FINAL EXAMINATION
GROUP III
(SYLLABUS 2008)

SUGGESTED ANSWERS TO QUESTIONS

DECEMBER 2014

Paper-12: FINANCIAL MANAGEMENT & INTERNATIONAL FINANCE

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

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

Please (i) Answer all parts of a question at one place.
(ii) Open a new page for answer to a new question.
(iii) Tick the question number answered on the front sheet of the answer-book.

All workings must form part of your answer.

Assumptions, if any, must be clearly stated.

Answer question No. 1 *from Part A which is compulsory and* any five *questions from Part B.*

PART A (25 Marks)

1. (a) In each of the cases given below, one out of four answers is correct. Indicate the correct answer (= 1 mark) and give workings/reasons briefly in support of your answer (= 1 mark): 2x8=16

(i) MN Ltd. has earning before interest and taxes of ₹ 36 crores. The company has 7% debentures of ₹ 72 crores. Cost of equity is 12.5%. Ignore taxes. What is the overall cost of Capital?

(A) 11.26%

(B) 11.20%

(C) 11.50%

(D) 11.28%

(ii) R Ltd. earns ₹ 8 per share, has capitalisation rate of 10% and has a return on investment at the rate of 18%. According to Walter's Model, what should be the price per share at 28% dividend pay out ratio?

(A) ₹ 120

(B) ₹ 125

(C) ₹ 126.08

(D) ₹ 125.08

(iii) MAYANK Ltd. employs 12% as nominal required rate of return to evaluate its new investment projects. In the recent meeting of the Board of Directors, it has been decided to protect the interest of shareholders against purchasing power loss due to inflation. The expected inflation rate in the economy is 5%. What is the real discount rate?

(A) 6.67%

(B) 6%

(C) 5%

(D) 6.5

(iv) What is the opportunity cost of not taking a discount, when the credit terms are 1/15 net 30? Assume 1 year = 365 days.

(A) 29.58%

(B) 24.58%

(C) 24.65%

(D) 29.68%

(v) An Indian Company is planning to invest in the US. The rates of inflation are 8% in India and 3% in USA. If the spot rate is currently ₹60.50/$, what spot rate can you expect after 5 years, assuming the inflation rates will remain the same over 5 years?

(A) ₹ 76.68

(B) ₹ 75.90

(C) ₹ 74.00

(D) ₹ 76.10

(vi) Operating Leverage 2, Combined Leverage 5, Profit/volume ratio 40%, Tax rate 40%, Earnings after tax ₹ 7.20 lakhs. Calculate the percentage drop in Sales to make the EPS zero.

(A) 10%

(B) 15%

(C) 20%

(D) 12%

(vii) From the following quotes of a bank, determine the rate at which Yen can be purchased with Rupees.

₹/£ Sterling	**75.31 – 33**
£ Sterling/Dollar ($)	**1.563 – 65**
Dollar ($)/Yen (¥)	**1.048/52 [per 100 Yen)**

(A) ₹ 124.02

(B) ₹142.02

(C) ₹ 412.02

(D) ₹ 214.02

(viii) Spot (Euro/Pound) = 1.6543/1.6557

Spot (Pound/NZ $) = 0.2786/0.2800

What is the % Spread on the Euro/Pound rate?

(A) 0.085%

(B) 0.805%

(C) 0.508%

(D) 0.058%

(b) State if each of the following sentences are T (= true) or F (= false): 1x9=9

(i) The 'sale and lease back' is usually preferred by firms having fixed assets but shortage of funds.

(ii) WTO, governed by a ministerial conference, meets every three years.

(iii) The sensitivity analysis deals with the consideration of sensitivity of the NPV in relation to different variables contributing to the NPV.

(iv) PPP theory takes into account only the movement of goods and services and not that of capital.

(v) A call option is said to be 'in-the-money' if the stock price is more than the strike price.

(vi) Working capital leverage measures the responsiveness of ROCE for changes in current assets.

(vii) The maturity date of Commercial Paper (CP) should not exceed the date beyond the date upto which credit rating is valid.

(viii) In the case of independent projects, if the NPV of the project is zero, IRR is equal to cost of Capital.

