FINAL EXAMINATION

GROUP IV

(SYLLABUS 2012)

SUGGESTED ANSWERS TO QUESTIONS

JUNE 2016

Paper-20: FINANCIAL ANALYSIS & BUSINESS VALUATION

Time Allowed: 3 Hours **Full Marks: 100**

The figures in the margin on the right side indicate full marks.

Please: (1) Answer all bits of a question at one place.

(2) Open a new page for answer to a new question.

SECTION A

In this section Answer Question No. 1(a) and (b) which is compulsory

1.

(a) Answer the following: **2×6=12**

(i) From the following information, compute the Trend Ration (%) of Net Sales and comment about the trend in Net Sales.

particulars	2010-11	2011-12	2012-13	2013-14	2014-15
Net Sales (₹ in lakhs)	5,959	6,500	6,809	6,649	7,262

(ii) Comment on the Fixed Assets Turnover Ratios of both the companies on the basis of the following information:

(₹ in lakhs)

	Company-A		Company-B	
particulars	2013-14	2014-15	2013-14	2014-15
Sales	250.00	300.00	450.00	750.00
Less Excise	31.25	37.50	56.25	93.75
Net sales	218.75	262.50	393.75	656.25
Gross Fixed Assets	2,500.00	2,800.00	3,500.00	4,000.00
Less Depreciation	1,500.00	2,000.00	1,250.00	1,500.00
Net Fixed Assets	1,000.00	800.00	2,250.00	2,500.00

(iii) The following information has information has been extracted from the Annual Report, 2015 of XYZ Ltd:

(₹ Lakhs)

Particulars	2013-14	2014-15
Net Sales	5,108	5,054
Operating expenses	3,427	4,071
Operating Profit	1,681	983
Total Assets	14,948	15,520
Return on Assets (ROA)	11.25%	6.33%

You are required to find out the drivers that are responsible for a sharp decline in ROA of the company in 2014-15.

(iv) If value of B Ltd. is ₹50lakhs. T. Ltd. is ₹20 lakhs, and on merger their combined value is ₹94 lakhs and B Ltd. receives premium on merger ₹13 lakhs, then what is the synergy gain?

(v) SMITH LTD. has PAT of ₹400 lakh with extra ordinary income of ₹60 lakh. The cost of capital and the applicable tax rate of the company are 20% and 30% respectively. What is the value of SMITH LTD.?

(vi) Market price per share is ₹160; Dividend per share is ₹40 and Earnings per share is ₹55, price earnings ratio will be__________.

(b) State whether the following statements are true of false: 1×8=8

(i) Valuation, Sensitivity analysis and presentation are not a part of Financial Modeling Process.

(ii) Financial analysis which is made by prospective investors is known as internal analysis.

(iii) If Z-Score is greater than 2.99 it is predicted that the firm belongs to bankrupt class.

(iv) Whenever the yield on a bond is more than coupon rate, the bond will be trading at a discount.

(v) A brand is nothing but a glorified product name; hence it has no value.

(vi) Valuing a firm using discounted cash flow method is conceptually different from valuing a capital project using present value method.

(vii) Higher the Dividend Payout Ratio of a company, higher is its Price/Earning (P/E) Ratio.

(viii) If a company has built up intangibles over a period of time. then it can show them in its Balance Sheet and thus, the book value of the company's share will increase.

Answer:

(a) (i)

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
Net Sales(₹ in lakhs	5,959	6,500	6,809	6,649	7,262
Net Sales(Trend Ratio)	100.00	109.08	114.26	111.58	121.87

There is a mix trend in Net Sales-Net Sales has increased during 2011-12, 2012-13 and a sharp increase in 2014-15; but there was a decline in Net Sales of 2013-14. If the tread of 2014-15 continues, it will be good for the company.

(ii) (₹ in lakhs)

	Company-A		Company-B	
Particulars	2013-14	2014-15	2013-14	2014-15
Sales	250.00	300.00	450.00	750.00
Less Excise	31.25	37.50	56.25	93.75
Net Sales	218.75	262.50	393.75	656.25
Gross Fixed Assets	2,500.00	2,800.00	3,500.00	4,000.00
Less Depreciation	1,500.00	2,000.00	1,250.00	1,500.00
Net Fixed Assets	1,000.00	800.00	2,250.00	2,500.00
Fixed Assets Turnover Ratio	0.22	0.33	0.18	0.26

Fixed Assets Turnover Ratio of Company A is better than those of Company B which means that Company A is able to generate more sales using its assets showing better utilization of the assets by Company A, indicating that it is performing better. Both companies have improved their fixed asset turnover ratios in 2014-15 compared to 2013-14, indicating an improvement in utilization of assets.

(iii)

XYZ Ltd. (₹ in lakhs)

Particulars	2013-14	2014-15
Net Sales	5,108	5,054
Operating expenses	3,427	4,071
Operating Profit	1,681	983
Total Assets	14,948	15,520
Return on Assets (ROA)	11.25%	6.33%
Operating Profit Margin	32.91%	19.45%
Assets Turnover Ratio	0.342	0.326

There is a sharp decline in ROA of the company as its profit margins have sharply declined from 32.91% to 19.45% and the assets utilization has also decreased marginally from 0.342 to 0.326.

