Paper – 20: Financial Analysis & Business Valuation

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

Group-A

(Answer Question 1 and 2 which are compulsory and any two from the rest)

Question 1.

Visakhapatnam Steel Plant (VSP) is one of the most modern steel plants in the country. In the year 1979, to meet the growing domestic needs of steel, Government of India signed an agreement with erstwhile USSR for cooperation in setting up 3.6 million tons integrated steel plant at Visakhapatnam. The project was estimated to cost ` 3,897.28 crores based on prices of-fourth quarter of 1981 but on completion of construction and commissioning of whole plant in 1992, the cost was escalated to around ` 8,500 crores. The plant has a capacity of producing 3 million tons of liquid steel and 2.656 million tons of saleable steel. The main products of VSP are angles, billets, channels, beams, squares, flats, rounds rebars, wire rods. The major units in VSP are Coke Ovens, Sinter Plant, Blast Furnace, Steel Melt Shop (SMS), Light and Medium Merchant Mill (LMMM), Wire Rod Mill(WRM), Medium & Structural Mill(MMSM).

The vision of VSP is to become a 10 million tons world class integrated steel plant by 2019-20. Its mission is to be a continuously growing company through technological up gradation, operational efficiency and expansion, producing steel at international standards of cost and quality ensuring optimal return on investment to stakeholders and meeting expectations of the customers. The core values of VSP are commitment, customer satisfaction, continuous improvement, concern for environment.

Constraints faced by VSP

Today, VSP is moving forward with an aura of confidence with pride to enable the company to reach new heights in organizational excellence. But in the earlier days, the plant, inspite of securing a reduction in the interest burden to a large extent through capital restructuring in 1993, could not attain envisaged capacity levels and financial viability. While price of steel was stagnant, high capital cost and large borrowings resulted in huge cost overruns and high capital-related charges. The input costs were high and raw materials prices had gone up. The recession in the steel industry was another cause for depression. It has been exposed to global competition by liberal imports. Apart from all this, in the fear 1998-99, Coke Oven Batteries came to a halt for the production of pig iron and finished steel as well as forcing a lengthy repair schedule. Also, sluggish economy both in domestic and international market led to reduction in sales turnover. Economic crisis in South-East Asian markets led to a large scale dumping of steel from their countries which adversely affected the export performance. The production factor of finished steel had declined in 1998-99 as compared to previous years.

Due to all these constraints faced by VSP, it was written off as the 'sick child of the industry'. The plant's accumulated losses crossed 50% of its capital base. VSP had to report the fact to BIFR (Board for Industrial and Financial Reconstruction) as the accumulated losses were necessitating reportability for potential sickness. In the process, the situation engendered the loose talk of privatization of the plant. VSP was directed to formulate turnaround strategy for long-term financial viability of the plant. VSP had submitted a capital restructuring proposal during July 1993 to Government, which had not been approved. Again, a second capital restructuring

proposal was undertaken in 1998, converting government loans into redeemable preference share capital.

Turnaround Strategies Implemented at VSP

It was time that VSP realized the changed economic and industrial scenario and also that nothing could be expected of cash-strapped Union Government. It needed to pick up the gauntlet to face the rough weather by identifying areas needing improvement and concentrating on-them to lead to progressive results. During 1998-99, the company facilitated the issue of 1% non-cumulative preference shares to Government of India that resulted in the increase of authorized share capital of the company from ` 6,500 crores to ` 8,000 crores. The interest rates on long-term were reduced. Introducing the corporate cash management scheme through Canara Bank, the company got daily sales collection of major branches on the same day at Head quarters. The company prepaid entire outstanding loan to UTI and part prepayments of term loans from banks through the wealth made out of internal generation through various measures.

The major step taken by VSP is utilizing the element of aggressive treasury management. The company had taken the step of rescheduling of high cost loans with low cost loans by pre-paying loans with higher interest and obtaining softer interest loans from banks. VSP has substituted high cost working capital demand loans with softer interest product like commercial paper. Also VSP secured cheaper lines of credit for import of raw materials.

During 2001-02, savings were achieved by change in mode of shipment of limestone, reduction in price of major purchases achieved by way of negotiation and cash flow was reduced on account of special additional duty. VSP has strived to achieve the best from its internal resources and attain funds through internal generation. The plant has taken innovative steps to operate consistently beyond rated capacities in all the production units. Efficient operation management coupled with optimum waste utilization and improved techno-economic parameters along with cost reduction measures have been the major contributing factors that led to VSP's turnaround.

With regard to techno-economic front, during the period from 1998-99 to 2002-03, the plant has made a significant improvement in the specific energy consumption, specific refractory consumption, average converter life, rolling rate, total coke rate and fuel consumption. Thrust was given for recycling of metallurgical waste and smaller fractions of coke in solid waste and the materials generated in the plant were collected, segregated, used or sold. Initiatives taken to recycle the solid waste and utilizing them led to a saving of raw material consumption.

Another major strategy of VSP that resulted in the turnaround of the company is the cost reduction measures taken in the plant production. Technological improvement schemes, usage of recycled solid wastes, usage of certain inputs in partial replacement with costlier ones, power generation through waste heat, internal recovery of copper for making value-added steel were major cost reduction measures taken. Initiatives were taken to consume freshly generated and accumulated metallurgical wastes. The company had laid emphasis on total involvement by workers participation in management through suggestion schemes, which played a major role in rapid growth of techno-economic parameter and labour productivity.

After reading the above passage, answer the following questions—

(a) **What is referred to as Industrial Sickness? Why VSP was called 'sick child of the industry'?**

(b) **How Government of India was involved in the turnaround policy adopted by VSP?**

(c) **Generally there are various ways for identification of sick/distress units. State those ways of identification.**

(d) **Technology had been applied for improvement of production in different ways. What are those areas and how did it become cost effective in VSP?**

[4+3+5+3]

Answer:

(a) The words 'bankruptcy', 'failure', 'sickness' etc. are often used interchangeably. The etymological meaning of sickness is decease or the act of being ill. Like a human being, a firm is also susceptible to sickness due to various reasons such as negligence, ignorance and inefficiency of its management and/or due to its poor resistance to withstand an uncertain, competitive and changing environment (external).

Distress means acute financial hardship/ crisis. Corporate Distress/Sickness means such a situation of a firm when it is unable to meet its debt. In other words, when value of the Total Assets of a company is insufficient to discharge its Total External Liabilities, the said company can be said a 'Distress Company'.

In short, Corporate Distress is a situation when the financial status of a company moves towards bankruptcy/ insolvency.

Visakhapatnam Steel Plant (VSP) is a vital steel project in our country. With the help of USSR, the Government of India had set up an integrated steel plant at Visakhapatnam. The main and major product of VSP are angles, billets, channels, beams, squares, flats, rounds rebars, wire rods. The main production units of VSP are Coke Ovens, Sinter Plant, Blast Furnace, Steel Melt Shop, Light and Medium Merchant Mill, Wire Rod Mill, Medium & Strauctural Mill.