(ix) Cash Value Added (CVA) is a measurement that finds the excess of Operating Cash Flow over the capital employed.

Answer: 1. (a)

(i) A - 11.26%

Market value of Equity = [EBIT -1]/K_e = [36 - 5.04] Cr. /0.125 = 30.96 /0.125 = ₹ 247.68 Cr.

Total value of firm (v) = 247.68 + 72.00 = 319.68 cr. So, K_0 = EBIT/V = [36/319.68] x 100 =11.26%

[ii] C - ₹ 126.08

DPS = 28% x EPS = 28% x ₹8 = ₹2.24.

So, Market value of share = $\dfrac{D+\frac{r}{k}(E-D)}{k}$

= [2.24 + {0.18/0.10 (8 - 2.24)}] / 0.10 = [2.240 + 10.368]/0.10 = ₹ 126.08

(iii) A – 6.67%

Real rate = [(1+n) / (1 + i)] -1 = [(1+0.12) / (1+ 0.05)] -1 = 0.06667 = 6.67%

(iv) B – 24.58%

Opportunity cost = Discount % / [100 - Discount %] x [365 / (N –S)] x 100 = 1/99 x 365 /15 x 100

= [365 / 1485] x 100 = 24.58 %

[v] A - ₹ 76.68

$F = S \times [(1 + r_A)^N / (1 + r_B)^n]$; or, $F(₹ / \$) = 60.50 \times [1 + 0.08)^5 / (1+ 0.03)^5]$

= 60.50 x 1.267455 = ₹ 76.68

[vi] C – 20%

Degree of combined Leverage = 2 x 2.5 = 5; DCL = % Change in EPS / % change in Sales; Or, 5 = 100 % / % change in sales; So, % change in sales = 100 % / 5 = 20 %

[vii] A - ₹ 124. 02

Ask (₹ / ¥) = Ask(₹ / £) x Ask (£ / $) x Ask ($ / ¥) = 75.33 x 1.565 x 1.052 = ₹ 124. 02

[viii] A - 0.085%

The % spread in Euro / Pound = [1.6557 -1.6543]/1.6543 = 0.085%

Answer: 1. (b)

(i) TRUE

(ii) FALSE

(iii) TRUE

(iv) TRUE

(v) TRUE

(vi) TRUE

(vii) TRUE

(viii) TRUE

(ix) FALSE.

PART B (75 Marks for *any five* questions.)

2. (a) The turnover of X Ltd. is ₹ 72 lakhs of which 80% is on credit. Debtors are allowed one month to clear off the dues. A factor is willing to advance 90% of the bills raised on credit for a fee of 2% a month plus a commission of 4% on the total amount of debts. X Ltd. as a result of this arrangement is likely to save ₹ 25,920 annually in management costs and avoid bad debts at 1% on the credit sales.

A Nationalised Bank has come forward to make an advance equal to 90% of the debts at an interest rate of 18% p.a. However, its processing fee will be at 2% on the debts.

Would you accept factoring or the offer from the bank? 10

(b) Explain the steps involved in 'Decision Tree Approach' in investment decision. 5

Answer: 2. (a)

Alternative I:

Cost of factoring Book Debts.		₹
Fees payable for Factoring ₹ 4,32,000 x 2%		8,640
Commission 4,80,000 x 4%		19,200
		27,840
	₹	
Less: Savings of management costs per month 25,920 /12 =	2,160	
Bad debts 4,80,000 x 1% =	4,800	6,960
Net cost of Factoring		20,880

Working notes: ₹ In lakhs

Total sales p.a	72.00
Less: Cash sales p.a 20%	14.40
Credit sales per annum 80%	57.60
Credit sales per month 57.60/12	4.80
Amount eligible for Factoring or advance by the bank	
90% credit sales	4.32

Alternative II:

Cost of BANK ADVANCE against Book debts ₹

Interest charges 4,32,000 x 18% x 1/12	6,480
Processing fee 4,80,000 x 2%	9,600
Bad debts loss unavoidable	4,800
Management costs	2,160
	23,040

So, X LTD. may opt for alternative I, i.e, Factoring.

