MOCK TEST PAPER 2

FINAL COURSE: GROUP – I

PAPER – 2: STRATEGIC FINANCIAL MANAGEMENT

SUGGESTED ANSWERS/HINTS

1. (a) (i) If USD is flat

$$\text{Return} = \frac{(\text{Price at end} - \text{Price at begining}) + \text{Interest}}{\text{Price at begining}}$$

$$= \frac{(103 - 100) + 3}{100}$$

$$= \frac{3 + 3}{100} = 0.06 \text{ say } 6\%$$

(ii) If USD appreciates by 3%

(1+0.06)(1+0.03) -1 = 1.06 X1.03 - 1 = 0.0918 i.e. 9.18%

(iii) If USD depreciates by 3%

(1+0.06)(1-0.03) -1 = 1.06 X 0.97 - 1 = 0.0282 i.e. 2.82%

(iv) If Indian Rupee is appreciated by 5%

(1+0.06)(1-0.05) -1 = 1.06 X 0.95 - 1 = 0.007 i.e. 0.7%.

Total Marks = 6

(b) Financial Analysis whether to set up the manufacturing units in India or not may be carried using NPV technique as follows:

I. Incremental Cash Outflows

	$ Million
Cost of Plant and Machinery	500.00
Working Capital	50.00
Release of existing Working Capital	(15.00)
	535.00

II. Incremental Cash Inflow after Tax (CFAT)

(a) Generated by investment in India for 5 years

	$ Million
Sales Revenue (5 Million x $80)	400.00
Less: Costs	
Variable Cost (5 Million x $20)	100.00
Fixed Cost	30.00
Depreciation ($500Million/5)	100.00
EBIT	170.00
Taxes@35%	59.50
EAT	110.50

Add: Depreciation	100.00
CFAT (1-5 years)	210.50

(b) Cash flow at the end of the 5 years (Release of Working Capital) 35.00

(c) Cash generation by exports (Opportunity Cost)

	$ Million
Sales Revenue (1.5 Million x $80)	120.00
Less: Variable Cost (1.5 Million x $40)	60.00
Contribution before tax	60.00
Tax@35%	21.00
CFAT (1-5 years)	39.00

(d) Additional CFAT attributable to Foreign Investment

	$ Million
Through setting up subsidiary in India	210.50
Through Exports in India	39.00
CFAT (1-5 years)	171.50

III. Determination of NPV

Year	CFAT ($ Million)	PVF@12%	PV ($ Million)
1-5	171.50	3.6048	618.2232
5	35	0.5674	19.8590
			638.0822
Less: Initial Outflow			535.0000
			103.0822

Advice: Since NPV is positive the proposal should be accepted.

Total Marks = 10

(c) Outcomes of the financial planning are the financial objectives, financial decision-making and financial measures for the evaluation of the corporate performance.

Financial objectives are to be decided at the very outset so that rest of the decisions can be taken accordingly. The objectives need to be consistent with the corporate mission and corporate objectives.

Financial decision making helps in analyzing the financial problems that are being faced by the corporate and accordingly deciding the course of action to be taken by it.

The financial measures like ratio analysis, analysis of cash flow statement are used to evaluate the performance of the Company. The selection of these measures again depends upon the Corporate objectives.

Total Marks = 4

2. (a) VALUATION BASED ON MARKET PRICE

Market Price per share ₹ 400

Thus value of total business is (₹ 400 x 1.5 Cr.) ₹ 600 Cr.

VALUATION BASED ON DISCOUNTED CASH FLOW

Present Value of cash flows:

(₹ 250 cr x 0.893) + (₹ 300 cr. X 0.797) + (₹ 400 cr. X 0.712) = ₹ 747.15 Cr.

Value of per share (₹ 747.15 Cr. / 1.5 Cr) ₹ 498.10 per share

RANGE OF VALUATION

	Per Share ₹	Total ₹ Cr.
Minimum	400.00	600.00
Maximum	498.10	747.15

Total Marks = 6

(b) (i) Current Price of share of TIC Ltd. = ₹ 415

Exercise rate = ₹ 400

Risk free interest rate is = 5% p.a.

