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.

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) **[2x9=18]**

(i) What is the opportunity cost of not taking a discount, when the credit terms are 2/20 net 45? Assume 1 year = 360 days

A. 24.9%
B. 29.4%
C. 22.9%
D. 29.2%

(ii) E Limited has earnings before interest and taxes (EBIT) of ₹ 10 million at a cost of 7%., Cost of equity is 12.5%. Ignore taxes. Calculate the overall cost of capital.

A. 11.26%
B. 11.62%
C. 16.12%
D. 12.61%

(iii) S Limited earns ₹ 6 per share, has capitalisation rate of 10% and has a return on investment at the rate of 20%. According to Walter's model, calculate the price per share at 30% dividend payout ratio.

A. ₹120
B. ₹102
C. ₹112
D. ₹106

(iv) On January 1, 2014, X Limited's begining inventory was ₹4,00,000. During 2014, X Ltd. purchased ₹19,00,000 of additional inventory. On December 31, 2014, X Ltd.'s ending inventory was ₹5,00,000. Calculate the X Ltd.'s operating cycle in 2014, if it is assumed that the average collection period is 42 days.
(1 year =365 days).

A. 123.3 days
B. 132.3 days
C. 126.3 days
D. 133.3 days

(v) From the following, what is the amount of sales of A Ltd.? Financial Leverage — 3:1; Interest—₹200; Operating Leverage — 4 : 1; Variable Cost as a % of sales — 66.67%.

A. ₹3,600

B. ₹6,300

C. ₹6,030

D. ₹3,060

(vi) The dollar is currently trading at ₹40. If rupee depreciates by 10%, what will be the spot rate?

A. ₹0.0525

B. ₹0.0552

C. ₹0.0225

D. ₹0.0522

(vii) If the following rates are prevailing: Euro/$: 1.1916/1.1925 and $/£ : 1.42/1.47 what will be the corss rate between Euro/Pound?

A. 1.6921/1.750

B. 1.7530/1.6921

C. 1.6921/1.1925

D. 1.7530/1.1916

(viii) A company has expected Net Operating Income – ₹ 2,40,000; 10% Debt – ₹7,20,000 and Equity Capitalisation rate - 20% what is the weighted average cost of capital for the company?

A. 0.15385

B. 0.13585

C. 0.18351

D. 0.15531

(ix) The P/V ratio of a firm dealing in precision instruments is 50% and margin of safety is 40%. Calculate net profit, if the sales volume is ₹ 50,00,000.

A. ₹ 1,00,000

B. ₹ 5,00,000

C. ₹ 10,00,000

D. ₹ 6,00,000

(b) State if each of the following sentences is T (= true) or F (= false): [1×7=7]

(i) Deterministic model of financial planning yield multiple — point estimate.

(ii) Risk under transaction exposure can be minimized using Money Market Hedge.

(iii) Flexibility is one among the performance indicators of the organisation.

(iv) A project is a "One-shot" major undertaking.

(v) Fund Managers use futures as a more economical way of achieving their portfolio goals.

(vi) The profit or loss associated with converting foreign currency dominated assets/liabilities in reporting currency is called Economic Exposure.

(vii) TRIMs are the rules; a country applies to the domestic regulations to promote Foreign investment, often as a part of an Industrial Policy.

Part B (75 Marks)

2 (a). GMBH is in software development business. It has recently been awarded a contract from an Asian country for computerisation of its all offices and branches spread across the country. This will necessitates acquisition of a super computer at a total cost of ₹10 crore. The expected life of computer is 5 years. The scrap value is estimated at ₹5 crore. However, this value could even be much lower depending upon the developments taking place in the field of computer technology.

A leasing company has offered a lease contract will total lease rent of ₹1.5 crore per annum for 5 years payable in advance with all maintenance costs being borne by lessee.

The other option available is to purchase the computer by taking loan from the bank with variable interest payment payable semi-annually in arrears at a margin of 1% per annum above MIBOR. The MIBOR forecast to be at a flat effective rate of 2.4% for each 6 month period, for the duration of loan.