Answer: 2. (b)

While constructing a Decision Tree for a given problem, the following steps may be required:

(i) Break the project into clearly defined stages. For example, a computer software company may take up the project of new package in different stages, i.e, research and development, market testing, limited production, and then full production.

(ii) List all the possible outcomes at each stage. Specify the probability of each outcome at each stage based on the information available. This task will become progressively more difficult as more stages are involved.

(iii) Specify the effect of each outcome on the expected cash flows from the project.

(iv) Evaluate the optimal action to be taken at each stage in the decision tree, based on the outcome of the previous stage and its effect on cash flow.

3. (a) As the manager of a financial services company, you have received a proposal seeking a term loan of ₹300 lakhs, from a firm planning an investment in fixed assets of ₹500 lakhs in a new project. The loan is indicated to be repayable in three annual instalments commencing from the end of the 2nd year. The following information concerning the project is available:

	Year 1	Year 2	Year 3	Year 4
Gross Profit (Before depreciation)	**75**	**100**	**150**	**150**
Depreciation	**50**	**45**	**40**	**35**
Interest on:				
Term Loan	**25**	**45**	**30**	**15**
Working Capital borrowing	**10**	**15**	**20**	**20**
Provision for Tax	**—**	**10**	**30**	**—**

Assuming other techno-economic criteria to be satisfactory, you are required to:

(i) Compute any three ratios which, in your opinion, would guide the financing decision; and

(ii) Interpret briefly such ratios and give your views on the proposal.

(Note: Risk free rate on interest is 10% and Average Market Risk Premium 8%.)

(3+2+2) + (1+2)=10

(b) What do you understand by a Stable Dividend Policy? Why should it be followed?

2+3=5

Answer: 3. (a)

Computation of ratio ₹ In lakhs

Ratio 1: Average return on investment	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Profit before interest & tax	25	55	110	115
Less: Interest on W. Capital borrowing	(10)	(15)	(20)	(20)
Return on long-term investment (pre-tax)	15	40	90	95
Less: Provision for tax	-	-	(10)	(30)
Return on long-term investment (Post-tax)	15	40	80	65
Average return (pre-tax) 240/4 = 60				
Average return(post-tax) 200/4 = 50				

Average return on investment:

Pre-tax return 60/500 x 100 = 12 %. Post-tax return 50/500 x 100 = 10%.

Comment: Average return on long-term investment is less than the prevailing market rate of interest plus risk premium (i.e., 18 %). Therefore, profitability of the project is poor.

₹ In lakhs

Ratio 2: Interest cover on term loan:	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Return on investments (post-tax)	15	40	80	65
Add: Depreciation	50	45	40	35
Cash available for payment of interest on term loan	65	85	120	100
Interest on term loan	25	45	30	15

Interest cover (no. of times)	2.6	1.89	4.00	6.67

Comment: Interest cover on term loan is very good. This is expected to improve in the third year and then sharply rises to 6.67 times in the fourth year. However, this does not indicate betterment of the debt-servicing capacity of the borrower as indicated below:

₹ In lakhs

Ratio 3: Debt-service coverage ratio	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Gross profit (before Depreciation)	75	100	150	150
Less: Interest on W. Capital borrowing	(10)	(15)	(20)	(20)
	65	85	130	130
Less: Provision for tax	-	-	(10)	(30)
A. Cash available for debt servicing	65	85	120	100
B. Debt-service obligation (interest + instalment)	25	145	130	115
C. Debt-service coverage (A/B) no. of times	2.6	0.6	0.9	0.9

Comments:

Except for the first year, Debt-service coverage works out to be very poor. In fact, proper debt-servicing will start only from the second year when payment of instalment will fall due. In third and fourth years the ratio is expected to be better but not even above 1 (one).

The burden of instalment payments will adversely affect the debt-servicing capacity of the firm although it will be able to pay the interest comfortably.

Overall comment:

Debt-service coverage ratio indicates the poor debt-servicing capacity of the borrower firm. Interest coverage ratio only indicates whether the borrower can at least pay the interest charges. But since the schedule of investment payment has been specified and the principal of the term loan is to be paid within four years of the project, the profitability of the firm arising out of this project after four years cannot be taken into consideration and also no information in this respect. Also, return on investment during the initial four years is not very much impressive.