In the earlier days of its operation, VSP could not attend the proper capacity level for its production may be due to wrong capacity management. Though its interest burden was reduced to a large extent by the scheme of capital restructuring in 1993, it could not meet the financial viability of the project. A large amount of borrowings were in its huge capital outlay resulting a high capital cost and capital related charges. But that was the time of recession in the steel industry and the price of steel was stagnant. There was also an exposure of global competition by way of liberal imports. The production of Coke Oven Batteries was hampered due to the production halt for the pig iron. Moreover the trade disturbance in domestic and international market led to the reduction in sales turnover. The export performance was poorly affected by the economic crisis in South-East Asian market. The accumulated loss of the plant exceeded 50% of the capital base of VSP.

Due to all these reasons and constraints faced by VSP, it was called as the 'sick child of the industry'.

(b) To overcome the financial sickness of VSP, a turnaround strategy was being directed by BIFR (Board for Industrial and Financial Reconstruction) for the long-term financial viability of the plant. As a part of the turnaround strategy, VSP had submitted a capital restructuring proposal during July, 1993 to the Government of India which had not approved it. After five years, a second capital restructuring proposal was undertaken in 1998 to convert the government loans into the redeemable preference share capital. During 1998-99, VSP had issued 7% non-cumulative preference shares to the Government of India. As a result, the authorised capital of VSP had increased from `6,500 crores to `8,000 crores. The interest rate burden was also reduced on long term borrowings.

(c) As per the **Sick Industrial Companies (Special Provisions) Act, 1985**, a business unit may be treated as sick if the following conditions are satisfied:

i. The unit must be registered for not less than 7 years period.
ii. Its accumulated losses at the end of the financial year are equal to or exceed its net worth.
iii. Its accumulated losses at the end of the financial year have resulted in an erosion of 50% or more of its peak net worth immediately preceding 4 financial years.

As per Section 2 (46AA) of the **Indian Companies Act, 1956**, a company is considered as sick if:

i. Its accumulated losses in any financial year is equal to or more than its average net worth during 4 years immediately preceding such financial year.
ii. It failed to repay its debt within any three consecutive quarters on demand made in writing for its repayment by a creditor or creditors of such company.

According to the **Reserve Bank of India**, an industrial unit should be considered as sick if it has incurred cash loss in the previous accounting year and is likely to continue to incur cash loss in the current accounting year as well as the following year and has an erosion of its net worth on account of cumulative cash losses to the extent of 50%.

According to the **ICICI**, a sick is one whose financial viability is threatened by adverse factors present and continuing. The adverse factors might relate to management, market fiscal burden, labour relations or any other. When the impact of factors reaches a point where a company begins to incur cash losses leading to erosion of its funds, there is treat to its financial stability.

According to **NCAER**, an industrial undertaking may be financially viable, if its three elements are proved to be positive. The NCAER Study on Corporate Distress Prediction prescribed the following three elements/ parameters for predicting the stages of corporate sickness:

i. Cash profit position (a profitability measure).
ii. Net working capital position (a liquidity measure).
iii. Net worth position (a solvency measure).

According to the **Study Team of the State Bank of India on Small Scale Industries** (1975), "a sick unit is one which fails to generate internal surplus on a continuous basis and depends for its survival on frequent infusion of external funds."

(d) During the period from 1998-99 to 2002-03, the advancement of technology had made a significant improvement in the specific energy consumption, specific refractory consumption, average converter life, rolling rate, total coke rate and fuel consumption. Moreover, the technological upgradation had played a vital role in usage of recycled solid wastes, usage of certain inputs in partial replacement with costlier ones, power generation through waste heat, internal recovery of copper for making for value added steel. These were the areas where VSP had made a successful cost reduction scheme as a part of its turnaround policy. The involvement of workers for participation in management to give suggestions in techno-economic matters had resulted in a positive labour productivity.

Question 2.

Ganga Manufacturing Company is an important producer of lawn furniture and decorative objects for the patio and garden. The last year's Income Statement and Balance Sheet are as follows:

Income Statement (Extract)

Particulars	`
Sales	75,00,000
Variable Costs	46,90,000
Contribution	28,10,000
Fixed Costs	14,00,000
Earnings before Interest and Tax (EBIT)	14,10,000
Interest	2,00,000
Earnings before Tax (EBT)	12,10,000
Taxation	6,05,000
Net Income after Tax	6,05,000

Balance Sheet (Extract)

Liabilities	`	Assets	`
Equity Capital	10,00,000	Fixed Assets	60,00,000
Reserves and Surplus	42,00,000	Inventory	6,00,000
Long-term Debt (10%)	20,00,000	Receivables	7,00,000
Current Liabilities	5,00,000	Cash	4,00,000
	77,00,000		77,00,000

Figures for industry comparison:
Normal Asset Turnover 1.2: 1
Normal Profit Margin 20%.

For the Current Year, the forecasted sales are ` 80,00,000 and it is likely that variable costs will remain at approximately the same percentage of sales as was in the last year (Figures could be rounded off). Fixed costs will rise by 10%.

Ganga has short listed the following two product lines to be sold through its existing distribution channels:

(1) **Production and Sale of metal table and chair unit that will be sold for issue around swimming pools. This will require an investment of `20,00,000, which would involve installation of manufacturing and packaging machinery. Sales forecast are `15,00,000 per annum, variable costs account for 2/3rds of sales value, fixed costs are `2,00,000 and no additional working capital is needed.**

(2) **Hardwood Planter, with three separate components, will be appropriate for medium-sized shrubs. This will require an investment of `30,00,000 with forecasted sales per annum of `25,00,000, variable costs 64% of sales value and fixed costs of `5,00,000.**

Two Financial Plans are available:

(a) **It could borrow on a 10-year note at 9 per cent for either or both of the projects of an amount not to exceed `60,00,000.**

(b) **Cumulative Preference shares with a 10 per cent dividend upto an amount of ` 30,00,000. Financing through the issue of equity shares would not be possible at the present time.**

Required:

(1) **Without the new proposals, what would be the company's operating, Fixed charges and Combined leverages for next year? Would the company have [redacted] leverage? Also calculate profit margin and assets leverage or capi[redacted]**

(2) **How does the acceptance of each project affect the differing leverages including asset leverages?**

(3) **With each financing alternatives, do the company's future earnings per share increase or decrease. Why?**

[6+6+3]

Answer:

(1) Computation of the Company's Operating, Fixed Charges and Combined leverages for next year —

Basic Workings:

Statement of Earning of Company

Particulars	**Last Year** `	**Current Year** `
Sales	75,00,000	80,00,000
Less: Variable Costs	46,90,000	50,00,000
Contribution	28,10,000	30,00,000
Less: Fixed Costs	14,00,000	15,40,000
Earnings before Interest and Tax (EBIT)	14,10,000	14,60,000
Less: Interest	2,00,000	2,00,000
Earnings before tax (EBT)	12,10,000	12,60,000
Less: Tax (50%)	6,05,000	6,30,000
Earnings after Tax (EAT)	6,05,000	6,30,000

Operating Leverage = $\frac{\text{Contribution}}{\text{EBIT}}$

$$= \frac{\text{₹}\,30,00,000}{\text{₹}\,14,60,000} = 2.05479$$

Fixed charge (Financial) Leverage $= \dfrac{\text{EBIT}}{\text{EBT}}$

$$= \frac{\text{₹}\,14,60,000}{\text{₹}\,12,60,000} = 1.15873$$

Combined Leverage $= \dfrac{\text{Contribution}}{\text{EBT}}$

$$= \frac{\text{₹}\,30,00,000}{\text{₹}\,12,60,000} = 2.38$$

Return on capital employed $= \dfrac{\text{EBIT}}{\text{Capital employed}} \times 100$

$$= \frac{\text{₹}\,14,60,000}{\text{₹}\,72,00,000} \times 100 = 20.3\%$$

Profit Margin $= \dfrac{\text{EBIT}}{\text{Sales}}$

$$= \frac{\text{₹}\,14,60,000}{\text{₹}\,80,00,000} \times 100 = 18.25\%$$

Assets Leverage or Capital Turnover $= \dfrac{\text{Sales}}{\text{Capital employed}}$

$$= \frac{\text{₹}\,80,00,000}{\text{₹}\,72,00,000} = 1.11$$

Yes, the Company would have a favourable financial leverage. This is because the company is earning 20.3% on the capital employed and is paying only 10% on long-term debt.

(2) Computation of differing leverages including asset leverage of each project:

Basic Workings

Statements of Earnings on the Projects

Project	(a) **Metal table and**	(b) **Hardwood planter**

	chair Unit (`20,00,000 Investments)	(`30,00,000 Investments)
Sales	15,00,000	25,00,000
Less: Variable Costs	10,00,000	16,00,000
Contribution	5,00,000	9,00,000
Less: Fixed Costs	2,00,000	5,00,000
Earnings before Interest and tax (EBIT)	3,00,000	4,00,000

Operating Leverage $= \frac{\text{Contribution}}{\text{EBIT}}$

(a) For Metal Table & Chair Unit $= \frac{\text{` }5,00,000}{\text{` }3,00,000} = 1.67$

(b) For Hardwood Planter $= \frac{\text{` }9,00,000}{\text{` }4,00,000} = 2.25$

Asset Leverage $= \frac{\text{Sales}}{\text{Capital employed}}$

(a) For Metal Table & Chair Unit $= \frac{\text{` }15,00,000}{\text{` }20,00,000} = 0.75$

(b) For Hardwood Planter $= \frac{\text{` }25,00,000}{\text{` }30,00,000} = 0.83$

Return on Capital employed $= \frac{\text{EBIT}}{\text{Capital employed}} \times 100$

(a) For Metal Table & Chair Unit $= \frac{\text{` }3,00,000}{\text{` }20,00,000} \times 100 = 15\%$

(b) For Hardwood Planter $= \frac{\text{` }4,00,000}{\text{` }30,00,000} \times 100 = 13.33\%$

Profit Margin $= \frac{\text{EBIT}}{\text{Sales}}$

(a) For Metal Table & Chair Unit = $\frac{\text{` }3,00,000}{\text{` }15,00,000}$ = 20%

(b) For Hardwood Planter = $\frac{\text{` }4,00,000}{\text{` }25,00,000}$ = 16%

The above computations show that the acceptance of metal table and chair project will adversely affect the operating leverage, return on capital employed and asset leverage. Similarly, the acceptance of Hardwood Planter will adversely affect the return on capital employed and asset leverage.

(3) The effect of financing alternatives on Company's future earnings per share:

(a) To borrow on a 10 year note at 9% for either or both of the projects of an amount not to exceed ` 60,00,000.

The cost of borrowing for this alternative is 9%. The return on ca[redacted] project i.e., metal table and chair unit is 15% and for second p[redacted] planter is 13.33%. In both the projects, earnings are higher than the cost of borrowings, hence, the balance earnings after paying interest obligation will be available to equity shareholders. Thus, with this financing alternative, the earnings per share will increase.

(b) To issue a cumulative preference shares with a 10% dividend upto an amount of `30,00,000.

The company can raise an amount upto `30,00,000 by issue of cumulative preference shares, whereas it requires `20,00,000 and `30,00,000 respectively for two projects. Hence, it can use this financing alternative for one of the two projects because the dividend of 10% has to come from after tax profit and tax rate is 50%, therefore, pre-tax cost is 20%. The return on capital employed of first project, i.e., production and sale of metal table and chair is 15% and of second project, i.e., Hardwood Planter with separate components is 13.33%. Since the returns on both the projects are lower than the cost of 20%, hence, financing of the project under this alternative will reduce the overall profits available to equity shareholders, i.e., earnings per share will decrease for Ganga Manufacturing Company.

Question 3.

(a) **From the following balance sheet prepare common size statement and comment on it.**

	Amount (`) 31.03.2012	**Amount (`) 31.03.2013**
Equity share capital (of `10 each)	**7,00,000**	**7,50,000**
Reserve & Surplus	**3,00,000**	**5,00,000**
Long term debt	**5,00,000**	**4,50,000**
Current Liabilities	**3,00,000**	**2,00,000**
Total	**18,00,000**	**19,00,000**
Fixed Assets	**12,00,000**	**11,50,000**

Inventory	**3,00,000**	**3,50,000**
Debtors	**2,00,000**	**2,50,000**
Bank	**1,00,000**	**1,50,000**
Total	**18,00,000**	**19,00,000**

(b) **What are the areas in corporate sector can be the indicators of its distress analysis?**

(c) **"A syndicated bank loan is one in which a group (or syndicate) of banks provides funds to the borrower." — Clarify it.**

[5+3+2]

Answer:

(a) Common Size Balance Sheet as on 31.03.2012 & 31.03.2013

		On 31.03.2012 % of total	**On 31.03.2013 % of total**
Equity share capital	$\left[\frac{\text{Share Capital}}{\text{Total Liabilities}}\times 100\right]$	39%	39%
Reserve & Surplus	$\left[\frac{\text{Reserve \& Surplus}}{\text{Total Liabilities}}\times 100\right]$	17%	26%
Long term debt	$\left[\frac{\text{Long Term Debt}}{\text{Total Liabilities}}\times 100\right]$	27%	24%
Current Liabilities	$\left[\frac{\text{Current Liabilities}}{\text{Total Liabilities}}\times 100\right]$	17%	11%
		100%	**100%**
Fixed Assets	$\left[\frac{\text{Fixed Assets}}{\text{Total Assets}}\times 100\right]$	67%	61%
Inventory	$\left[\frac{\text{Inventory}}{\text{Total Assets}}\times 100\right]$	17%	18%
Debtors	$\left[\frac{\text{Debtors}}{\text{Total Assets}}\times 100\right]$	11%	13%
Bank	$\left[\frac{\text{Bank}}{\text{Total Assets}}\times 100\right]$	5%	8%
		100%	**100%**

Observations & Conclusions: The proportion of owner's equity to total liabilities of the company has been stable (39%) for both the years where as the proportion of long term debt to total liabilities has been decreased from 27% to 24% in the year 2012-13. So we can conclude that the dependency on outsiders has been decreased and degree of financial risk associated with the company has been reduced during the study period.