(iv)Synergy gain = Combined Value - Value of merging companies

= ₹[94-(50+20)] lakhs = ₹24 lakhs

(v)PAT of extra ordinary income = (1-0.30) × 60 = ₹42 lakh

PAT of the company excluding extra ordinary income = (₹400-42) lakh

= ₹358 lakh

So, value of smith Ltd. = (358÷0.20) = ₹1,790 lakh

(vi)Price Earnings ratio = Market Price ÷ EPS = 160 ÷ 55 = 2.91

(b)

(i) False. It is a part of Financial Modeling.
(ii) False. It is external analysis of financial statements.
(iii) False. It is a safe firm.
(iv) True. It will be quoting below the face value.
(v) False. Brand is a valuable intangible asset.
(vi) False. In both cases the concept of present value is used.
(vii) True. A higher Dividend Payout Ratio of a company meets shareholder expectations and hence, higher is its Price/Earning (P/E) Ratio.
(viii) False. If a company has built up intangibles over a period of time, then they do not get capitalized and hence do not appear in the Balance Sheet and thus, the book value of the company's share will not increase.

SECTION B
In this section, Answer any five questions from the following

2. (a)
Vedika Ltd. finds on 31st December, 2015 that it is short of funds with which to implement its branch expansion programme. On 1st January, 2015, it had a bank balance of ₹1,80,000 in its current account. From the following information, prepare a statement for the Board of Directors to show how the overdraft of ₹68,750 at 31st December, 2015 has arisen: 10

Figures as per Balance Sheet
(as on 31st December)

	2014 (₹)	2015 (₹)
Fixed Assets	7,50,000	11,20,000
Stock and stores	1,90,000	3,00,000
Debtors	3,80,000	3,65,000
Bank Blance/(Overdraft)	1,80,000	(68,750)
Trade Creditors	2,70,000	3,50,000
Share Capital (in shares of ₹10 each)	2,50,000	3,00,000
Bills Receivable	87,500	95,000

The profit for the year ended 31st December, 2015 before charging depreciation and taxation amounted to ₹2,40,000. The 5,000 shares were issued on 1st January, 2015 at a premium of ₹5 per share. ₹1,37,500 was paid in March 2015 by way of income tax including tax on distribution of dividend. Dividend was paid as follows for 2014 (final) on the capital on 31-12-2014 @ 10% less tax 25%. For 2015(interim) 5% on capital on 31st March, 2015 free of tax.

(b) The operating and cost data of ABC Ltd. are:
Sales ₹20,00,000
Variable Costs ₹14,00,000
Fixed Costs ₹4,00,000(including 15% interest on ₹10,00,000)
You are required to

(i) Calculate its operating, financial and combined leverage and
(ii) determine the additional sales to double its EBIT. **3+3=6**

Answer:
(a)

Vedika Ltd
Cash Flow Statement
For the period 1st January 2015 to 31st December 2015

	₹	₹
1. Cash Flows from Operating Activities:		
Operating profit before dep. and tax	2,40,000	
Adjustment for:		
Increase in creditors	80,000	
Decrease in debtors	15,000	
Increase in stock	(1,10,000)	
Increase in B/R	(7,500)	
Income tax paid	(1,37,500)	
Net Cash from Operating Activities (1)		80,000
2. Cash Flow from Investing Activities:		
Purchase of fixed assets	(3,70,000)	
Net Cash used in Investing Activities(2)		(3,70,000)
3. Cash Flows from Financing Activities:		
Issue of shares at premium	75,000	
Payment of final dividend(2014)	(18,750)	
Payment of interim dividend (2015)	(15,000)	
Net Cash from Financing Activities(3)		41,250
Net increase in Cash and Cash Equivalents		(2,48,750)
Cash and Cash Equivalents at the beginning		1,80,000
Cash and Cash Equivalents at the end	(68,750)	

Thus although there is opening bank balance and positive cash flow from operating activities and financing activates the substantial funds used in purchase of fixed assets has resulted in bank overdraft at year end.

(b) (i) EBIT = Sales-VC-Operative fixed cost =(20,00,000 -14,00,000 -2,50,000)= ₹3,50,000.

Net earnings before taxes = EBIT-Interest = 3,50,000 -1,50,000 =₹2,00,000

Operating leverage = (Sales - VC)/EBIT = 6,00,000 ÷ 3,50,000 = 1.71

Financial leverage = EBIT/(EBIT -Interest) = 3,50,000 ÷ 2,00,000 = 1.75

Combined leverage = operating leverage X financial leverage =1.71×1.75 =2.99

(ii) Desired sales revenue to earn double EBIT:

The P/V ratio will be —
Contribution/Sales
= (₹ 20,00,000 - ₹ 14,00,000)/ ₹ 20,00,000
= ₹ 6,00,000/ ₹ 20,00,000 = 0.30
Now, the desired sales revenue will be —
(₹ 2,50,000 + ₹ 3,50,000 + ₹ 3,50,000)/ 0.30

= ₹ 31,66,667
Additional sales required = ₹ (31,66,667-20,00,000)
= ₹ 11,66,667

3.(a) The following financial statements have been extracted from the Annual Report 2015-16 of METCALF TEXTILES Ltd. a largest Textile Company, having a strong presence in over 80 countries in the world.