Tax rate applicable to corporation is 30%. For taxation purpose depreciation on computer is allowed at 20% as per WDV method, with a delay of 1 year between the tax depreciation allowance arising and deduction from tax paid & capital gain tax arising on sale of computer. You *are* required to calculate:

I. Compound annualised post tax Cost of Debt.

II. NPV of lease payment v/s purchase decisions at discount rate of 5% & 6%.

III. The break even post tax Cost of debt at which corporation will be indifferent between leasing and purchasing the computer.

IV. Which option should be opted for? **[1+(3+4)+1+1]**

2 (b). List the relevance of Social Cost Benefit Analysis for Private Enterprise. **[5]**

3 (a). List out the steps involved to determine the financial viability of a project. **[4]**

3 (b). The following data is available for Bajaj Ltd.:

Sales	₹ 2,00,000
Less : Variable cost @30%	60,000
Contribution	1,40,000
Less : Fixed Cost	1,00,000
EBIT	40,000
Less : Interest	5,000
Profit before tax	35,000

Find out:

(i) Using the concept of financial leverage, by what percentage will the taxable income increase if EBIT increase by 6%?

(ii) Using the concept of operating leverage, by what percentage will EBIT increase if there is 10% increase in sales, and

(iii) Using the concept of leverage, by what percentage will the taxable income increase if the sales increase by 6%? Also verify results in view of the above figures.

[2×3=6]

3 (c). The following figures are collected from the annual report of XYZ Ltd:

	₹
Net Profit	30 lakhs
Outstanding 12% preference shares	100 lakhs
No. of equity shares	3 lakhs
Return on Investment	20%
Cost of Equity	16%

What should be the approximate dividend pay-out ratio so as to keep the share price at ₹ 48 by using Walter's model? **[5]**

4 (a). The Directors of Grasswood Ltd. present you with the Balance sheets as on 30th June, 2013 and 2014 and ask you to prepare statements which will show them what has happened to the money which came into the business during the year 2014.

Liabilities :	**30.6.13**	**30.6.14**
Authorised capital 15,000 shares of ₹ 100 each	15,00,000	15,00,000
Paid up capital	10,00,000	14,00,000
Debentures (2014)	4,00,000	—
General Reserve	60,000	40,000
P & L Appropriation A/c	36,000	38,000
Provision for the purpose of final dividends	78,000	72,000
Sundry Trade Creditors	76,000	1,12,000
Bank Overdraft	69,260	1,29,780
Bills Payable	40,000	38,000
Loans on Mortgage	—	5,60,000
	17,59,260	**23,89,780**
Assets :		
Land & Freehold Buildings	9,00,000	9,76,000
Machinery and Plant	1,44,000	5,94,000
Fixtures and Fittings	6,000	5,500
Cash in hand	1,560	1,280
Sundry Debtors	1,25,600	1,04,400
Bills Receivable	7,600	6,400
Stock	2,44,000	2,38,000
Prepayments	4,500	6,200
Share in other companies	80,000	2,34,000
Goodwill	2,40,000	2,20,000
Preliminary expenses	6,000	4,000
	17,59,260	**23,89,780**

You are given the following additional information:

A. Depreciation has been charged (i) on Freehold Buildings @ 2½% p.a. on cost ₹ 10,00,000. (ii) on Machinery and plant ₹ 32,000 (iii) on Fixtures and Fittings @5% on cost, ₹ 10,000. No depreciation has been written off on newly acquired Building and Plant and Machinery.

B. A piece of land costing ₹ 1,00,000 was sold in 2014 for ₹ 2,50,000. The sale proceeds were credited to Land and Buildings.

C. Shares in other companies were purchased and dividends amounting to ₹ 6,000 declared out of profits made prior to purchase has received and use to write down the investment (shares).

D. Goodwill has been written down against General Reserve.

E. The proposed dividend for the year ended 30th June 2013 was paid and, in additions, an interim dividend, ₹ 52,000 were paid. **[10]**

4 (b). Describe are the basic elements of joint venture? **[5]**

5 (a). A company requires ₹ 20 lacs and provides the following information:

- Target Debt Equity Ratio = 3:2
- K_d = 12%, for the first 4 lacs and 12.5% for the balance
- EPS for the current year ₹ 20 per share
- Dividend payout ratio 60%, growth rate 5%
- Current MPS ₹ 90. Flotation Cost ₹ 6 each
- Present Equity Share Capital ₹ 2 lacs, divided into fully paid shares of ₹ 10 each.
- Corporate Tax Rate 30%.