SD (Volatility) = 22%

Based on the above bit is calculated value of an option based on Black Scholes Model:

$$d_1 = \frac{\ln\left(\frac{415}{400}\right) + \left[0.05 + \frac{1}{2}(0.22)^2\right]0.25}{0.22\sqrt{0.25}}$$

$$= \frac{0.03681 + 0.01855}{0.11} = 0.5033$$

$$d_2 = \frac{\ln\left(\frac{415}{400}\right) + \left[0.05 - \frac{1}{2}(0.22)^2\right]0.25}{0.22\sqrt{0.25}}$$

$$= \frac{0.03681 + 0.00645}{0.11} = 0.3933$$

$$V_o = V_s\, N(d_1) - \frac{E}{e^{rt}}\, N(d_2)$$

$N(d_1) = N(0.5033) = 0.6926$

$N(d_2) = N(0.3933) = 0.6530$

Value of Option $= 415(0.6926) - \frac{400}{e^{(0.05)(0.25)}}(0.6530)$

$$= 287.43 - \frac{400}{1.0126}(0.6530)$$

$$= 287.43 - 257.95 = ₹\ 29.48$$

Since market price of ₹ 25 is less than ₹ 29.48 (Black Scholes Valuation model) indicate that option is underpriced, hence worth buying.

(ii) If the current price is taken as ₹ 380 the computations are as follows:

$$d_1 = \frac{\ln\left(\frac{380}{400}\right) + \left[0.05 + \frac{1}{2}(0.22)^2\right]0.25}{0.22\sqrt{0.25}}$$

$$= \frac{-0.05129 + 0.01855}{0.11} = -0.2976$$

$$d_2 = \frac{\ln\left(\frac{380}{400}\right) + \left[0.05 - \frac{1}{2}(0.22)^2\right]0.25}{0.22\sqrt{0.25}}$$

$$= \frac{-0.05129 + 0.00645}{0.11} = -0.4076$$

$N(d_1) = N(-0.2976) = 0.3830$

$N(d_2) = N(-0.4076) = 0.3418$

Value of Option $= 380(0.3830) - \frac{400}{e^{(0.05)(0.25)}}(0.3418)$

$= 145.54 - \frac{400}{1.0126}(0.3418)$

$= 145.54 – 135.02 = ₹ 10.52$

(iii) Since dividend is expected to be paid in two months time we have to adjust the share price and then use Black Scholes model to value the option:

Present Value of Dividend (using continuous discounting) = Dividend $\times e^{-rt}$

$= ₹ 10 \times e^{-0.05 \times 0.16666}$

$= ₹ 10 \times e^{-0.008333}$

$= ₹ 10/ 1.0084 = ₹ 9.92$

Adjusted price of shares is ₹ 408.00 – ₹ 9.92 = ₹ 398.08

This can be used in Black Scholes model

$$d_1 = \frac{\ln\left(\frac{398.08}{400}\right) + \left[0.05 + \frac{1}{2}(0.22)^2\right]0.25}{0.22\sqrt{0.25}}$$

$$= \frac{-0.00481 + 0.01855}{0.11} = 0.1250$$

$$d_2 = \frac{\ln\left(\frac{398.08}{400}\right) + \left[0.05 - \frac{1}{2}(0.22)^2\right]0.25}{0.22\sqrt{0.25}}$$

$$= \frac{-0.00481 + 0.00645}{0.11} = 0.0150$$

$N(d_1) = N(0.1250) = 0.5497$

$N(d_2) = N(0.0150) = 0.5060$

Value of Option $= 398.08(0.5497) - \frac{400}{e^{(0.05)(0.25)}}(0.5060)$

$= 218.82 - \frac{400}{1.0126}(0.5060)$

$= 218.82 – 199.88 = ₹ 18.94$

(c) Some of the parameters to identity the currency risk are as follows:

(1) Government Action: The Government action of any country has visual impact in its currency.

For example, the UK Govt. decision to divorce from European Union i.e. Brexit brought the pound to its lowest since 1980's.