The company wants to keep its shareholders happy by giving them a fair rate of return. The company is using return on equity (ROE) as one of the metrics of performance evaluation for determining the return for shareholders. Due to intense competition, in recent years, its ROE is under pressure and to maintain the level of ROE, the company is to change its business Model-in that, it is varying its, margin, assets utilization and leverage.

You are required to:

(i) carryout the DuPont Analysis considering the financial parameters given below and show how the return on equity (ROE) of the company (Metcalf Textiles Ltd.) is changing due to change in its Margins, Assets utilization and Leverage over the period of four years.

(ii) Give your comments on the trend of the said paramenters. 8+2=10

Statement of Profit & Loss for year ended March 31, (Amount in ₹ crore)

	2013	2014	2015	2016
Total revenue	**7998**	**8992**	**9976**	**11804**
Profit before tax	**1855**	**1612**	**1990**	**2817**
Profit after tax	**1514**	**1345**	**1574**	**2110**
Dividend	**225**	**315**	**225**	**225**
Tax on dividend	**37**	**51**	**36**	**38**
Retained earning	**1252**	**979**	**1313**	**1847**

Balance Sheet as at 31st March, (Amount in ₹ crore)

		2013	2014	2015	2016
Equity and Liabilities					
1.	**Shareholders' fund** **a. Share capital** **Reserves and Surplus**	 **225** **8055**	 **225** **9034**	 **225** **10347**	 **225** **12194**
2.	**Non-current liabilities:** **Loan Funds**	 **7**	 **617**	 **17**	 **1352**
3.	**Current liabilities** **Deferred Tax**	 **251** **8538**	 **296** **10172**	 **324** **10913**	 **392** **14163**
Assets					

1.	**Non - Current assets:**				
	Fixed Assets	**3774**	**4369**	**4685**	**5276**
2.	**Non - Current investments**				
	Investments	**371**	**799**	**1449**	**3642**
3.	**Current assets**	**4393**	**5004**	**4779**	**5245**
		8538	**10172**	**10913**	**14163**

(b) The following information has been extracted from the records of SITERAZE Ltd. as on 31st March, 2016:

(Amount in ₹ lakh)

Equity share capital (of ₹10 each)	**800**
Sales (net)	**4000**
Market value of Equity Share (₹ 8 each)	**640**
Working Capital	**(400)**
Total Assets	**2800**
Retained Earnings	**200**
EBIT	**472**
Book Value of Total Debt	**1800**

Required:

Calculate, the Z- Score of Siteraze Ltd. using ALTMAN's (1968) MODEL and comment on it.

5+1=6

Answer:

Extended DuPont provides the drivers of ROE in terms of margins, assets utilization and leverage thereby provides important information in understanding business model of a company. Extended DuPont Analysis decomposes ROE into three components as given Below:-

ROE = (PAT/Sales) × (Sales/Assets) × (Assets/Equity)

The above equation shows that ROE is driven by profit Margin (PAT/Sales), Assets Utilization or Assets Turnover (Sales/Assets) and how much of the assets are financed by equity and debt, i.e. a measure of leverage (Assets/Equity)

Using the above decomposition, we obtain various decomposed components of ROE over a period of four years which are given below:

Year ended 31st march	2013	2014	2015	2016
ROE	18.287%	14.532%	14.883%	16.974%
PAT/SALES	18.930%	14.958%	15.778%	17.875%
SALES TO ASSETS	0.937	0.884	0.914	0.833
ASSETS TO EQUITY(NET WORTH)	1.031	1.099	1.032	1.140

The company saw a sharp decline in ROE in year 2013-14 which was primarily due to reduction in Profit Margins (from 18.930% to 14.958%) as well as reduction in the assets utilization, which may hint that the company (or perhaps the industry) might be having a tough time in pushing sales; situation improved in 2014-15 and 2015-16 and the main driver was Profit Margin. The big increase in ROE 2015-16 came primarily from Profit Margin and Leverage; had the company increased its assets utilization ROE would have increased further; seeing this, it is clear that the biggest challenge before Metcalf Ltd. is to increase Asset utilization.

Working notes:

Year ending 31st March	2013	2014	2015	2016
PAT	1514	1345	1574	2110
Sales	7998	8992	9976	11804
Assets	8538	10172	10913	14163
Equity (Net Worth)	8280	9259	10572	12419

(b)

As per Altman's Model (1968) of Corporate Distress Prediction
$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5$
Here, the five variables are as follows:
X_1 = Working Capital to Total Assets = (400) ÷ 2800 = (0.1429)
X_2 = Retained Earnings to Total Assets = 200 ÷ 2800 = 0.0714
X_3 = EBIT to Total Assets = 472 ÷ 2800 = 0.1686
X_4 = Market Value of Equity to book value of Total Debt = 640 ÷ 1800 = 0.3556
X_5 = Sales to Total Assets = 4000 ÷ 2800 = 1.4286

Therefore, Z-Score = (1.2 × (-) 0.1429) + (1.4 × 0.0714) + (3.3 × 0.1686) + (0.6 × 0.3556) + (1 × 1.4286)

= (-) 0.1715 + 0.1000 + 0.5564 + 0.2134 + 1.4286

= 2.1269

Comments: As the calculated value of Z-Score lies between 1.81 and 2.99. It is predicted that the company consists of both bankrupt and non-bankrupt elements (i.e. mixture of failed and non-failed elements) and therefore requires further investigation to determine its conclusive solvency status.