The percentage of current assets to total assets has been increased from 33% to 39% whereas the percentage of current liabilities to total liabilities decreased from 17% to 11% in the year 2012-13. Therefore it indicates that the liquidity position of the company have been significantly improved during the period under study. But reduction of fixed assets may hamper the long term stability and operating efficiency of the company.

(b) A firm goes in sickness gradually. Every firm exhibits some situations of financial distress before it goes bankrupt. These situations towards bankruptcy are the indicators/symptoms of financial distress of a firm. Following are the indicators/ symptoms of financial distress of a firm:

(i) **In the areas of operation:**

a. Low production capacity utilization.
b. High operating cost.
c. High rate of rejection of goods manufactured.
d. Regular default in making payment to suppliers.
e. Delay in payment of wages.
f. High rate labour turnover.
g. Declining or stagnant sales volume.
h. Accumulation of finished stock in godown.
i. Failure of distribution network.
j. Cut down in advertisement expenditure.

(ii) In the areas of finance:

a. Rapidly increasing debts.
b. Regular default in repayment of debt.
c. Failure in payment of statutory liabilities.
d. Continuous irregularity in cash credit/overdraft account.
e. Repayment of one debt taking another debt.
f. Deteriorating liquidity position of the business.

(iii) In the areas of Books of Accounts:

a. Finalization of accounts long after the end of the accounting year.
b. Non-submission of financial information to the bankers.
c. Window dressing in Balance Sheet.
d. Frequent changes in accounting policies.
e. Delay in conducting audit.

(iv) Others:

a. Fall in market value of shares.
b. High rate of turnover of key personnel.
c. Frequent changes in management.

(c) The syndicated bank loan is used by borrowers who seek to raise a large amount of funds in the loan market rather than through the issuance of securities. The need for a group of banks arises because the amount sought by a borrower may be too large for any one bank to be exposed to the credit risk of that borrower.

These bank loans are called senior bank loans because of their priority position over subordinated lenders (bondholders) with respect to repayment of interest and principal. The interest rate on a syndicated bank loan is a rate that periodically resets at the reference rate plus a spread. A syndicated loan is typically structured so that it is amortized according to a predetermined schedule, and repayment of principal begins after a specified number of years.

Question 4.
Following is the summarized Balance Sheet of Paro Trading Corporation Ltd. as at 31st Mar. 2013:

Equity Share Capital – `2,50,000
6% Preference Share Capital - `1,50,000
General reserve – `20,000
Profit and Loss Account – `15,000
5% Debentures – `1,00,000
Sundry Creditors – `12,000
Bills payable – `28,000

Good will – `20,000
Land and Building – `2,50,000
Machinery – `1,75,000
Furniture – `10,000
Stock – `90,000
Sundry debtors – `21,000
Cash at bank – `5,000
Preliminary Expenses – `4,000

Other Information:
Total Sales `4,00,000; 20% of which is made on credit. Gross Profit and net Profit (after tax) for the year amounted to `80,000 and `20,000, respectively.

Comment on the financial conditions of the business.

[10]

Answer:
Before making any comment on the financial conditions, the following ratios are to be computed and, again, the following components are to be computed first in order to compute the different ratios:

Components:

1. **Current Assets:**

Particulars	`
Stock	90,000
Sundry debtors	21,000
Cash at bank	5,000

	1,16,000

2. Current/Liquid Liabilities:

Particulars	`
Sundry Creditors	12,000
Bills payable	28,000
	40,000

3. Liquid assets:

Current Assets – Stock
= `1,16,000 - `90,000
= `26,000

4. Fixed Assets:

Particulars	`
Land and Building	2,50,000
Machinery	1,75,000
Furniture	10,000
	4,35,000

5. Proprietor's Equity/Funds:

Particulars		`
Equity Share Capital		2,50,000
6% Preference Share Capital		1,50,000
General Reserve		20,000
Profit and Loss Account		15,000
		4,35,000
Less: Fictitious Assets:		
Goodwill	20,000	
Preliminary Expenses	4,000	(24,000)
		4,11,000

6. Total debts / Outside Liabilities:

Particulars	`
5% Debentures	1,00,000
Current Liabilities	40,000
	1,40,000

7. Shareholders' Equity:

Proprietor's Equity – 6% Preference Share Capital
= `4,11,000 – `1,50,000
= `2,61,000

8. Total Assets:

Total Fixed Assets + Total Current Assets
= `4,35,000 + `1,16,000
= `5,51,000

Computation of Ratios:

1. Current Ratio:

$$\frac{\text{Current Assets}}{\text{Curent Liabilities}} = \frac{\text{` 1,16,,000}}{\text{` 40,000}} = 2.9:1$$

2. Liquid Ratio:

$$\frac{\text{Liquid Assets}}{\text{Liquid Liabilities}} = \frac{\text{` 26,000}}{\text{` 40,000}} = 0.65:1$$

3. Proprietary Ratio:

$$\frac{\text{Proprietor's Equity}}{\text{Total Assets}} = \frac{\text{` 4,11,000}}{\text{` 5,51,000}} = 0.75:1$$

4. Fixed Assets to Proprietorship Ratio:

$$\frac{\text{Fixed Assets}}{\text{Proprietor's Equity}} = \frac{\text{` 4,35,000}}{\text{` 4,11,000}} = 1.06:1$$

5. Debt – Equity Ratio:

$$\frac{\text{Total Debts}}{\text{Proprietor's Equity}} = \frac{\text{` 1,40,000}}{\text{` 4,11,000}} = 0.34:1$$

6. Capital Gearing Ratio:

$$\frac{\text{Equity Share Capital}}{\text{Preference Share \& Debentures}} = \frac{\text{` 2,50,000}}{\text{` 2,50,000}} = 1:1$$

7. Gross Profit Ratio:

$$\frac{\text{Gross Profit}}{\text{Sales}} \times 100 = \frac{\text{` 80,000}}{\text{` 4,00,000}} \times 100 = 20\%$$