Hence the proposal should not be accepted for financing.

3. (b) The term "stability of dividends" means consistency or lack of variability in the stream of dividends payments and it may be in the form of (i) constant dividend per share, (ii) constant pay-out ratio, and (iii) stable rupee dividend plus extra dividend.

A policy of constant dividend per share is most suitable to concerns whose earnings are expected to remain stable over a no. of years.

A policy of constant payout ratio may be supported by a firm because it is related to the firm's ability to pay dividends.

The policy of constant low dividends per share plus some extra dividend in the year of high profits is suitable to the firms having fluctuating earnings from year to year

4. (a) A manufacturing company is planning to install either of the following two machines which are mutually exclusive. The details of their purchase price and operating costs are as given below:

	Machine I ₹	Machine II ₹
Purchase price including cost of installation	1,00,000	80,000
Operating costs: Yearwise:		
1	20,000	25,000
2	20,000	25,000
3	20,000	25,000
4	25,000	36,000
5	25,000	36,000
6	25,000	36,000
7	30,000	—
8	30,000	—
9	30,000	—
10	30,000	—

The salvage value of the Machine I is expected to be ₹15,000 at the end of its life of 10 years, while for Machine II it is ₹10,000 at the end of the 6th year.

The cost of capital is 15%.

You can assume that technically both the Machines are equally useful.

You are required to answer the following:

(i) What is the present value of costs for Machine I?

(ii) What is the present value of costs for Machine II?

(iii) What is the annual capital charge for Machine I?

(iv) What is the annual capital charge for Machine II?

(v) Which of the Machines is cheaper?

[Given:

Year	Rate	PVFA	PVF
3	15%	2.283	0.658
4	15%	2.855	0.572
6	15%	3.784	0.432
10	15%	5.019	0.247]

3+2+2+2+1=10

(b) Describe profitability and maneuverability as the important characteristics of financial planning. 2+3=5

Answer: 4. (a)

Since initial outlay and operating costs are given, the appropriate method to be applied is 'Annual capital charge'.

The Present value of Cost for Machine I and Machine II

Year	Operating Cost of Machine I (₹)	Operating Cost of Machine II (₹)	PVF	PV of Machine I (₹)	PV of Machine II (₹)
1	20,000	25,000	0.870	17,400	21,750

2	20,000	25,000	0.756	15,120	18,900
3	20,000	25,000	0.658	13,160	16,450
4	25,000	36,000	0.572	14,300	20,592
5	25,000	36,000	0.497	12,425	17,892
6	25,000	36,000	0.432	10,800	15,552
7	30,000	-----	0.376	11,280	-----
8	30,000	-----	0.327	9,810	-----
9	30,000	-----	0.284	8,520	-----
10	30,000	-----	0.247	7,410	-----
Total Cost				1,20,225	1,11,136
Purchase Price including installation				1,00,000	80,000
PV of total outflow				2,20,225	1,91,136
Less: Salvage Value				3,705	4,320
Net Present Value of Outflow				2,16,520	1,86,816
PVAF				5.019	3.784
Annual Capital Charge				43,140.07	49,369.98

As annual capital Charge for Machine I is low, Machine I is cheaper.

Working Notes:
Calculation of Salvage Value

Machine I	Machine II
₹15,000 × 0.247 = ₹3,705	₹10,000 × 0.432 = ₹4,320

Answer: 4. (b)

(i) **Profitability:** A financial plan should maintain the required proportion between fixed charge obligations and the liabilities in such a manner that the profitability of the organization is not adversely affected. The most crucial factor in financial planning is the forecasting of sales, for sales almost invariably represent the primary sources of income and cash receipt. Besides, the operation of the business is geared to the anticipated volume of sales. The management should recognize the likely margins of error inherent in forecast and this recognition would enable the management to avoid the hazards involved in attaching a false accuracy to forecast data based on tenuous assumption.