4. The Finance manager has been asked to make a projected statement of profit and loss of Pure Cable Limited for the next F.Y. 2016-17 so that the company can make a budget for F.Y. 2016-17. For this purpose, the following information has been collected by the finance manager:

Statement of profit and loss of Pure Cable Limited for the year ending on March 31,

Particulars (₹ in lakhs)	**2015**	**2016**
Income		
Revenue from operations (gross)	**21,826.40**	**24,235.30**
Less: Excise Duty	**1,184.80**	**1,528.50**
Revenue From Operations (Net)	**20,641.60**	**22,706.80**
Other Income	**319.90**	**241.70**
Total Revenue	**20,961.50**	**22,948.50**

Expenses		
Cost of Materials Consumed	**15,769.50**	**17,129.20**
Purchase of Stock-in-Trade	**24.00**	**60.40**
(Increase)/Decrease in Inventories of Finished Goods, Work in Progress and Stock-in-Trade	**126.90**	**(296.80)**
Employee Benefit Expenses	**260.70**	**133.80**
Depreciation, Amortization and Impairment	**394.70**	**466.30**
Other Expenses	**2,234.60**	**2,671.50**
Total Expenses	**18,810.40**	**20,164.40**
Profit Before Interest and Tax	**2,151.10**	**2,784.10**
Less: Interest	**663.37**	**583.04**
Profit Before Tax	**1,487.73**	**2,201.06**
Less: Tax @ 34%	**505.83**	**748.36**
Profit After Tax	**981.90**	**1,452.70**

Additional Information:

(a) Gross Revenue from Operations will increase by the same rate as it increased from F.Y. 2014-15 to F.Y. 2015-16.

(b) As per the recent Union Budget, the Excise Rate on the company's product has been increased to 6.50% for the F.Y 2016-17 and the corporate income tax rate will remain unchanged at 34% (including cess/surcharge as applicable).

(c) Seeing the past trend, other incomes will be reduced by 5%.

(d) It is strongly felt that the expenses to sales ratio of F.Y. 2015-16 for all expenses (except interest and taxes) will remain unchanged for F.Y. 2016-17.

(e) Interest expense will reduce by 2%.

Assuming that you are the finance manager of the company, you are required to make Projected Statement of Profit and Loss for the F.Y.2016-17 as per the date given above. 16

Answer:

The Finance manager has been asked to make a projected statement of profit & loss of Pure Cable Limited for the next FY 2016-17 so that the company can make a budget for FY 2016-17. For this purpose the projections for year ended 31-03-2017 are worked out on the basis of the information given.

Projected Statement of Profit and Loss of Pure Cable Limited for the Year ending on March31,2017

(₹ in lakhs)

Particulars	2017	Basis of Charge
Income		
Revenue from Operations (Gross)	26,910.88	Increase Revenue by the growth rate of FY 2015-16 -11.04% Excise Duty @ 6.50%
Less: Excise Duty	1,749.21	
Revenue From Operations(Net)	25,161.67	95% of the FY 2015-16
Other Income	229.62	
Total Revenue	25,391.29	
Expenses		
Cost of Materials Consumed	18,981.96	75.44% of Revenue from Operations (Net)

Purchase of Stock-in-Trade	67.94	0.27% of Revenue from Operations (Net)
(Increase)/Decrease in Inventories of Finished Goods, Work in Progress and Stock-in Trade	(329.62)	-1.31% of Revenue from Operations (Net)
Employee Benefit Expense	148.45	0.59% of Revenue from Operations(Net)
Depreciation, Amortization and Impairment	515.81	2.05% of Revenue from Operations (Net)
Other Expenses	2961.53	11.77% of Revenue from Operations (Net)
Total Expenses	22.346.07	
Profit Before Interest and Tax	3,045.22	
Less: Interest	571.38	Reduce by 2%
Profit Before Tax	2,473.84	
Less: Tax @ 34%	841.11	
PROFIT AFTER TAX	1,632.73	

Alternative Answer

Project statement of Profit and Loss of Pure Cable Limited for the year ending on March 31, 2017

(₹ in lakhs)

Particulars	**2017**	**Basis of charge**
Income		
Revenue from operations (Gross)	26,910.88	Increase Revenue by the growth rate of FY 2015-16 – 11.04%
Less: Excise Duty	1,749.21	Excise Duty @ 6.50%
Revenue from Operations (Net)	25,161.67	
Other Income	229.62	95% of the FY 2015-16
Total Revenue	**25,391.29**	
Expenses		
Cost of Materials consumed	19020.61	70.68% of gross revenue from operations
Purchase of Stock-in-trade	67.01	0.249% of gross revenue from operations
(increase)/decrease in inventories of finished goods, work in progress and stock-in-trade	(329.65)	1.225% of gross revenue from operations
Employee benefit expenses	148.55	0.552% of gross revenue from operations
Depreciation, amortization and impairment	517.76	1.924% of gross revenue from operations
Other expenses	2966.39	11.023% of gross revenue from operations
Total expenses	**22390.67**	
Profit before interest and tax	3000.62	
Less: Interest	571.38	Reduce by 2%
Profit before tax	2429.24	
Less: Tax @ 34%	825.94	
PROFIT AFTER TAX	**1603.30**	

5. A Limited and B Limited are in negotiations in which A Limited has expressed the desire to acquire B Limited and it is decided that A Limited will acquire B Limited. For this, purpose, the following information has been extracted from the books of both the companies for F.Y. 2015-16.