8. Net Profit Ratio:

$$\frac{\text{Net Profit}}{\text{Sales}} \times 100 = \frac{\text{` 20,000}}{\text{` 4,00,000}} \times 100 = 5\%$$

9. Stock – Turnover ratio:

$$\frac{\text{Cost of goods sold}}{\text{Average Stock}} = \frac{\text{` 3,20,000}}{\text{` 90,000}} = 3.6 \text{ times}$$

10. Debtors' Turnover Ratio:

$$\frac{\text{Debtors}}{\text{Credit Sales}} \times 365 = \frac{₹\ 21{,}000}{₹\ 80{,}000} \times 365 = 96 \text{ days}$$

11. Return on Proprietor's Fund:

$$\frac{\text{Net Profit (after Tax)}}{\text{Proprietor's Fund}} = \frac{₹\ 20{,}000}{₹\ 4{,}11{,}000} = 0.05: 1$$

12. Turnover to Fixed Assets ratio:

$$\frac{\text{Turnover}}{\text{Fixed Asets}} = \frac{₹\ 4{,}00{,}000}{₹\ 4{,}35{,}000} = 0.92: 1$$

Interpretation and Comments

Financial performance of a firm can be analysed from the liquidity and solvency position, credit terms, profitability, capital and investment structure, over- and under-trading etc. These are discussed one by one in detail.

Liquidity and Solvency Position

Current Ratio of the firm is found to be 2.90: 1. It means two rupees ninety [redacted] are available against each rupee of Current Liability which, apparen[redacted] satisfactory liquidity position. But that is, however, not true since its Liquid Ratio is found to be 0.65: 1, i.e. major bulk of Current Assets constitute Stock which is slow-moving in character. Therefore, the liquidity position of the firm is not at all satisfactory.

Credit Terms

Only 80% of the Sales are made for Cash and 20% are Credit. Collection system is faulty since the Debtors are enjoying a credit facility for 96 days which is more than the normal credit period. Therefore, the management of debt collection may not prove to be efficient.

Profitability

Ratio of Gross Profit is 20% on Sales which is a healthy sign and Net Profit on Sales is only 5% which means Operating Expenses are higher, i.e. major share of expenses are used to cover Fixed Overheads. If the amount of sales can be increased, no doubt, the Net Profit will improve (provided there is a scope for increased production with the same level of Fixed Overheads).

Capital and Investment Structure

Debt-Equity Ratio of 0.34 : 1 tells that the firm is not so dependent on outside liabilities. It is a good sign. The same result can also be achieved from the Capital Gearing Ratio. But Fixed Assets to Proprietorship Ratio indicates that the entire amount of Fixed Assets were not purchased by the Proprietor's Equity, i.e. the firm has to depend on outside liabilities. It is undesirable.

Return on Proprietor's Fund

Only 5% of the Net Profit is available for the proprietors which is not at all satisfactory. -

Overtrading or Under trading

Turnover to Stock and Turnover to Fixed Assets are 3.6 times and 0.92 : 1, respectively, which indicate unhealthy sign. Fixed Assets are not properly utilised. No doubt, it is a sign of undertrading.

Conclusion

Although the present economic condition of the firm is not sound, it can raise its rate of return on investment by increasing production, since there will not be a substantial increase in Fixed Overhead. The firm can raise loans by issuing shares or debentures and should invest the same into Current Assets.

Question 5.

(a) **Following figures have been extracted from the records of a company:**

Year	2011-12	2012-13
Sales (`)	**12,00,000**	**16,80,000**
Cost of Goods Sold (`)	**8,00,000**	**12,60,000**
Units Sold	**40,000**	**60,000**

Account for changes in profit due to changes in sales quantity, cost price and selling price.

(b) **Rowdy Company's equity shares are being traded in the market at `54 per share with a price- earnings ratio of 9. The Company's dividend payout is 75%. It has 1,00,000 equity shares of `10 each and no preference shares. Book value per share is `47.**
Calculate: (i) Earnings per share, (ii) net income, (iii) Dividend yield, and (iv) return on equity.

(c) **"Financial analysis is the selection, evaluation and interpretation of financial data, along with other pertinent information, to assist in investment and financial decision-making." — specify the sources of financial data and also state the objectives of such analysis towards goal congruence.**

[4+4+2]

Answer:

(a)

Particulars	**2011-12**	**2012-13**	**Changes**
(a) Sales (`)	12,00,000	16,80,000	(+) 4,80,000
(b) Cost of Goods Sold (`)	8,00,000	12,60,000	(+) 4,60,000
Gross Profit (`) [a - b]	4,00,000	4,20,000	(+) 20,000
(c) Units Sold	40,000	60,000	(+) 20,000
(d) Selling Price per Unit (`) [a ÷ c]	30	28	(-)2
(e) Cost Price per Unit (`) [b ÷ c]	20	21	(+)1

Statement showing account for changes in Profit

Particulars	`	`
Changes in profit due to changes in sales:		
1. Increase in profit due to increase in quantity		6,00,000
[Change in quantity x Base year's unit selling price		

= (60,000-40,000) x `30]		
2. Decrease in profit due to decrease in unit selling price [Change in unit selling price x Base year's quantity = (`28 - `30) x 40,000]		(80,000)
3. Decrease in profit due to change in price and quantity [Changes in unit selling price x Change in quantity = (`28 - `30) x (60,000 - 40,000)]		(40,000)
		4,80,000
Changes in profit due to changes in cost:		
1. Decrease in profit due to increase in quantity [Change in quantity x Base year's unit cost price = (60,000 - 40,000) x `20]	(4,00,000)	
2. Decrease in profit due to increase in unit cost price [Change in unit cost price x Base year's quantity = (`21 - `20) x 40,000]	(40,000)	
3. Decrease in profit due to change in price and quantity [Change in unit cost price x Change in quantity = (`21 - `20) x (60,000 - 40,000)]	(20,000)	(4,60,000)
Net Increase in Gross Profit		[redacted]

Note: Here, the base year is 2011-12.