(ii) **Maneuverability :** It is the direct result of management's adherence to the financial structure which is acceptable to the business community; i.e. creditors, shareholders, bankers, etc. It is necessary to choose a financial plan, which may control the crisis, the crisis that may develop from time to time. It is well known that any financial plan should aim at a proper balance between debt and equity. This is essential to ensure that the stake of the entrepreneur in an industry or a concern is substantial, so that his handling of affairs, financial or others may be in its best interest.

5. (a) A company's capital structure consists of the following:

Equity shares of ₹ 100 each	**:**	**₹ 20,00,000**
Retained earnings 9%	**:**	**₹ 10,00,000**
Preference shares	**:**	**₹ 12,00,000**
7% Debentures	**:**	**₹ 8,00,000**
Total	**:**	**₹ 50,00,000**

The company earns 12% on its capital. The income tax rate is 40%. The company requires a sum of ₹25 lakhs to finance its expansion programme for which following alternatives are available to it:

(i) Issue of 20,000 Equity shares at a premium of ₹ 25 per share;

(ii) Issue of 10% Preference shares;

(iii) Issue of 8% Debentures;

It is estimated that the P/E ratios in the cases of Equity, Preference and Debentures financing would be 21.4,17 and 15.7 respectively.

Required: **Which of the three financing alternatives would you recommend and why? 5**

(b) MP Ltd. is considering to change its credit terms and provides you the following information:

Particulars	Present policy	Proposed policy
Credit terms	Net 30	$\frac{1}{10}$, Net 30
Sales (₹)	14,40,000	Increase in Sales by ₹ 40,000
Average collection period	30 days	Decline in period by $\frac{1}{3}$-rd
Bad debts	2%	2%

It is expected that 50% of the customers will take discount and pay on the 10th day. The variable cost ratio is 70%. And the opportunity cost of investment in receivable is 10% (pre-tax). The tax rate is 50%.

Should the company change its credit terms? [Assume 360 days in a year]. 5

(c) What is the need for a range of performance measures? Explain. 5

Answer: 5. (a)

Working notes:

EBIT-Present ₹ 50 lakhs x 12 % = ₹ 6,00,000;

EBIT- Equity/Preference/Debentures = ₹ 6 lakhs + [₹ 25 lakhs x 12%] = ₹ 9,00,000;

Interest - Present / Equity / Preference = ₹ 8 lakhs x 7 % = ₹ 56,000.

Interest - Debentures = ₹ 56,000 + [₹ 25 lakhs x 8 %] = ₹ 2,56,000;

Preference dividend- Present/ Equity/ debentures = ₹ 12 lakhs x 9% = ₹ 1,08,000;

Preference dividend - Preference = ₹ 1,08,000 + [₹ 25 lakhs x 10 %] ₹ 3,58,000;

No. of Equity shares (Equity plan) = 20,000 + 20,000 = 40,000. And Market price = EPS x P/E Ratio.

Statement showing Estimated EPS & Market price per Equity share under the various financing plans.

Particulars	Present ₹	Equity plan ₹	Preference share plan ₹	Debentures plan ₹
EBIT	6,00,000	9,00,000	9,00,000	9,00,000
Less: Interest	56,000	56,000	56,000	2,56,000
EBT	5,44,000	8,44,000	8,44,000	6,44,000
Less: Tax 40 %	2,17,600	3,37,600	3,37,600	2,57,600
Earnings after tax (EAT)	3,26,400	5,06,400	5,06,400	3,86,400
Less: Preference dividend	1,08,000	1,08,000	3,58,000	1,08,000
Earnings for Equity shareholders	2,18,400	3,98,400	1,48,400	2,78,400
No. of Equity shares	20,000	40,000	20,000	20,000
Earnings per share	10.92	9.96	7.42	13.92
P/E Ratio		21.40	17.00	15.70
Market price		213.14	126.14	218.54

Recommendations: It is advised that the company should go for DEBT PLAN on account of the following reasons—

(i) Market price per share is highest among the various alternatives plans.

(ii) EPS is highest among the various alternatives.

(iii) Comparatively better Debt - Equity mix.

Answer: 5. (b)

Working notes:

(i) Total costs other than bad debts & Cash discount = 70 % of credit sales.