(₹ in lakhs)

Particulars	A Limited	B Limited
Statement of Profit and Loss		
Revenue from Operations	1,200	630
Less:		
Cost of materials consumed, net of expenses capitalized	634	280
Other Operation Expenses	62	32
Interest	10	5
Depreciation and Amortization	64	75
Operating Profit	430	238
Net Non-Operating Income	42	27
Profit Before Tax	472	265
Tax	160	90
Profit After Tax	312	175
Balance Sheet:		
Share Capital (Face value of Shares of both the Companies ₹10)	300	200
Reserves and surplus	3,210	1,356
Non-Current Liabilities	440	104
Current Liabilities	1,235	750
Total Liabilities	5,185	2,410
Net Fixed Assets	2,985	1,850
Non-Current Investments & Other Non- Current Assets	575	355
Current Assets	1,625	205
Total Assets	5,185	2,410
Additional Information:		
Promoters holding in the Company	40%	30%
Free Float Market Capitalization (Assuming that promoters shares are not available for trading in the market)	₹3,150.00	₹1,400.00

In a joint meeting of the directors of both companies, the following decisions are taken:

(i) The swap ratio will be decided by considering the following parameters with the weights as given below:
   (a) Book Value 25%
   (b) Market Price 40%
   (c) EPS 25%
   (d) Net Profit Ratio 10%

(ii) All assets and liabilities will be taken over by A Limited at book values.

(iii) The combined profit will increase by 10% due to synergy gains arising because of higher scale of operations.

(iv) It is expected that the market will look this decision of A Limited as 'a value creator' decision and consequently, it is expected that A Limited's P/E Ratio will increase by 10%

from its existing level after the acquisition of B Limited.

Give in the above information; you are required to compute assuming that the acquisition will be completed as per the terms given.

(a) The Swap Ratio
(b) Book Value per share of A Limited after acquisition
(c) Earnings per share of A Limited after acquisition
(d) Market Price of A Limited's share after acquisition **7+3+3+3=16**

Answer:

(₹ in lakhs)

	A Limited	B Limited
Net Worth (Share Capital + Reserves and Surplus)	₹3,510.00	₹1,556.00
No. of Shares (Share Capital/Face Value) (in lakhs)	30	20
Book Value per share	₹117.00	₹77.80
Free float Market Capitalization	₹3,150.00	₹1,400.00
Free float in the Market = No. of shares X (1- Promoters holding)	18	14
Market Price	₹175.00	₹100.00
Net Profit (PAT)	₹312.00	175.00
No. of Shares	30	20
Earnings Per Share(EPS)	₹10.40	₹8.75
PAT	₹312.00	₹175.00
Revenue from Operations	₹1,200.00	₹630.00
Net Profit Ratio	26.00%	27.78%

	A Limited	B Limited	Swap Ratio	Weight	Swap Ratio x Weight
Book Value per share	117.00	77.80	1: 0.665	25%	0.1663
Market Price	175.00	100.00	1: 0.571	40%	0.2284
Earnings Per Share (EPS)	10.40	8.75	1: 0.841	25%	0.2103
Net Profit Ratio	26.00%	27.78%	1: 1.068	10%	0.1068
				100%	0.7118

Say 0.712

(i) It means that the Swap Ratio is -0.712 shares of A Limited for every share of B Limited.

Therefore, total no. of shares to be issues by A Limited (20 × 0.712)	14.24
Net Worth of A Limited after acquisition:	
Share Capital (30+14.24) × 10	₹442.40
Reserves and Surplus (3210+1356)	₹4,566.00
Net Worth of A Limited after acquisition	₹5,008.40
Book Value per share	₹113.21
(ii) Net Profit of A Limited after acquisition Considering 10% synergy gain = (312 + 175) × 1.1=	₹535.70
(iii) EPS	₹12.11
P/E ratio of A Limited before acquisition (175 ÷10.40)=	16.83
New P/E Ratio of A Limited after acquisition (10% synergy impact)	18.51
(iv) Therefore, Market Price (18.51 × 12.11)	224.16

* Note: Capital Reserve of ₹57.60 lakhs arising on takeover of all assets and liabilities by A Ltd. at book value is not considered as it is not a part of distributable surplus. If the same is included Net worth is ₹5,066 lakhs & book value is ₹114.51.

6.