(b) The calculation of ratios of Rowdy Company as follows:

(i) Earnings per Share

Price/ Earnings Ratio (given) = 9

$$\text{P/E ratio} = \frac{\text{Market Price}}{\text{EPS}}$$

$$9 = \frac{`54}{\text{EPS}}$$

9 x EPS = `54

EPS = `54/9 = `6

(ii) Net Income = EPS x No. of shares

= EPS x No. shares

= ` 6 x 1,00,000 Equity shares = `6,00,000

(iii) $$\text{Dividend Yield} = \frac{\text{Dividend per share}}{\text{Market price per share}}$$

$$\text{Dividend per share} = \frac{\text{Net income} \times \text{Dividend payout}}{\text{No. of equity shares}}$$

$$= \frac{₹\,6{,}00{,}000 \times 0.75}{1{,}00{,}000 \text{ Equity shares}} = ₹4.50$$

Dividend yield = $\frac{₹\,4.50}{₹\,54} \times 100$ = 8.33%

(iv) Return on Equity = $\frac{\text{Net Income}}{\text{Equity}}$

$$= \frac{₹\,6{,}00{,}000}{₹\,54 \times 1{,}00{,}000 \text{ Equity shares}} \times 100 = 11.11\% \text{ (based on market price)}$$

$$= \frac{₹\,6{,}00{,}000}{₹\,47 \times 1{,}00{,}000 \text{ Equity shares}} \times 100 = 12.766\% \text{ (based on book value)}$$

(c) There are various sources from where the analysts can collect financial data needed in financial analysis. The analyst draws the financial data needed in [redacted] many sources. The primary source is the data provided by the com[redacted] report and required disclosures. The annual report comprises of balance sheet, income statement, the statement of cash flows as well as footnotes to these statements. These are very important document to analyse the financial statement effectively.

The objective of financial analysis is to assess the performance of a firm in the context of its stated goals and strategy. There are two principal tools of financial analysis: ratio analysis and cash flow analysis. Ratio analysis involves assessing how various line items in a firm's financial statements relate to one another. Cash flow analysis allows the analyst to examine the firm's liquidity, and how the firm is managing its operating, investment, and financing cash flows. Financial forecasting is useful in company valuation, credit evaluation, financial distress prediction, security analysis, mergers and acquisitions analysis, and corporate financial policy analysis.

Section B – Business Valuation

(Full Marks: 50)

Answer Question no. 6 and 7 and any two from the rest in this section.

6. The Directors of Orient Paper & Industries Ltd is planning to sell the Company. For this purpose they want you to put a value on the equity share of the Company using the methods which a prospective purchaser might apply.

The following information should be considered in valuing the shares under each method, commenting briefly on each method adopted –

I. Balance Sheet as on 31st March 2013

Liabilities	`	Assets	`
20,000 Equity Shares of `10 each fully paid	2,00,000	Fixed Assets - Net Block	
Revenue Reserves	5,95,000	Land & Building	5,00,000
Secured Loan (Secured on Land & Building)	1,50,000	Plant & Machinery	2,75,000
Trade & Expense Creditors	1,35,000	Motor Vehicles	55,000
Provision for Taxation	45,000	Stock in Trade	1,33,000
		Sundry Debtors	1,45,000
		Cash at Bank	15,000
		Preliminary Exp[redacted]	[redacted]
	11,25,000		[redacted]

II. Profit/ Dividend record: The Profit record after tax and interest but before dividends over the last five years has been as follows:

Year	2009	2010	2011	2012	2013
Profit	` 80,000	` 75,000	` 95,000	` 80,000	` 85,000

The average dividend has been `30,000 (gross) for the last ten years.

III. The operating budget shows that estimated after tax profit for the next year will be `85,000 and thereafter it is estimated that this will increase by 5% p.a. over the next four years.

IV. In the light of recent developments in the field of financial reporting, the Company has had its Fixed Assets valued by an independent expert whose report discloses the following values – Land & Building - `6,10,000, Plant & Machinery- `2,88,000, Motor Vehicles - `1,02,000.

V. A study of three public companies in the same market as Orient Paper & Industries Ltd shows that the average dividend yield and price earning ratio of these over last three years have been ----

Year	J. K. Paper Ltd		Ballarpur Industries Ltd		Century Pulp & Paper Ltd	
	Dividend Yield %	P/E Ratio	Dividend Yield %	P/E Ratio	Dividend Yield %	P/E Ratio
2011	17.00	8.00	17.00	8.50	16.50	9.00

2012	**17.00**	**8.00**	**15.00**	**9.00**	**17.00**	**10.00**
2013	**17.00**	**9.00**	**18.00**	**10.00**	**17.50**	**11.50**
Average	**17.00**	**8.33**	**16.70**	**9.17**	**17.00**	**10.17**

VI. One of the Directors has indicated that after tax cost of capital is now 17½% . The estimated net cash flow of the Company after taking into consideration taxation and capital expenditure over next five years in order to achieve / and as a result of, the five years profit plan, are as follows:

Year	**2014**	**2015**	**2016**	**2017**	**2018**
CF (`)	**1,00,000**	**1,20,000**	**1,40,000**	**10,000**	**1,50,000**

Another Director is of the view that profitability be measured at 12 ½% on Tangible Capital and 17 ½% on Intangible Capital. [15]

Answer: 6

1. Net Assets Method

Particulars	`	`
Land and Building (at revalued amount)		6,10,000
Plant and Machinery (at revalued amount)		2,88,000
Motor Vehicles (at revalued amount)		1,02,000
Stock in trade (at Balance Sheet Value)		1,33,000
Sundry Debtors (at Balance Sheet Value)		1,45,000
Cash at Bank (at Balance Sheet Value)		15,000
Total Assets		**12,93,000**
Less: Outside Liabilities		
Secured Loans	(1,50,000)	
Sundry creditors	(1,35,000)	
Provision for Taxation	(45,000)	3,30,000
Net Tangible Assets		**9,63,000**
Number or Equity Shares		20,000
Value per Equity Share (` 9,63,000 ÷20,000)		**48.15**

2. Dividend Yield Method

a. Actual Dividend Rate of the Company = Average Dividend ÷ Paid Up Capital

= ` 30,000 ÷ ` 2,00,000 = 15.00%

b. Average Industry Dividend Rate = (17% +16.70% +17%) ÷ 3 16.90%

c. **Value per Equity Share** = (Face Value x Actual Yield)/ Industry Dividend Rate

= (`10 x 15.00%) ÷16.90% **8.88**

3. PE Multiple Method (based on Projected Earnings)

Note: Industry Average PE Ratio = (8.33 + 9.17 +10.17)/3 = **9.22 times**

	Year	Profit after Tax	Weights	Product
	2014	`85,000	5	4,25,000
	2015	85,000 x 1.05 = `89,250	4	3,57,000
	2016	89,250 x 1.05 = `93,713	3	[redacted]
	2017	93,713 x 1.05 = `98,399	2	[redacted]
	2018	98,399 x 1.05 = `1,03,319	1	1,03,319
	Total	**`4,69,681**	**15**	**13,63,256**
a.	Average Profits (Simple/ Weighted)	4,69,681 ÷ 5 = `93,936		13,63,256 ÷15 = `90,884
b.	Number of Equity Share	20,000 shares		20,000 Shares
c.	Projected Earnings per Share	`4.70		`4.54
d.	Value per Share (on PE Multiple) = Co' EPS x Industry PE Ratio	`4.70 × 9.22 times = **`43.33**		`4.54 × 9.22 = **`41.86**

Note:

- Also, PAT for the year ending on the B/s date i.e. 2013 can be taken as a Future Earning Capacity i.e. at ` 85,000. Hence, EPS = `4 .25 and Value per share = `4.25 x 9.22 times = **`39.19.**
- Higher weightage is give to the near future years than far further future years.