(2) Nominal Interest Rate: As per interest rate parity (IRP) the currency exchange rate depends on the nominal interest of that country.

(3) Inflation Rate: Purchasing power parity theory discussed in later chapters impact the value of currency.

(4) Natural Calamities: Any natural calamity can have negative impact.

(5) War, Coup, Rebellion etc.: All these actions can have far reaching impact on currency's exchange rates.

(6) Change of Government: The change of government and its attitude towards foreign investment also helps to identify the currency risk.

Total Marks = 4

3. (a) (i) (1) Second Leg = Start Proceed x $\left(1+\text{Repo Rate}\times\frac{\text{No. of days}}{360}\right)$

₹ 2,00,31,759 = ₹ 2,00,06,750 x $\left(1+\text{Repo Rate}\times\frac{9}{360}\right)$

1.00125 = $\left(1+\text{Repo Rate}\times\frac{9}{360}\right)$

Repo Rate = 0.05 = 5%

(2) First Leg (Start Proceed) = Nominal Value x $\frac{\text{Dirty Price}}{100}\times\frac{100-\text{Initial Margin}}{100}$

₹ 2,00,06,750 = ₹ 2,00,00,000 x $\frac{\text{Dirty Price}}{100}\times\frac{100-1.25}{100}$

10003.375 = 98.75 x Dirty Price

Dirty Price = ₹ 101.30

(3) Dirty Price = Clean Price + Interest Accrued

101.30 = Clean Price + $100\times\frac{240}{360}\times 6\%$

Clean Price = ₹ 97.30

Total Marks = 4

(ii) (1) Number of new equity shares to be offered for each rights head

Subscription Price = ₹ 40 × 0.80 = ₹ 32 per share

Ex Right Price to be restricted to = ₹ 40 × 0.90 = ₹ 36

Let R be the ratio in which right share to be issued then

₹ 36 = $\frac{₹40+₹32\times R}{1+R}$

36 + 36R = ₹ 40 + 32R

R = 1

Thus, 1 equity share be offered for each share held.

(2) Theoretical Value of right = ₹ 36 – ₹ 32 = ₹ 4

(3) No. of equity share to be issued = $\frac{₹12\,crore}{₹32}$ = 37,50,000 or 0.375 crore shares

Total Marks = 4

(b) (i)

Particulars		
(a)	Amount invested by Mr. Optimistic as on 01/04/2016	₹ 16,00,000
(b)	Gain during 5 years (16,00,000 x 17.5% x 5 years)	₹ 14,00,000
(c)	Value of investment as on 31/03/2021 (a + b)	₹ 30,00,000
(d)	NAV as on 31/03/2021	₹ 100 per Unit
(e)	Total number of units as on 31/03/2021 (c / d)	30000 Units
	Total units before second bonus = 30,000 x 4/5	24000 Units
	Total units before first bonus = 24,000 x 5/6	20000 Units
	NAV as on 01/04/2016 = 16,00,000/ 20000	₹ 80 per Unit

(ii) (1) Let N be the opening NAV, then

N (1 + 0.25) = ₹ 24.95

N = ₹ 19.96

i.e., beginning NAV = ₹ 19.96

(2) Let X be the number of units purchased

Then ending units = 20,800

Accordingly,

$$20800 = X + \frac{0.998X}{24.95}$$

$$20800 = \frac{24.95X + 0.998X}{24.95}$$

$$X = 20000$$

Thus, number of units to be purchased = 20,000

(3) Original amount of investment

Initial NAV	₹ 19.96
Entry Load	₹ 0.04
	₹ 20.00
Number of funds purchased	20,000
Amount of investment	₹ 4,00,000

(c) Some of the methods as how to approach a pitch presentation are as follows:

(i) **Introduction:** To start with, first step is to give a brief account of yourself i.e. who are you? What are you doing? But care should be taken to make it short and sweet. Also, use this opportunity to get your investors interested in your company. One can also talk up the most interesting facts about one's business, as well as any huge milestones one may have

achieved.