(a) The following are the summarized balance sheets of two companies, Radha Ltd. and Soami Ltd. as on 31.03.2016:

Liabilities	Radha Ltd.	Sami Ltd.	Assets	Radha Ltd.	Soami Ltd
Equity Share 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	**3,00,000**	**5,00,000**			
	27,00,000	**21,00,000**		**27,00,000**	**21,00,000**

Additional information:

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

Particulars	Radha Ltd.	Soami Ltd
Revaluation of Tangible Block	**21,00,000**	**12,00,000**
Revaluation of Current Assets	**10,00,000**	**4,00,000**

(ii) Average annual profits for three years before charging debenture interest: Radha Ltd. ₹4,50,000; Soami Ltd. ₹3,10,000

(iii) Goodwill is to be valued at three year's purchase of average super profits for 3 years. Such average is to be calculated after adjustment of depreciation at 10% on the amount of

increase/decrease on revaluation of fixed assets. In case of Soami Ltd. claims of ₹10,000 which was omitted, is to be adjusted against its average profit. Income tax is to be ignored.

(iv) Normal profit capital employed is to be taken at 12%, capital employed being considered on the basis of net revalued amount of Tangible assets.

Ascertain the value of Goodwill of Radha Ltd. and Soami Ltd. **10**

(b) Dayal Ltd. furnishes the following information relating to the previous three years, and request you to compute the value of the brand of the company:

(₹ in lakhs)

Particulars	2013	2014	2015
Profit before interest and tax	75.00	85.25	150.00
Loss in Sale of Assets	3.00	--	18.00
Non-operating income	12.00	7.25	8.00

Inflation was 9% for 2014 and 15% for 2015. If the capitalization factor considering internal and external value drivers to the brand is 14. Determine the brand value.
Assume an all inclusive future tax rate of 35%. **6**

Answer:

(a) (1) Computation of Capital Employed

Particulars	Radha Ltd.	Soami Ltd.
Revaluation of Tangible Block	21,00,000	12,00,000
Revaluation of Current Assets	10,00,000	4,00,000
Creditors	(3,00,000)	(5,00,000)
10% Debentures	(6,00,000)	(4,00,000)
Claim/Expenses not recorded	-	(10,000)
Equity Capital Employed	22,00,000	6,90,000
Normal Profits (12% × Capital Employed)	2,64,000	82,800

Note: Equity Capital Employed and Equity Earnings are considered for purpose of determining Goodwill, since Goodwill is monetary value of residual business advantage, which includes, among many things, advantages of gearing as well.

(2) Computation of Future Maintainable Profits

Particulars	Radha Ltd.	Soami Ltd
Average Profits as Given	4,50,000	3,10,000
Less: Interest on Debentures [6,00,000 × 10% ÷4,00,000 × 10%]	(60,000)	(40,000)
Less: Claim/Expenses not recorded	-	(10,000)
Less: Depreciation on Increase in Value of Fixed Assets [(21L-	(40,000)	-

17L)× 10%]		
Add: Depreciation on Decrease in value of Fixed Assets [14L-12L) × 10%]	-	20,000
Equity Earnings = Future Maintainable Profits	3,50,000	2,80,000

(3) Computation of Goodwill

Particulars	Radha Ltd	Soami Ltd
Future maintainable Profits	3,50,000	2,80,000
Less: Normal Profits	(2,64,000)	(82,800)
Super Profits	86,000	1,97,200
Goodwill (Super Profits × 3 years)	2,58,000	5,91,600

(b) Valuation of Brand of Dayal Ltd as at 31-3-2015. (₹ in lakhs)

Particulars	2013	2014	2015
Profit Before Interest and Tax	75.00	85.25	150.00
Add: Loss on Sale Assets	3.00	-	18.00
Less: Non Operating Income	(12.00)	(7.25)	(8.00)
Branded Earnings	66.00	78.00	160.00

Inflation Adjustment Factor	1.09×1.15=1.25	1.15	1.00
Inflation Adjusted Earning as at 31.03.2015	82.50	89.70	160.00
Weight	1	2	3
Product	82.50	179.40	480.00
Weighted Average Earnings Before Tax[(82.50+179.40+480)÷(1+2+3)]			123.65
Less: Taxes at 35%			(43.28)
Weighted Average Brand Earnings After Tax			80.37
Capitalization Factor			14
Brand Value			₹1125.18 Lakhs

* Most recent year is given higher weight.

7.

(a) For Goal Ltd. the FCFE projected for next 3 years are stated below along with the immediately past year FCFE. You are required to value equity share by DCF approach. From Year 4 FCFE is expected to grow at 3% p.a. Cost of equity is measured at 15% p.a. Number of shares outstanding is 1,00,000. **8**

	Past Year	Projected		
		Year 1	Year 2	Year 3
FCFE(₹Lakhs)	160	180	200	220

Discounting Factor @ 15% p.a. Year 1= 0.869565, Year 2= 0.756144, Year 3= 0.657516.

