creditors	<u>3,00,000</u>	Cash and bank balance	1,00,000
	<u>12,40,000</u>		<u>12,40,000</u>

X's financial records for the past five years were as under:

	2011	2010	2009	2008	2007
Profits	80,000	74,000	70,000	60,000	62,000
Extra ordinary item(s)	3,500	4,000	(6,000)	(8,000)	1,000
	83,500	78,000	64,000	52,000	61,000
Dividends	48,000	40,000	40,000	32,000	32,000
	35,500	38,000	24,000	20,000	29,000

Additional information:

(i) There were no changes in the issued capital of X during this period.

(ii) The estimated values of X Ltd.'s assets on 31.12.2011 are:

	Replacem ent	Realiza ble
Fixed assets	8,00,000	5,40,000
Stock	3,00,000	3,20,000

(iii) It is anticipated that 1% of the debtors may prove to be difficult to be realized.

(iv) The cost of capital to the acquiring company is 10%.

(v) The current return of an investment of the acquiring company is 10%. Quoted companies with similar businesses and activities as X have a P/E ratio approximating to 8, although these companies tend to be larger than X.

Required:

Estimate the value of the total equity capital of X Ltd., on 31.12.2011 using each of the following bases:

- (a) Balance sheet value (b) Replacement cost
(c) Realizable value (d) P/E ratio model.

23. P Limited is considering the acquisition of R Limited. The financial data at the time of acquisition being:

	P Limited	R Limited
Net profit after tax (₹ in lakhs)	60	12
Number of shares (lakhs)	12	5
Earning per share (₹)	5	2.40
Market price per share (₹)	150	48
Price earning ratio	30	20

It is expected that the net profit after tax of the two companies would continue to be ₹ 72 lakhs even after the amalgamation.

Explain the effect on EPS of the merged company under each of the following situations:

- (i) P Ltd. offers to pay ₹ 60 per share to the shareholders of R Ltd.
(ii) P Ltd. offers to pay ₹ 78 per share to the shareholders of R Ltd.
The amount in both cases is to be paid in the form of shares of P Ltd.

24. The following is the summarized Balance Sheet (as at 31st December, 2011) of Sun Ltd.:

Liabilities		Assets	
Share Capital:		Fixed Assets:	
80,000 Equity shares of ` 10 each fully paid up	8,00,000	Goodwill	1,10,000
50,000 Equity shares of ` 10 each ` 8 paid up	4,00,000	Plant and Machinery	8,00,000
36,000 Equity shares of ` 5 each fully paid up	1,80,000	Land and Building	10,00,000
30,000 Equity shares of ` 5 each ` 4 paid-up	1,20,000	Furniture and Fixtures	1,00,000
3,000 10% Preference shares of 100 each fully paid	3,00,000	Vehicles	2,00,000
Reserves and Surplus:		Investments	3,00,000
General reserve	1,40,000	Current Assets:	
Profit and Loss account	2,10,000	Stock	2,10,000
Secured Loan: 12% Debenture	2,00,000	Debtors	1,95,000
Unsecured Loan: 15% Term loan	1,50,000	Prepaid Expenses	40,000
Deposits	1,00,000	Advances	45,000
Current Liabilities:		Cash and Bank balance	2,00,000
Bank Loan	50,000		
Creditors	1,50,000		
Outstanding expenses	20,000		
Provision for tax	2,00,000		
Proposed Dividend:			
Equity	1,50,000		
Preference	30,000		
	32,00,000		32,00,000

Additional Information:

- In 2009 a new machinery costing ` 50,000 was purchased, but wrongly charged to revenue (no rectification has yet been made for the same).
- Stock is overvalued by ` 10,000 in 2010. Debtors are to be reduced by ` 5,000 in 2011, some old furniture (Book value ` 10,000) was disposed of for ` 6,000.
- Fixed assets are worth 5 per cent more than their actual book value. Depreciation on appreciated value of fixed assets except machinery is not to be considered for valuation of goodwill.
- Of the investment 20 per cent is trading and the balance is non-trading. All trade investments are to be valued at 20 per cent below cost. Trade investment were purchased on 1st January, 2011. 50 percent of the non-trade investments were acquired on 1st January, 2010 and the rest on 1st January, 2009. A uniform rate of dividend of 10 percent is earned on all investments.
- Expected increase in expenditure without commensurate increase in selling price is ` 20,000.
- Research and Development expenses anticipated in future ` 30,000 per annum.