(ii) **Team:** The next step is to introduce the audience the people behind the scenes. The reason is that the investors will want to know the people who are going to make the product or service successful. Moreover, the investors are not only putting money towards the idea but they are also investing in the team. Also, an attempt should be made to include the background of the promoter, and how it relates to the new company. Moreover, if possible, it can also be highlighted that the team has worked together in the past and achieved significant results.

(iii) **Problem:** Further, the promoter should be able to explain the problem he is going to solve and solutions emerging from it. Further the investors should be convinced that the newly introduced product or service will solve the problem convincingly.

(iv) **Solution:** It is very important to describe in the pitch presentation as to how the company is planning to solve the problem.

(v) **Marketing/Sales:** This is a very important part where investors will be deeply interested. The market size of the product must be communicated to the investors. This can include profiles of target customers, but one should be prepared to answer questions about how the promoter is planning to attract the customers. If a business is already selling goods, the promoter can also brief the investors about the growth and forecast future revenue.

(vi) **Projections or Milestones:** It is true that it is difficult to make financial projections for a startup concern. If an organization doesn't have a long financial history, an educated guess can be made. Projected financial statements can be prepared which gives an organization a brief idea about where is the business heading? It tells us that whether the business will be making profit or loss? **Total Marks = 4**

OR

Some of the sources for funding a startup are as follows:

(i) **Personal financing:** It may not seem to be innovative but you may be surprised to note that most budding entrepreneurs never thought of saving any money to start a business. This is important because most of the investors will not put money into a deal if they see that you have not contributed any money from your personal sources.

(ii) **Personal credit lines:** One qualifies for personal credit line based on one's personal credit efforts. Credit cards are a good example of this. However, banks are very cautious while granting personal credit lines. They provide this facility only when the business has enough cash flow to repay the line of credit.

(iii) **Family and friends:** These are the people who generally believe in you, without even thinking that your idea works or not. However, the loan obligations to friends and relatives should always be in writing as a promissory note or otherwise.

(iv) **Peer-to-peer lending:** In this process group of people come together and lend money to each other. Peer to peer lending has been there for many years. Many small and ethnic business groups having similar faith or interest generally support each other in their start up endeavors.

(v) **Crowd funding:** Crowdfunding is the use of small amounts of capital from a large number of individuals to finance a new business initiative. Crowdfunding makes use of the easy accessibility of vast networks of people through social media and crowdfunding websites to bring investors and entrepreneurs together.

(vi) **Micro loans:** Microloans are small loans that are given by individuals at a lower interest to a new business ventures. These loans can be issued by a single individual or aggregated across a number of individuals who each contribute a portion of the total amount.

(vii) Vendor financing: Vendor financing is the form of financing in which a company lends money to one of its customers so that he can buy products from the company itself. Vendor financing also takes place when many manufacturers and distributors are convinced to defer payment until the goods are sold. This means extending the payment terms to a longer period for e.g. 30 days payment period can be extended to 45 days or 60 days. However, this depends on one's credit worthiness and payment of more money.

(viii) Purchase order financing: The most common scaling problem faced by startups is the inability to find a large new order. The reason is that they don't have the necessary cash to produce and deliver the product. Purchase order financing companies often advance the required funds directly to the supplier. This allows the completion of transaction and profit flows up to the new business.

(ix) Factoring accounts receivables: In this method, a facility is given to the seller who has sold the good on credit to fund his receivables till the amount is fully received. So, when the goods are sold on credit, and the credit period (i.e. the date upto which payment shall be made) is for example 6 months, factor will pay most of the sold amount up front and rest of the amount later. Therefore, in this way, a startup can meet his day to day expenses.