(b) Calculate Economic value added (EVA) with the help of the following information of Moon Ltd.: **4**

Financial leverage: 1.4 times;
Equity capital ₹170 lakhs;
Reserve and surplus ₹130 lakhs;
10% debentures ₹400 lakhs;
Cost of equity: 15%
Income tax: 30%

(c) Sun Ltd. Has announced issue of warrants on 1:1 basis for its equity shareholders. The warrants are convertible at an exercise price of 12. Warrants are detachable and trading at ₹7. What is the minimum price of the warrant and the warrant premium if the current price of the stock is ₹16? **4**

Answer:

(a) Value of Equity Share of Goal Ltd. by DCF Approach

	Year 0	Year 1	Year 2	Year 3
FCFE (₹ lakh)	#	180	200	220
Discounting Factor		0.869565	0.756144	
PV of Yr 1 FCFE	156.52			
PV of Yr 2 FCFE	151.23			
Terminal Value at the end of Yr. 2*			1833.333	
PV of Terminal Value **	1386.264			
Value of Equity [156.52+151.23+1386.264] (₹ lakh)	1694.01			
Value per share [Value of Equity/Number of Shares] ₹	1694.01			

past year FCFE is irrelevant for valuation.

* Use the formula based on Gordon. Terminal Value of the firm at the end of year 2 = FCFF/(Ke-G)
for the infinite series of FCFFS from year 3 to infinity = 220/(0.15-0.03) = 1833.333.

** PV of Terminal Value at year 0 = $1833.33/(1+0.15)^2$ = 1386.264

Note: the long term growth rate is applicable on the subsequent FCFE and not on the first

FCFE of the series. Hence the series starts with Year 3 FCFE and the PV for the infinite series by application of Gordon formula is obtained at the end of Year 2(always 1 year before the starting cash flow.)

Alternative solution:

	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4
FCFE (₹ lakh)		180	200	220	226.6
Discounting Factor		0.869565	0.756144	0.657516	
PV of Yr 1 FCFE	156.52				
PV of Yr 2 FCFE	151.23				
PV of Yr 3 FCFE	144.6535				
Terminal Value at the end of Yr 3				1888.333	
PV of Terminal Value	1241.61				
Value of Equity $\sum$DCF (₹ lakh)	1694.01				
Value per share ₹	1694.01				

Note: Terminal Value at end of Year 3 = 226.6 ÷ (0.15-0.03) =1888.333

PV of Terminal Value at year 0 = 1888.333 ÷ $(1+0.15)^3$ = 1241.61

(b) Calculation of EVA of Moon Ltd.

DFL=1.4
I =10% of 400 = 40;
DFL = EBIT/(EBIT -I)
= EBIT/(EBIT -40) = 1.4;
EBIT = 140
NOPAT = EBIT (1-t) = 140×0.7 = 98
Equity = 300
Cost of debt after tax = 0.07
Capital Charge = Equity× Cost of Equity + Debt× Cost of Debt = 300×0.15 + 400×0.07= 73
EVA = NOPAT - Capital Charge = 98-73 = ₹25 lakhs

Note: Tax = 30% of EBT = 30
EAT = EBT- Tax
= 100-30 = 70

(c) Sun Ltd.
Minimum Price of warrant = current stock price - exercise price of warrant = ₹ (16-12) = ₹4
Warrant Premium = Trading Price of warrant - minimum price = ₹ (7-4) = ₹3

8. Write a short note on any four of the following: 4×4=16

(a) Quality of Earnings
(b) Methodology of Brand Valuation
(c) Human Resource Accounting
(d) Off-Balance Sheet Financing
(e) Hostile Takeover Bids

Answer:

(a) Quality of Earnings:

Quality of Earnings means the amount of earnings attributable to higher sales or lower costs rather than artificial profits created by accounting anomalies such as inflation of inventory. Quality of earnings is considered poor during times of high inflation. Also, earnings that are calculated conservatively are considered to have higher quality than those calculated by aggressive accounting policies.

It is to mean the degree to which management's choices of accounting estimates can affect reported income (these choices occur ever; period.) For example: those who use the term in this manner judge an insurance company's earnings to be of low quality. The company's management must re-estimate its future payments to the insured, by period- and the estimates are made about long term imponderables, such as how long a person will live or future earnings on investments.

In the long run, net income should be about equal to cash flows because a company is normally in business in order to earn cash. The timing may be slightly different. That is, a company may get cash and subsequently do something to earn it or the company may earn revenues by delivering services or products and then later receive the cash. The closer the amount of net earnings is to the amount of cash flow in the short run, the higher the perception of the quality of earnings.

Another-issue is the sustainability of earnings. Earnings are higher quality if they will be ongoing rather than just a blip on the screen. For example, a company may convince customers at year end to go on and stock up on their product. There may also be included the implied promise or assumption that the company will buy back the product some time after year end if necessary. In such a case the quality of earnings is poor.

(b) Methodology of Brand Valuation:

Brand valuation methodology is comprised of four elements:

(i) Financial Analysis

To identity business earnings and earnings from intangibles for each of the distinct segments being assessed.

(ii) X-market Analysis

To measure the role that a brand plays in driving demand for services in the markets in which it operates and hence to determine what proportion of earnings from intangibles are attributable to the Brand.

This is measured by an indicator referred to as Role Branding Index.

(iii) Brand Analysis:

To assess the competitive strengths and weakness of the Brand and hence the security of future earnings expected from the brand. This is measured by an indicator referred to as Brand Strength Score.

(iv) Legal Analysis:

To establish that the brand is a true piece of property.

There are various method s including Models like inter Brand Model that deal with a number of factors including penetration, effectiveness, recall, international presence etc.