- g. In a similar business a normal return on capital employed is 10%.
- h. Profit (after tax) are as follows:
- i. In 2009 - ₹ 2,10,000, in 2010 - ₹ 1,90,000 and in 2011 - ₹ 2,00,000.
- j. Current income tax rate is 50%, expected income tax rate will be 40%.

From the above, ascertain the ex-dividend and cum-dividend intrinsic value for different categories of Equity shares. For this purpose goodwill may be taken as 3 years purchase of super profits. Depreciation is charged on machinery @ 10% on reducing system.

25. Following is the Balance Sheet of Rampal Limited as on 31st March, 2012:

Liabilities		Assets	
1,00,000 equity shares of ₹ 10 each	10,00,000	Goodwill	7,20,000
10,000, 12% preference share of ₹ 100 each	10,00,000	Buildings	15,00,000
General reserve	6,00,000	Plant	10,00,000
Profit and Loss account	4,00,000	Investment in 10% stock	4,80,000
15% debentures	10,00,000	Stock-in-trade	6,00,000
Creditors	8,00,000	Debtors	4,00,000
		Cash	1,00,000
	48,00,000		48,00,000

Additional information are given below:

- (a) Nominal value of investment is ₹ 5,00,000 and its market value is ₹ 5,20,000.
- (b) Following assets are revalued:

(i)	Building	₹ 32,00,000
(ii)	Plant	₹ 18,00,000
(iii)	Stock-in-trade	₹ 4,50,000
(iv)	Debtors	₹ 3,60,000

- (c) Average profit before tax of the company is ₹ 12,00,000 and 12.50% of the profit is transferred to general reserve, rate of taxation being 50%.
- (d) Normal dividend expected on equity shares is 8% while fair return on closing capital employed is 10%. *NRR 10%*
- (e) Goodwill may be valued at three year's purchase of super profits.
- Ascertain the value of each equity share under fair value method.

26. The following is the Balance Sheet of N Ltd. as on 31st March, 2009:

Balance Sheet

Liabilities	Rs.	Assets	Rs.
4,00,000 Equity shares of Rs. each fully paid	40,00,000	Goodwill	4,00,000
13.5% Redeemable of Rs. 100 each fully paid	20,00,000	Building	24,00,000
General Reserve	16,00,000	Machinery	22,00,000
Profit and Loss Account	3,20,000	Furniture	10,00,000
Bank Loan (Secured against fixed assets)	12,00,000	Vehicles	18,00,000
Bills Payable	6,00,000	Investments	16,00,000
Creditors	31,00,000	Stock	11,00,000
		Debtors	18,00,000
		Bank Balance	3,20,000
		Preliminary Expenses	<u>2,00,000</u>
	<u>1,28,20,000</u>		<u>1,28,20,000</u>

Further information:

- (i) Return on capital employed is 20% in similar businesses.
- (ii) Fixed assets are worth 30% more than book value. Stock is overvalued by Rs. 1,00,000, Debtors are to be reduced by Rs. 20,000. Trade investments, which constitute 10% of the total investments are to be valued at 10% below cost.
- (iii) Trade investments were purchased on 1.4.2008. 50% of non-Trade Investments were purchased on 1.4.2007 and the rest on 1.4.2006. Non-Trade Investments yielded 15% return on cost.
- (iv) In 2006-2007 new machinery costing Rs. 2,00,000 was purchased, but wrongly charged to revenue. This amount should be adjusted taking depreciation at 10% on reducing value method.
- (v) In 2007-2008 furniture with a book value of Rs. 1,00,000 was sold for Rs. 60,000.
- (vi) For calculating goodwill two years purchase of super profits based on simple average profits of last four years are to be considered. Profits of last four years are as under:
 2005-2006 Rs. 16,00,000, 2006-2007 Rs. 18,00,000,
 2007-2008 Rs. 21,00,000, 2008-2009 Rs. 22,00,000.
- (vii) Additional depreciation provision at the rate of 10% on the additional value of Plant and Machinery alone may be considered for arriving at average profit.

Find out the intrinsic value of the equity share. Income-tax and Dividend tax are not to be considered.