(ii) Opportunity cost of investments: Opportunity cost = Total cost x collection period /360 x Rate of return / 100

Present policy = ₹ 10,08,000 x [30/360] x [10 % - (10% / 2)] = ₹ 4,200.

Proposed policy = ₹ 10,36,000 x [20/360] x [10 % - (10% / 2)] = ₹ 2,878.

(iii) Cash discount = Total credit sales x % of customers who take up discount x Rate/ 100

= ₹ 14,80,000 x 50 % x 1% = ₹ 7,400.

Statement showing the Evaluation of Debtors Policies:

Particulars	Present policy ₹	Proposed policy ₹
A. Expected profit:		
(i) Credit sales	14,40,000	**14,80,000**
(ii) Total costs other than Bad debts & Cash discount	10,08,000	10,36,000
(iii) Bad debts	28,800	29,600
(iv) Cash discount	—	7,400
(v) Profit before Tax	4,03,200	4,07,000
(vi) Less: Tax	2,01,600	2,03,500
(vii) Profit after Tax	2,01,600	2,03,500

B. Opportunity cost of investment in receivables	4,200	2,878
C. Net benefits (A-B)	1,97,400	2,00,622

Recommendation: The proposed policy should be adopted since the net benefits under this policy is higher than those under the present policy.

Answer: 5. (c)

The measurement system of performance has to progress from being reactive to proactive and finally to be responsive, as the right matrices drive world class performance. Three roles of measurements are:

(i) Effectiveness;

(ii) Efficiency; and

(iii) Excellence.

Why do we measure?

(1) To know current status, degree of achievement and how far to go for ultimate goals to be achieved.

(2) For strategic alignment: to communicate and reinforce messages to employees on company focus, direction and targets.

(3) For strategic learning: to know what, and what works and does not work and to take better decisions.

6. (a) You are given the following information by your banker:

Spot	**₹/$**	**:**	**60.50/61.00**
	₹/£	**:**	**96.15/98.30**
6 month forward	**₹/$**	**:**	**62.00/63.10**
	₹/£	**:**	**98.20/100.15**
6 month $ interest rates		**:**	**5.90/6.10 [per annum]**

Required: Compute 6 month £ interest rates to prevent arbitrage. 10

(b) Explain the basic differences between Commercial Calculation and Social Cost Benefit Analysis (SCBA). 5

Answer: 6. (a)

Let us first work out the $/£ spot rate through re-cross currency rates:

$/£ = 96.15/61.00 : 98.30/60.50 =1.5762 : 1.6248

Similarly, we can work out 6-month Forward Quotes as:

$/£ = 98.2/63.1 : 100.15/ 62.00 = 1.5563 : 1.6153

Suppose, we borrow $ 100;

To prevent arbitrage, the following condition must be satisfied:

100 (1 + 0.061/2) > = [100/1.6248] x [1 + i/2] x [1.5563]; or, i > = 0.1518 or 15.18%.

For borrowing £ 100, the following condition must be satisfied:

100 [1 + i/2] > = [100/ 1.5762] x [1 + 0.059/2] x [1.6153]; or, i > = 0.1100 or, 11.00%.

Thus, we find that the interest rate on £ should be between 11.00 % and 15.18 % to prevent arbitrage.

Answer: 6. (b)

The economic analysis in project appraisal for evaluating investment projects is an important consideration in the analysis of social cost benefit. Basic differences between commercial calculation and SCBA computations in project appraisal lies in the following:

Commercial calculation		SCBA	
1.	Structured objective of higher Profitability	1.	Effect on society, health of society, rest on use, product, etc.
2.	Private interest is kept in mind	2.	Wider view on national interest is considered.
3.	Singular objective	3.	Divergent objectives not conflicting each other.
4.	Return on investment - maximization.	4.	Rate of return to be compared with social economy, apportionment of benefits and cost to different time periods, even generation differences are analysed.
5.	Objective is " at any cost" Achievement.	5.	Systematizing complex problems of project planning from point of View of society and nation.

7. (a) An Indian customer who has imported equipment from Germany has approached its bank for booking a forward DM Contract. The delivery is expected at the end of the six month from now. The following rates are being quote.