4. Projected Earnings Capitalization Method

Particulars	Simple Average	Weighted Average
a. Projected Earnings (PAT) of the Company	`93,936	`90,884
b. Normal Rate of Return of the Industry = 1 ÷PE Ratio	(1÷9.22) = 10.85%	(1÷9.22) = 10.85%
c. Capitalized Value of Projected Earnings (a÷ b)	`8,65,770	`8,37,641
d. Value per share = (c ÷ 20,000 Shares)	**`43.29**	**`41.88**

Note: The valuation under PE Multiple and Earnings Capitalization Method (at 10.85%) is effectively the same. The difference is due to rounding – off aspect in calculations.

5. Discounted Cash Flow Method

Year	PVF at 17.5%	Cash Flows	Present Value
2014	0.85	`1,00,000	`85,000
2015	0.72	`1,20,000	`86,400
2016	0.62	`1,40,0[redacted]	[redacted]
2017	0.52	`10,000	`5,200
2018	0.45	`1,50,000	`67,500
2019 onwards (See Note below)	0.45	`1,50,000 ÷10.85% = `13,82,488	`6,22,120
Present Value of Future Cash Flows till perpetuity			**`9,53,020**
Value per Share [`9,53,020 ÷20,000 shares]			**`47.65**

Note:

- Cash Flows of Year 2018 `1,50,000 are assumed to continue till perpetuity. Hence, it is divided by the Industry Normal Rate of Return, to estimate the cash flows till perpetuity. These are discounted to the present value, to ascertain the total discounted cash flows.
- Cash Flows of year 2017 is not in tune with the other years. This may be because of Capital Expenditure proposed during the year. In the absence of information of Capital Expenditure, no adjustment has been made.

6. Summary of Value per Share

Method	Value per Share	Remarks
1. Net Assets Method	`48.15	Reports the Fair Values of assets available to Equity Shareholders. Provides basis for negotiating prices
2.Dividend – Yield Method	`8.88	Suitable only for purchase of small lots and not for acquisition of controlling

		interest.
3. Earnings – Yield (PE Multiple)		
(a) On Simple Average	`43.33	Recognizes market / industry expectations and the
(b) On Weighted Average	`41.86	Company's future performance. However, weighted average
(c) On B/s Year Profits	`39.19	Based calculations are more appropriate.
4. Earnings Capitalization Method		
(a) On Simple Average	`43.29	Only a variant of the PE Multiple method. Weighted Average
(b) On Weighted Average	`41.88	Based calculations are more appropriate.
5.Discounted Cash Flows	`47.65	Most suited for acquisition of controlling interest.

7. BA Ltd. and DA Ltd. both the companies operate in the same industry. The Financial statements of both the companies for the current financial year are as follows:

Balance Sheet

Particulars	BA Ltd. (`)	DA Ltd. (`)
Current Assets	14,00,000	10,00,000
Fixed Assets (Net)	10,00,000	5,00,000
Total (`)	24,00,000	15,00,000
Equity capital (`10 each)	10,00,000	8,00,000
Retained earning	2,00,000	-
14% long – term debt	5,00,000	3,00,000
Current liabilities	7,00,000	4,00,000
Total (`)	24,00,000	15,00,000

Income Statement

Particulars	BA Ltd. (`)	DA Ltd. (`)
Net Sales	34,50,000	17,00,000
Cost of Goods sold	27,60,000	13,60,000
Gross Profit	6,90,000	3,40,000
Operating expenses	2,00,000	1,00,000
Interest	70,000	42,000
Earning before taxes	4,20,000	1,98,000
Taxes @5%	2,10,000	99,000
Earning after taxes (EAT)	2,10,000	99,000
Additional Information:		
No. of Equity shares	1,00,000	80,000
Dividend payment ratio (D/P)	40%	60%
Market price per share	`40	`15

Assume that both companies are in the process of negotiating a merger through an exchange of equity shares. You have been asked to assist in establishing equitable exchange terms and are required to:

- **I. Decompose the share price of both the companies into EPS and PIE components; and also segregate their EPS figures into Return on Equity (ROE) and book value/intrinsic value per share components.**
- **II. Estimate future EPS growth rates for each company.**
- **III. Based on expected operating synergies BA Ltd. estimates that the intrinsic value of DA's equity share would be f 20 per share on its acquisition. You are required to develop a range of justifiable equity share exchange ratios that can be offered by BA Ltd. to the shareholders of DA Ltd. Based on your analysis in part (i) and (ii), would you expect the negotiated terms to be closer to the upper, or the lower exchange ratio limits and why?**
- **IV. Calculate the post-merger EPS based on an exchange ratio of 0.4:1 being offered by BA Ltd. Indicate the immediate EPS accretion or dilution, if any, that will occur for each group of shareholders.**
- **V. Based on a 0.4:1 exchange ratio and assuming that BA Ltd's pre -merger P/E ratio will continue after the merger, estimate the post- merger market price. Also show the resulting accretion or dilution in pre-merger market prices. [15]**

Answer: 7

Market price per share (MPS) = EPS SP/E ratio or P/E ratio = MPS/EPS

(i) Determination of EPS, P/E ratio, ROE and BVPS of BA Ltd. and DA Ltd.

Particulars		BA Ltd. (`)	DA Ltd. (`)
Earnings after tax	(EAT)	210000	99000
No. of Shares	(N)	100000	80000
EPS	(EAT/N)	2.1	1.2375
Market price per share	(MPS)	40	15
P/E ratio	(MPS/EPS)	19.05	12.12
Equity Funds	(EF)	1200000	800000
BVPS	(EF/N)	12	10
ROE	(EAT/EF) X 100	17.50%	12.37%

(ii) Estimation of growth rates in EPS for BA Ltd. and DA Ltd.

Retention Ratio	(1 – D/P ratio)	0.6	0.4
Growth Rate	(ROE x retention ratio)	10.50%	4.95%

(iii) Justifiable equity shares exchange ratio

(a) Intrinsic value based = ` 20/` 40 = 0.5:1 (upper limit)

(b) Market price based = MPSb/MPSa = ` 15/` 40 = 0.375:1 (lower limit)

Since, BA Ltd. has a higher EPS, ROE, P/E ratio and even higher EPS growth expectations, the negotiable terms would be expected to be closer to the lower limit, based on the existing share prices.