27. The summarized balance sheets of Precious Ltd. as on 31st December, 2011 is as follows:

Liabilities		Assets	
Share capital (in shares of ` 100 each)		Fixed assets: Goodwill	1,50,000
4,500 Equity shares	4,50,000	Freehold property	3,75,000
1,500, 6% Preference shares	1,50,000	Plant and machinery (less depreciation)	1,50,000
Profit and loss A/c	7,50,000		
5% Debentures	3,00,000	Quoted investments	3,00,000
Sundry creditors	2,39,250	Current assets:	
		Stock	2,70,000
		Debtors (net)	2,99,250
		Bank balance	<u>3,45,000</u>
	<u>18,89,25</u>		<u>18,89,25</u>

Profits for the three years 2009, 2010 and 2011 after charging debenture interest and tax but before providing for preference dividend were ` 2,20,500, ` 3,22,500 and ` 2,40,000 respectively.

- Preference shares are payable at par on liquidation.
- The purchaser wants to acquire all the 4,500 equity shares.
- The price for equity shares is to be based on the following assumptions:
- The normal return of 10% on net assets (at revised valuation) attributable to equity shares.
- Debentures will be redeemed at a discount of 25% prior to the sale of the business. In order to provide funds for this purpose, investments will be sold out.
- The value of freehold property is agreed to be ascertained on the basis of 8% return. The current annual rental value is ` 50,400.
- A claim of ` 8,250 was omitted to be provided in the year 2011.
- Market value of quoted investments was ` 3,75,000.
- Non - recurring profits are to be eliminated. 10% of the profits for 2010 referred above arose from a transaction of a non- recurring nature.
- A provision of 5% on sundry debtors was made in 2011 which is no longer required (the provision when made was taken into account for purposes of Income - tax @ 50%).

Calculate the value of the of the company's shares (from the point of view of purchaser) after taking into account the revised values of assets and liabilities and value the goodwill based on three year's purchase of the super profit based on the average profit of the last three years.

Valuation of Business

28. MICO Ltd. gives the following cash flows estimate:

2003 Rs. 20,00 lakhs

2004 to 2006 Compound Growth Rate 6.5%

2007 to 2010 Compound growth rate 9.5%

Apply 20% discount rate and determine the value of business.

29. Shyam Garments Ltd. is a company which produces and sells to retailers a certain range of fashion clothings. They have made the following estimates of potential cash flows for the next 10 years.

Year	1	2	3	4	5	6	7	8	9	10
Cash flows										
(Rs. in lacs)	15.00	17.00	20.00	25.00	30.00	34.00	38.00	45.00	50.00	60.00

Kiddies Wear Ltd. is a company which owns a series of boutiques in a certain locality. The boutiques buy clothes from various suppliers and retail them. Each boutique has a manager and an assistant but all purchasing and policy decisions are taken centrally. Independent cash flow estimates of Kiddies Wear Ltd. was as follows:

Year	1	2	3	4	5	6	7	8	9	10
Cash flows										
(Rs. in lacs)	1.20	1.60	2.00	2.80	3.40	4.60	5.20	6.00	6.60	8.00

Shyam Garments Ltd. is interested in acquiring Kiddies Wear Ltd. in order to get some additional retail outlets. They make the following cost-benefit calculations:

- (viii) Net value of assets of Kiddies Wear Ltd.

	Rs in lacs
Sundry Fixed Assets	800
Investments	200
Stock	400
	1400
Less: Sundry Creditors	400
Net Assets	1000

- (ix) Sundry Fixed Assets amounting to Rs. 50 lacs cannot be used and their net realisable value is Rs. 45 lacs.

- (x) Stock can be realised immediately at Rs. 470 lacs.

- (xi) Investments can be disposed off for Rs. 212 lacs.

- (xii) Some workers of Kiddies Wear Ltd. are to be retrenched for which estimated compensation is Rs. 1,30 lacs.

- (xiii) Sundry creditors are to be discharged immediately.

- (xiv) Liabilities on account of retirement benefits not accounted for in the Balance Sheet by

- (xv) Kiddies Wear Ltd. is Rs. 48 lacs.