DM/$ Spot : 1.584/1.585

3 month forward : 0.030/0.029

6 month forward : 0.059/0.058

₹/$ Spot : 35.60/35.70

3 month forward : 0.15/0.25

6 month forward : 0.20/0.30

What rate will be the bank quote if it needs a margin of 0.5%? 5

(b) YANKEE LTD., an Indian company has an export exposure of 20 million Yen(¥) value at June-end. The Yen (¥) is not directly quoted against the Rupee. The current Spot rates are:

US$/IND ₹ : 51.79

US$/¥ : 139.75

It is estimated that the Yen (¥) will depreciate against the Dollar ($) to 144 and the Rupee will depreciate against the Dollar ($) to ₹ 53.

Forward rates for June are:

US$/¥ : 147.35

US$/IND ₹ : 54.89

Required:

(i) Calculate the expected loss if hedging is not done;

(ii) How will the position change with the company taking forward cover?

(iii) If the Spot rates on 30th June were eventually US $/¥ = 147.85 and US $/IND ₹ = 52.78, is the decision to take forward cover justified? 5

(c) Enumerate the motives for World trade and Foreign investments. 5

Answer: 7. (a)

We first calculate the forward rate [₹ / DM]. In the case of ₹ / $, since the swap points are in ascending order, we work out the outright forward rates by adding the swap points.

In the case of DM/ $ rates, since the swap points are in the descending order, we subtract the swap points.

The outright forward rates are given below:

DM/$:	Spot	1.584/1.585
	Three month forward	1.554 / 1.556
	Six month forward	1.525 /1.527
Rs/$:	Spot	35.60/35.70
	Three month forward	35.75 / 35.95
	Six month forward	35.80 / 36.00

We first need to calculate only Rs/ DM forward offer/ Ask rates. This is because, customer buys DM from the bank.

Ask [₹/DM] = Ask [₹/$] x Ask [$/DM]

Ask [₹/DM] = Ask [₹/ $] x Bid [1/(DM/$)] = 36 x [1/1.525] = ₹23.61/ DM.

Adding a margin of 0.5 %, the bank will quote a rate of [23.61] x [1+ 0.005] = ₹ 23.73 / DM.

Answer: 7. (b)

Since a direct quote for Yen and Rupee is not given, it is to be calculated by cross currency exchange rate.

Cross currency exchange rates are:

Ind ₹ / US $ x US $ / Yen ¥ = Ind ₹ / Yen ¥;
Or, (51.79 / 1) x (1 / 139.75) = 0.3706.

Spot rate on the date of Export =₹ 0.3706 = 1 ¥

Estimated rate on June: 1 ¥ = (53/144) = ₹ 0.3681

Actual rate on June: 1¥ = 52.78/147.85 = ₹ 0.3570

Forward rate of June: 1 ¥ = 54.89/147.35 = ₹ 0.3725

Calculations:

(i) Expected loss without hedging:

Value of export at the time of export = ₹ 0.3706 x ¥ 20 million = ₹ 74,12,000

Estimated payment to be received in June = ₹ 0.3681 x ¥ 20 million = ₹ 73,62,000

Expected Loss without forward cover = ₹ 73,62,000 - ₹ 74,12,000 = ₹ 50,000.

(ii) Hedging of loss under forward cover:

Rupee value of export on the date of export = 74,12,000

Payment received under forward cover = ₹ 0.3725 x ¥ 20 million = ₹ 74,50,000.

Expected profit if forward cover is taken = ₹ 74,50,000 – ₹ 74,12,000 = ₹ 38,000.

(iii) Since payment received under forward cover is higher at ₹ 74,50,000 vis-à-vis without any forward cover ₹ 71,40,000 (i.e. 0.3570 x 20 million) the decision to take forward cover is justified.

Answer: 7. (c)

The theories of comparative advantage, factor endowments, and product life cycle have been suggested as three major motives for foreign trade.

Theory of comparative advantage: This is the classical economic theory which explains why countries exchange their goods and services with each other. The underlying assumption is that some countries can produce some types of goods more efficiently than other countries.