Note: Students need to mention only any four points. **Total Marks = 4**

4. (a) Value of share at present $= \frac{D_1}{k_e - g}$

$= \frac{2(1.06)}{0.08-0.06} = ₹\ 106$

However, if the Board implement its decision, no dividend would be payable for 3 years and the dividend for year 4 would be ₹ 2.50 and growing at 7% p.a. The price of the share, in this case, now would be:

$$P_0 = \frac{2.50}{0.08-0.07} \times \frac{1}{(1+0.08)^3} = ₹\ 198.46$$

So, the price of the share is expected to increase from ₹ 106 to ₹ 198.45 after the announcement of the project. The investor can take up this situation as follows:

Expected market price after 3 years	$= \frac{2.50}{0.08-0.07}$	= ₹ 250.00
Expected market price after 2 years	$= \frac{2.50}{0.08-0.07} \times \frac{1}{(1+0.08)}$	= ₹ 231.48
Expected market price after 1 years	$= \frac{2.50}{0.08-0.07} \times \frac{1}{(1+0.08)^2}$	= ₹ 214.33

In order to maintain his receipt at least ₹ 2,000 for first 3 year, he would sell

10 shares in first year @ ₹ 214.33 for	₹ 2,143.30
9 shares in second year @ ₹ 231.48 for	₹ 2,083.32
8 shares in third year @ ₹ 250 for	₹ 2,000.00

At the end of 3rd year, he would be having 973 shares valued @ ₹ 250 each i.e. ₹ 2,43,250. On these 973 shares, his dividend income for year 4 would be @ ₹ 2.50 i.e. ₹ 2,432.50.

So, if the project is taken up by the company, the investor would be able to maintain his receipt of at least ₹ 2,000 for first three years and would be getting increased income thereafter.

Total Marks = 8

(b) **(i)** A Ltd. has lower return and higher risk than B Ltd. Hence, investing in B Ltd. is better than in A Ltd. because the return is higher and the risk is lower. However, investing in both will yield diversification advantage.

(ii) $r_{AB} = 0.22 \times 0.70 + 0.24 \times 0.30 = 0.226$ i.e. 22.60%

$\sigma^2_{AB} = 0.40^2 \text{ X } 0.7^2 + 0.38^2 \text{ X } 0.3^2 + 2\text{X } 0.7 \text{ X } 0.3 \text{ X } 0.72 \text{ X } 0.40 \text{ X } 0.38 = 0.1374$

$\sigma_{AB} = \sqrt{\sigma^2_{AB}} = \sqrt{0.1374} = 0.3707$ i.e. 37.07%

(iii) This risk-free rate will be the same for A and B Ltd. Their rates of return are given as follows:

$r_A = 22 = r_f + (r_m - r_f)\ 0.86$

$r_B = 24 = r_f + (r_m - r_f)\ 1.24$

$r_A - r_B = -2 = (r_m - r_f)\ (-0.38)$

$r_m - r_f = -2 / -0.38 = 5.26\%$

$r_A = 22 = r_f + (5.26)\ 0.86$

$r_f = 17.48\%$

Or

$r_B = 24 = r_f + (5.26)\ 1.24$

$r_f = 17.48\%$

$r_m - 17.48 = 5.26$

$r_m = 22.74\%$

(iv) $\beta_{AB} = \beta_A \times W_A + \beta_B \times W_B$

$= 0.86 \times 0.70 + 1.24 \times 0.30 = 0.974$

Total Marks = 8

(c) There exists a big difference between the project and parent cash flows due to tax rules, exchange controls. Management and royalty payments are returns to the parent firm. The basis on which a project shall be evaluated depend on one's own cash flows, cash flows accruing to the parent firm or both.

Evaluation of a project on the basis of own cash flows entails that the project should compete favourably with domestic firms and earn a return higher than the local competitors. If not, the shareholders and management of the parent company shall invest in the equity/government bonds of domestic firms. A comparison cannot be made since foreign projects replace imports and are not competitors with existing local firms. Project evaluation based on local cash flows avoid currency conversion and eliminates problems associated with fluctuating exchange rate changes.

For evaluation of foreign project from the parent firm's angle, both operating and financial cash flows actually remitted to it form the yardstick for the firm's performance and the basis for distribution of dividends to the shareholders and repayment of debt/interest to lenders. An investment has to be evaluated on basis of net after tax operating cash flows generated by the project. As both types of cash flows (operating and financial) are clubbed together, it is essential to see that financial cash flows are not mixed up with operating cash flows.