- b) Expected cash flows of the combined business will be as follows:

Year	1	2	3	4	5	6	7	8	9	10
Cash flow (Rs. in lacs)	18.00	19.00	23.00	29.50	35.00	40.00	45.00	53.00	58.00	69.00

Find out the maximum value of Kiddies Wear Ltd. which Shyam Garments Ltd. can quote. Also show the difference in valuation had there been no merger. Use 20% as discount factor.

30. Timby Ltd. is in the business of making sports equipment. The Company operates from Thailand. To globalise its operations, Timby has identified Fine Toys Ltd. an Indian Company, as a potential take over candidate. After due diligence of Fine Toys Ltd. the following information is available:

(a)

Cash Flow Forecasts (₹ in crore):										
Year	10	9	8	7	6	5	4	3	2	1
Fine Toys Ltd.	24	21	15	16	15	12	10	8	6	3
Timby Ltd.	108	70	55	60	52	44	32	30	20	16

- (b) The net worth of Fine Toys Ltd. (₹ in lakhs) after considering certain adjustments suggested by the due diligence team reads as under:

Tangible		750
Inventories		145
Receivables		75
		970
Less:		
Creditors	165	
Bank Loans	250	(415)
Represented by equity shares of ₹ 1,000 each		555

Talks for take over have crystalized on the following:

- Timby Ltd. will not be able to use Machinery worth ₹ 75 lakhs which will be disposed of by them subsequent to take over. The expected realization will be ₹ 50 lakhs.
- The inventories and receivables are agreed for takeover at values of ₹ 100 and ₹ 50 lakhs respectively which is the price they will realize on disposal.
- The liabilities of Fine Toys Ltd. will be discharged in full on take over alongwith an employee settlement of ₹ 90 lakhs for the employees who are not interested in continuing under the new management.
- Timby Ltd. will invest a sum of ₹ 150 lakhs for upgrading the Plant of Fine Toys Ltd. on takeover. A further sum of ₹ 50 lakhs will also be incurred in the second year to revamp the machine shop floor of Fine Toys Ltd.
- The Anticipated Cash Flows (in ₹ crore) post takeover are as follows:

Year	1	2	3	4	5	6	7	8	9	10
	18	24	36	44	60	80	96	100	140	200

You are required to advise the management the maximum price which they can pay per share of Fine Toys Ltd. if a discount factor of 20 per cent is considered appropriate.

31. The summarized Balance Sheet of R Ltd. for the year ended on 31st March, 2010, 2011 and 2012 are as follows:

(` in thousands)			
	31.3.2010	31.3.2011	31.3.2012
Liabilities			
3,20,000 equity shares of ` 10 each, fully paid	3,200	3,200	3,200
General reserve	2,400	2,800	3,200
Profit and Loss account	280	320	480
Creditors	1,200	1,600	2,000
	7,080	7,920	8,880
Assets			
Goodwill	2,000	1,600	1,200
Building and Machinery less, depreciation	2,800	3,200	3,200
Stock	2,000	2,400	2,800
Debtors	40	320	880
Bank balance	240	400	800
	7,080	7,920	8,880

Additional information:

- (a) Actual valuations were as under

Building and machinery less, depreciation	3,600	4,000	4,400
Stock	2,400	2,800	3,200
Net profit (including opening balance after writing off depreciation, goodwill, tax provision and transferred to general reserve)	840	1,240	1,640

- (b) Capital employed in the business at market value at the beginning of 2009-10 was ` 73,20,000 which included the cost of goodwill. The normal annual return on average capital employed in the line of business engaged by R Ltd. is 12½%.
- (c) The balance in the general reserve on 1st April, 2009 was ` 20 lakhs.
- (d) The goodwill shown on 31.3.2010 was purchased on 1.4.2009 for ` 20 lakhs on which date the balance in the Profit and Loss account was ` 2,40,000. Find out the average capital employed in each year.
- (e) Goodwill is to be valued at 5 year's purchase of Super profit (Simple average method).

Find out the total value of the business as on 31.3.2012.

32. From the following information, calculate the value of a share if you want to

- (i) buy a small lot of shares;
- (ii) buy a controlling interest in the company.

Year	Profit	Capital Employed	Dividend
	(`)	(`)	%
2007	55,00,000	3,43,75,000	12
2008	1,60,00,000	8,00,00,000	15
2009	2,20,00,000	10,00,00,000	18
2010	2,50,00,000	10,00,00,000	20

The market expectation is 12%.