Theory of factor endowments: Countries are endowed differently in their economic resources. Columbia is more efficient in the production of coffee and the US is more efficient in the production of computers. Columbia has oil. Weather, and abundant supply of unskilled labour necessary to produce coffee more economically than the US. Differences in these national factor endowments explain differences in comparative factor cost between the two countries.

Product life cycle: All products have a certain length of life. During this life they go through certain stages. PLC theory explains both world trade and foreign investments patterns on the basis of stages in a product's life.

Trade control: The possibility of foreign embargo on sales of certain products and the needs of national defense may cause some countries to seek self sufficiency in some strategic commodities. Political and military questions constantly affect international trade and international business operations. Tariffs, import quotas and other trade barriers are three means of protectionism.

8. Write short notes on (any three): 5x3=15

(a) Considerations while distributing the earnings.

(b) TRIPS.

(c) Impact of GDRs on Indian capital market.

(d) Currency Swaps and their variants.

Answer: 8. (a)

A firm takes into account the following considerations to determine the appropriate dividend policy:

1. **Investment opportunities:** Firms having substantial investment opportunities generally tend to maintain low payout ratio to conserve the resources for growth.
2. **Liquidity:** Payment of dividend is largely dictated by the amount of cash available what Modiglianni & Miller suggest. In the event of adversity in the capital market, the best interest of the shareholders' wealth might be advanced by making sure that cash is available for payment of dividend, by borrowing or by passing up otherwise beneficial investment opportunities.
3. **Control:** External financing unless through rights issue, leads to dilution of control. Thus, if major holders are averse to dilution of control the company tends to rely more on retained earnings and maintain low payout ratio.
4. **Clientele effect:** This shows that a company's dividend policy may depend on the preferred habits of the majority shareholders. If the dividend policy is not consistent with the preferences of majority shareholders many investors would want to dispose off their holdings in the company, causing the market price of shares to fall.
5. **Information content of dividends:** The changes in the level of dividends convey new information to the world. A shareholder might interpret large dividend also as the failure of management to find new investment opportunities for expansion.

Answer: 8. (b)

1. It is an international agreement administered for the first time by the world trade organization(WTO) into the international trading system.
2. It sets down minimum standard for many forms of intellectual property regulations.
3. Till date, it remains the most comprehensive international agreement on intellectual property.
4. It was negotiated at the end of Uruguay Round of the General Agreement on Tariffs and Trade (GATT) in 1994.

Answer: 8. (c)

Arbitrage possibility of GDR issues has created additional responsibility on the investors. Investors are now required to keep track of world-wise economic events and how the company's GDRs are being traded.

GDR can be issued for any price; therefore, retail investors can longer expect discounted rights or public issue.

It serves as an easy way for flow of huge volume of foreign funds into Indian capital market.

In February 2002, the government has allowed 'two way fungibility' of shares issued under the euro issues. Two- way fungibility means reissue of ADRs /GDRs in place of shares. Which were issued by way of conversions of ADR/ GDR. Regulations relating to GDR, in particular, are :

(i) Reissuance of GDR would be permitted to the extent of GDRs WHICH HAVE BEEN REDEEMED TO UNDERLYING SHARES.

(ii) Transactions would be effected through SEBI registered brokers and under the RBI guidelines.

(iii) Reissuance of GDR will take place through custodian.

(iv) For creation of GDR the Indian broker will purchase the shares from stock exchanges, for which money will come from overseas buyer.

(v) Overseas depositor will issue GDR to foreign investors.

Answer: 8. (d)

A currency swap converts a stream of cashflow from one currency to another without exchange rate risk; it enables a corporation to lower its borrowing costs in any desired currency. It, thus, converts borrowings to inexpensive financing in the desired currency.

In Currency Swap, both principal and interest payments in one currency are exchanged to another currency. An exchange of principal amounts in the beginning and re-exchange at termination is also possible. This may take the form of fixed to fixed, fixed to floating and floating to floating currency swaps.

1. Fixed to fixed currency swap: involves exchange of principals which are equivalent and denominated in different currencies, where both the parties make fixed payments to each other till the termination on specified date.
2. Fixed to floating currency swap: It is a combination of fixed to fixed and floating to floating currency swap.
3. Floating to floating currency swap: This involves both payments at floating rate but in different currencies.