Total Marks = 4

5. (a) (i) Working Notes -

Calculation of Portfolio Beta suggested by Mr. Y

Security	Beta	Wt. of Holding	Beta x Wt. of Holding
S	1.20	0.10	0.120
K	0.75	0.10	0.075
P	0.40	0.30	0.120
D	1.40	0.50	0.700
Total		1.00	1.015

Portfolio Beta is 1.015

Calculation of Expected Return based on CAPM at present situation-

Particulars	Risk Free Rate (R_f)	Beta	Market Return	Risk Premium = R_m-R_f	Beta X Risk Premium	Expected Return
a	b	c	d	e = d - b	f = c x e	g = b + f
Kannyaka Ltd.	8%	1.400	12%	4%	5.600%	13.60%
Portfolio	8%	1.015	12%	4%	4.060%	12.06%

(1) Calculation of Expected Return based on CAPM if market goes up by 2.5%:

Particulars	Risk Free Rate (R_f)	Beta	Market Return	Risk Premium= R_m- R_f	Beta X Risk Premium	Expected Return
a	b	c	d	e = d - b	f = c X e	g = b + f
Kannyaka Ltd.	8%	1.400	14.50%	6.5	9.100%	17.10%
Portfolio	8%	1.015	14.50%	6.5	6.598%	14.60%

(2) Calculation of Expected Return based on CAPM if market goes down by 2.5%:

Particulars	Risk Free Rate(R_f)	Beta	Market Return	Risk Premium= R_m - R_f	Beta X Risk Premium	Expected Return
a	b	c	d	e = d - b	f = c X e	g = b + f
Kannyaka Ltd.	8%	1.400	9.50%	1.50%	2.100%	10.10%
Portfolio	8%	1.015	9.50%	1.50%	1.523%	9.52%

(ii) Advice: If the probability of market giving negative return is more, it is advisable to Mr. X to buy the portfolio suggested by Mr. Y because Beta of the portfolio is less than of Kannyaka Ltd.

Total Marks = 8

(b) Final settlement amount shall be computed by using formula:

$$= \frac{(N)(RR - FR)(dtm/DY)}{[1 + RR(dtm/DY)]}$$

Where,

N = the notional principal amount of the agreement;

RR = Reference Rate for the maturity specified by the contract prevailing on the contract settlement date;

FR = Agreed-upon Forward Rate; and

dtm = maturity of the forward rate, specified in days (FRA Days)

DY = Day count basis applicable to money market transactions which could be 360 or 365 days.

Accordingly,

If actual rate of interest after 6 months happens to be 9.60%

$$= \frac{(₹\,60\,\text{crore})(0.096 - 0.093)(3/12)}{[1 + 0.096(3/12)]}$$

$$= \frac{(₹\,60\,\text{crore})(0.00075)}{1.024} = ₹\ 4,39,453.13 \text{ or } ₹\ 4,39,453$$

Thus banker will pay Parker & Co. a sum of ₹ 4,39,453

If actual rate of interest after 6 months happens to be 8.80%

$$= \frac{(₹\,60\,\text{crore})(0.088 - 0.093)(3/12)}{[1 + 0.088(3/12)]}$$

$$= \frac{(₹\,60\,\text{crore})(-0.00125)}{1.022} = -₹\ 7,33,855$$

Thus Parker & Co. will pay banker a sum of ₹ 7,33,855 .19 or ₹ 7,33,855

Total Marks = 8

(c) The Dow Theory is one of the oldest and most famous technical theories. It was originated by Charles Dow, the founder of Dow Jones Company in late nineteenth century. It is a helpful tool for determining the relative strength of the stock market. It can also be used as a barometer of business.

The Dow Theory is based upon the movements of two indices, constructed by Charles Dow, Dow Jones Industrial Average (DJIA) and Dow Jones Transportation Average (DJTA). These averages reflect the aggregate impact of all kinds of information on the market. The movements of the market are divided into three classifications, all going at the same time; the primary movement, the secondary movement, and the daily fluctuations. The primary movement is the main trend of the market, which lasts from one year to 36 months or longer. This trend is commonly called bear or bull market. The secondary movement of the market is shorter in duration than the primary movement, and is opposite in direction. It lasts from two weeks to a month or more. The daily fluctuations are the narrow movements from day-to-day. These fluctuations are not part of the Dow Theory interpretation of the stock market. However, daily movements must be carefully studied, along with primary and secondary movements, as they go to make up the longer movement in the market.