In ultimate analysis, the value of a Brand depends on what difference it makes to capturing minds of customers and enabling differentiation of the products and making an impact on markets in terms of visibility, mind bending and effect on sales and profit/earnings.

The valuation of brand can be made using the Cost, income or Market Approach. The cost approach captures the expenditure incurred on the brand or its replacement cost. The market approach values the brand based on value of comparable brands in the market. The income approach values the brand by estimating present value of future brand earnings.

Alternative answer

(i) Market segmentation: Brands influence customer choice, but the influence varies depending on the market in which brand operates. For valuation we need to split brand's market into non-overlapping and homogeneous groups of consumers according to applicable criteria such as product or service, distribution channels, consumption patterns, purchase sophistication, geography existing and new customers and so on. The brand is valued in each segment and the sum of the segments constitutes the total value of the brand.

(ii) Financial analysis: Identify and forecast revenue and earnings from intangibles generated by the brand for each of the distinct segments determined in step-1. Intangibles earnings are defined as brand revenue less operating costs, applicable taxes and a charge for the capital employed. The concept is similar to the economic profit.

(iii) Demand analysis: Assess the role that the brand plays in driving demand for products and services in the markets in which it operates and determine what proportion of intangible earning is attributable to the brand measured by an indicator referred to as the "role of branding index". The role of branding index represents the percentage of intangible earnings that are generated by the brand. Brand earnings are calculated by multiplying the role of branding index by intangible earnings.

(iv) Competitive benchmarking: Determine the competitive strengths and weaknesses of the brand to derive the specific brand discount rate that reflects the risk profile of its expected future earnings. This comprises extensive competitive benchmarking and a structured evaluation of the brand's market, stability, leadership position, growth trend, support geographic footprint and legal protect ability.

(v) Brand value calculation: Brand value is the net present value (NPV) of the forecast brand earnings, discounted by the brand discount rate. The NPV calculation comprises both the forecast period and the period beyond, reflecting the ability of brands to continue generating future earnings.

(c) Human Resource Accounting:

Human Resource Accounting (HRA) is defined as "the process of identifying and measuring data about human resources and communicating this information to interested parties". It involves measurement of all costs/ investments associated with recruitment, placement, training & development of employees, but also the quantification of the economic-value of the people in an organization. It is also defined as the "measurement and reporting of the cost and value of people in an organization". The two main approaches employed for measurement of HRA are:

1. The cost approach
2. The economic value approach.

The first one involves methods based on costs incurred by the company and the second one is based on economic value of human resources and their contribution to company.

(d) Off- Balance Sheet Financing:

It is a form of financing in which large capital expenditure are kept off of a company's balance sheet through various classification methods. Companies will often use off-balance-sheet financing to keep their debt to equity (D/E) and leverage ratio low, especially if the inclusion of a large expenditure would break negative debt covenants.

Off Balance Sheet item is an asset or debt that does not appear on a company's balance sheet. Items that are considered off balance sheet are generally ones in which the company does not have legal claim or responsibility for. For example, loans issued by a bank are typically kept on the bank's books. If those loans are securitized and sold off as investments, however, the securitized debt is not kept on the bank's books. One of the most common off-balance sheet items is an operating lease. Off balance sheet (OBS) usually means an asset or debt or financial activity not on the Company's balance sheet. It could involve a lease or a separate subsidiary or a contingent liability such as a letter of credit. It also involves loan commitments, futures. forwards and other derivatives, when-issued securities and loans sold

Contrast to loans, debt and equity, which do appear on the balance sheet. Examples of Off- balance sheet financing includes joint ventures, research and development partnerships, and operating leases (rather than purchase of capital equipment.)

Operating lease are one of the most common forms of off-balance-sheet financing. In these cases, the asset itself is kept on the lessor's balance sheet and the lessee reports only the required rental expenses for use of the asset. Generally Accepted Accounting Principles in the U.S. have set numerous rules for companies to follow in determining whether a lease should be capitalized (including on the balance sheet) or expensed. This term came into popular use during the Enron bankruptcy. Many of the energy traders' problems stemmed from setting up inappropriate off balance-sheet entities.

(e) Hostile Takeover Bid:

The acquiring firm, without the knowledge and consent of the management of the target firm, may unilaterally pursue the efforts to gain a controlling interest in the target firm, by purchasing shares of the latter firm at the stock exchanges. This is a technique for affecting either a takeover or an amalgamation. It may be defined as an offer to acquire shares of a company, whose shares are not closely held, addressed to the general body of shareholders with a view to obtaining at least sufficient shares to give the offer or. voting control of the company. Takeover Bid is thus adopted by company for taking over the control and management affairs of listed company by acquiring its controlling interest.

While a takeover bid is used for affecting a takeover, it is frequently against the wishes of the management of Offeree Company when it becomes a hostile takeover bid. It may take the form of an offer to purchase shares for cash or for share for share exchange or a combination of these two. Such case of merger/acquisition is popularity known as 'raid'. The Caparo group of the U.K. made a hostile takeover bid to takeover DCM Ltd. and Escorts Ltd. Similarly, some other NRIs have also made hostile bid to takeover some other Indian companies. The new takeover code, as announced by SEBI deals with the hostile bids.