(iv) Calculation of post-merger EPS and its effects

Particulars	BA Ltd. (`)	DA Ltd. (`)	Combined

EAT	(`)	(i)	210000	99000	309000
Share outstanding		(ii)	100000	80000	132000*
EPS	(`)	(i)/(ii)	2.1	1.2375	2.341
EPS Accretion (Dilution)	(`)		0.241	(0.301***)	

(v) Estimation of Post merger Market Price and other effects

Particulars			BA Ltd. (`)	DA Ltd. (`)	Combined
EPS	(`)	(i)	2.1	1.2375	2.341
P/E Ratio		(ii)	19.05	12.12	19.05
MPS	(`)	(i)/(ii)	40	15	44.6
MPS Accretion	(`)		4.6	2.84***	

* Shares outstanding (combined) = 100000 shares + (0.40 x 80,000) = 1,32,000 shares		
** EPS claim per old share	= `2.34 x 0.4	= `0.936
EPS dilution	= `1.2375 – `0.936	= `0.3015
*** S claim per old share	(`44.60 x 0.4)	17.84
Less: MPS and per old share		15.00
		2.84

8.

(a) What are the different methods of valuing self-generated brand

(b) Explain how it is possible for sales growth to decrease the value of a profitable company.

[6+4]

Answer: 8 (a)

Important methods in valuation of self generated brands are discussed below:

(i) **Historical cost method**: Here Brand value is the sum total of Brand Development cost + Brand Marketing and Distribution cost + Brand Promotion cost including advertising and other cost.

(ii) **Replacement Price Model**: It is the opportunity cost of investment made for replacement of brand. Brand Value = Replacement Brand Cost

(iii) **Market Price Model**: Here Brand value is net realizable value on sale in the market.

(iv) **Current Cost Model**: According to this approach the current corporate brands are valued at the current value to the group which is reviewed annually and not subject to amortization.

(v) **Potential Earning Model:** The potential Earning model is based on the estimated potential earning that would be generated by a brand and their capitalization by using appropriate discount rate. The volume of revenues raised by a brand in the market determines its value.

Total market value of brand = Net brand revenue/capitalization rate.

Net- Brand revenues = (Brand units x Unit brand price) - (Brand units x Unit brand cost) (Marketing cost + R & D cost + tax costs)

Answer: 8 (b)

A company can be profitable and yet have a ROIC that is less than the WACC if the company has large capital requirements. If ROIC is less than the WACC, then the company is not earning enough on its capital to satisfy its investors. Growth adds even more capital that is not satisfying investors. Hence, growth decreases values. It is thus clear that merely being a profit earning company is not enough. If the profit earning give a return on capital invested that is less than the WACC deployed. This will erode shareholder's value and result in a decrease in value even of a profitable company. Capital structure and WACC in reference to the rate of return, thus become very significant factor in valuation.

9.

(a) **In finance theory, it is often assumed that stock markets in the USA and the UK are semi-strong form efficient. Explain this assumption and its implications for financial managers.**

(b) **Ronix Computers has a well-earned reputation for earning a high return on capital. The firm had a return on capital of 100%, on capital invested of `1,500 crore, in 2008-09.**

Assume that you have estimated the value of the research asset to be `1,000 crore. In addition, the R&D expense this year is `250 crore, and the amortization of the research asset is `150 crore.

Required:

Re-estimate Ronix Computer's return on capital. **[6+4]**

Answer: 9 (a)

The term 'stock market efficiency' refers to the efficiency with which the stock market processes information and is described by the efficient markets hypot [redacted]

The EMH can be described in three forms: the strong form, the semi-strong form and the weak form. The semi-strong form is concerned with new public information and can be described as follows:

Share prices react very quickly and logically when new information is made public. The general principle behind this hypothesis is that information is intelligently analyzed by investors as soon as it is made public.

It is generally observed that share prices do move in this manner in US and UK markets, unlike in India.

Assumptions of efficient market hypothesis:

This hypothesis is most likely to be true if -

(i) There are. sufficient investors to create a market
(ii) All investors have access to the same information
(iii) Investors are well equipped to analyze information
(iv) Transactions costs are small
(v) Investors act rationally Some of the implications for financial managers of this hypothesis include the following:
   a. The market price of a share is the best estimate of the share's real value, based on public information.
   b. If details of a proposed new investment project are released to the public, share prices should quickly rise by the amount of the project NPV when the details are announced.

Answer: 9 (b)

In Ronix computers, capital invested is `1,500 crore. The value at the research asset is `1,000 crore. So, the adjusted value of capital invested is `2,500 crore. EBIT (1-t) originally calculated was `1,500 crore; adjusted EBIT (1-t) equals approximately ` (1,500 + 250 -150) = `1,600Cr. Ronix computer's adjusted return on capital is `1,600/` 2,500 = 64%

10.

(a) You have been provided the following financial data pertaining to RITZ LTD, an Engineering company.

Year ended March 31	2012	2011	2010
Profit before Interest and Tax (` million)	3396	2310	1785
Non-branded Income (` million)	335	125	112
Inflation factor	1.000	1.064	1.132
Weightage factor	3	2	1
Average Capital Employed (ACE) (` million)	6550		
Remuneration to Capital (8% of Avg. Capital employed)	8%		
Corporate Tax rate	35%		
Brand Multiple Applied	23.20		

You are required to calculate the BRAND VALUATION of RITZ LTD.

(b) Discuss various aspects of, computation of Economic Value Added and application in business planning and valuation. **[7+3]**

Answer: 10 (a)

RITZ LTD.

Calculation of Brand Value **(Amount in ` Million)**

Year ended March 31	2012	2011	2010
Profit Before Interest and Tax	3396	2310 125	1785
Less : Non -Branded Income	335		112
Adjusted Profit before Tax	3061	2185	1673
Inflation factor	1	1.064	1.132
Present Value of Profits	3061	2325	1894
Weightage factor	3	2	1
Weighted Average Profit	2621	-	-
Remuneration to Capital (8% of Average Capital employed)	**524**		
Brand - Related Profits	2097		
Corporate Tax @ 35%	734		
Brand Earnings	**1363**		
Brand Multiple Applied	23.2		
Brand Value :(` in million) (1363 x 23.20)	**31622**		

Workings: Weighted Average Profit = $\frac{(3061 \times 3)+(2325 \times 2)+(1894 \times 1)}{3+2+1} = 2621$

Answer: 10 (b)

EVA is defined as excess profit of a firm after charging the cost of capital.

EVA = (Return on operating capital-weighted average cost of capital) x Capital [net assets]

EVA is a metric developed by Stern Stewart and is synonymous with the generic term 'economic profit'.

EVA is a specific type of residual income. It is operating profit after tax less Capital charges. EVA is an analytical tool and a management discipline to measure the performance of the firm. It shows whether management is adding or destroying value over a period of time. Performance at Board or management level or bonuses for managers can be judged or determined better by this technique.

Thus, EVA appears to offer many advantages for management as an internal measure. 'Ex-ante EVA' can be used as a tool for planning purposes and 'Ex-post EVA' as a measure for contraband capital budgets and to determine remuneration.