Thus, the Dow Theory's purpose is to determine where the market is and where is it going, although not how far or high. The theory, in practice, states that if the cyclical swings of the stock market averages are successively higher and the successive lows are higher, then the market trend is up and a bullish market exists. Contrarily, if the successive highs and successive lows are lower, then the direction of the market is down and a bearish market exists.

Total Marks = 4

6. (a) (i) Market value of Companies before Merger

Particulars	*RIL*	*SIL*
EPS	₹ 2	₹ 1
P/E Ratio	10	5
Market Price Per Share	₹ 20	₹ 5
Equity Shares	10,00,000	10,00,000
Total Market Value	2,00,00,000	50,00,000

(ii) Post Merger Effects on RIL

	₹
Post-merger earnings	30,00,000
Exchange Ratio (1:4)	
No. of equity shares o/s (10,00,000 + 2,50,000)	12,50,000
EPS: 30,00,000/12,50,000	2.40
PE Ratio	10
Market Value 10 x 2.4	24
Total Value (12,50,000 x 24)	3,00,00,000

Gains From Merger:	₹
Post-Merger Market Value of the Firm	3,00,00,000
Less: Pre-Merger Market Value	
RIL 2,00,00,000	
SIL 50,00,000	2,50,00,000
Total gains from Merger	50,00,000

Apportionment of Gains between the Shareholders:

Particulars	RIL (₹)	SIL (₹)
Post-Merger Market Value:		
10,00,000 x 24	2,40,00,000	--
2,50,000 x 24	-	60,00,000
Less: Pre-Merger Market Value	2,00,00,000	50,00,000
Gains from Merger:	40,00,000	10,00,000

Thus, the shareholders of both the companies (RIL + SIL) are better off than before

(iii) Post-Merger Earnings:

Increase in Earnings by 20%

New Earnings: ₹ 30,00,000 x (1+0.20)	₹ 36,00,000
No. of equity shares outstanding:	12,50,000
EPS (₹ 36,00,000/12,50,000)	₹ 2.88
PE Ratio	10
Market Price Per Share: = ₹2.88 x 10	₹ 28.80

∴ Shareholders of RIL will be better-off than before the merger situation.

Total Marks = 8

(b) **(i)** To compute perfect hedge we shall compute Hedge Ratio (Δ) as follows:

$$\Delta = \frac{C_1 - C_2}{S_1 - S_2} = \frac{150 - 0}{780 - 480} = \frac{150}{300} = 0.50$$

Mr. D should purchase 0.50 share for every 1 call option.

(ii) Value of Option today

If price of share comes out to be ₹ 780 then value of purchased share will be:

Sale Proceeds of Investment (0.50 x ₹ 780)	₹ 390
Loss on account of Short Position (₹ 780 – ₹ 630)	₹ 150
	₹ 240

If price of share comes out to be ₹ 480 then value of purchased share will be:

Sale Proceeds of Investment (0.50 x ₹ 480)	₹ 240

Accordingly, Premium say P shall be computed as follows:

(₹ 300 – P) 1.025 = ₹ 240

P = ₹ 65.85

(iii) Expected Return on the Option

Expected Option Value = (₹ 780 – ₹ 630) × 0.60 + ₹ 0 × 0.40 = ₹ 90

Expected Rate of Return = $\frac{90 - 65.85}{65.85} \times 100$ = 36.67%

Total Marks = 8

(c) Such mergers involve firms engaged in unrelated type of business operations. In other words, the business activities of acquirer and the target are neither related to each other horizontally (i.e., producing the same or competiting products) nor vertically (having relationship of buyer and supplier). In a pure conglomerate merger, there are no important common factors between the companies in production, marketing, research and development and technology. There may however be some degree of overlapping in one or more of these common factors. Such mergers are in fact, unification of different kinds of businesses under one flagship company. The purpose of merger remains utilization of financial resources, enlarged debt capacity and also synergy of managerial functions. **Total Marks = 4**