Calculate weighted Marginal Cost of Capital. **[8]**

5 (b). Zenith Ltd. currently has an annual turnover of ₹ 20 lakhs and an average collection period of 4 weeks. The company propose to introduce a more liberal credit policy which they hope will generate additional sales, as shown below:

	Additional Collection Period	**Sales**	**default**
1	2 Weeks	2,00,000	2%
2	4 Weeks	2,50,000	3%
3	6 Weeks	3,50,000	5%
4	8 Weeks	5,00,000	8%

The selling price of the product is ₹ 10 and the variable cost per unit is ₹ 7.

The current bad debt loss is 1 % and the desired rate of return on investment is 20%. For the purpose of calculation, a year is to be taken to comprise of 52 weeks. Indicate which of the above policies you would recommend the company to adopt. **[7]**

6 (a). The following data relates to ABC Ltd.'s share prices:

Current price per share	₹ 180
Price per share in the 6m futures market:	₹ 195

It is possible to borrow money in the market for securities transactions at the rate of 12% per annum.

Required:

I. Calculate the theoretical minimum price of a 6-month futures contract.

II. Explain if any arbitrage opportunities exist. **[2+5]**

6 (b). Nifty Index is currently quoting at 1300. Each lot is 250. Mr. X purchases a March contract at 1300. He has been asked to pay 10% initial margin. Calculate the amount of initial margin. To what level Nifty futures should rise to get a percentage gain of 5%. **[1+2]**

6 (c). The annual interest rate is 5% in the United States and 8% in the UK. The spot exchange rare is £/$ -1.50 and forward exchange rate, with one year maturity, is £/$ = 1.48 In view of the fact that arbitrager can be borrow $ 1000000 at current spot rate, calculate the arbitrageur profit/ loss? **[5]**

7 (a). For imports from UK, Philadelphia Ltd. of USA owes £650000 to London Ltd., payable on May, 2014. It is now 12 February, 2015. The following future contracts (contract size £62,500) are available on the Philadelphia exchange:

Expiry	Current futures rate
May	1.4900 $/£ 1
June	1.4960 $/£ 1

I. Illustrate how Philadelphia Ltd. can use future contracts to reduce the transaction risk if, on 20 May the spot rate is 1.5030 $/£ 1 and June futures are trading at 1.5120 $/£. The spot rate on 12 February is 1.4850 $/£ 1.

II. Calculate the hedge efficiency and comment on it. **[8+2]**

7 (b). State currency futures? List the steps involved in the technique of hedging through futures. **[5]**

8 (a). 'Fixed Costs are unrelated to output and irrelevant for decision making purpose in all circumstances'.- Justify. **[3]**

8 (b). A company wants to invest in a machinery that would cost ₹ 50,000 at the beginning of year 1. It is estimated that the net cash inflows from operations will be ₹18,000 per annum for 3 years; if the company opts to service a part of the machine at the end of year 1 at ₹10,000 and the scrap value at the end of year 3 will be ₹12,500. However, of the company decides not to services the part, it will have to be replaced at the end of year 2 at ₹15,400. But in this case, the machine will work for the 4th year also and get operational cash inflow of ₹18,000 for the 4th year. It will have to be scrapped at the end of year 4 at ₹9,000. Assuming cost of capital at 10% and ignoring taxes, will you recommend the purchase of this machine based on the net present value of its cash flows?

If the supplier gives a discount of ₹ 5,000 for purchase, what would be your decision? (The present value factors at the end of years 0, 1, 2, 3, 4, 5 and 6 are respectively 1, 0.9091, 0.8264, 0.7513, 0.6830, 0.6209 and 0.5644). **[5+2]**

8 (c). S Ltd. has ₹ 10,00,000 allocated for capital budgeting purposes. The following proposals and associated profitability indexes have been determined: **[5]**

Project	Amount (₹)	Profitability Index
1	3,00,000	1.22
2	1,50,000	0.95
3	3,50,000	1.20
4	4,50,000	1.18
5	2,00,000	1.20
6	4,00,000	1.20

Advice which of the above investment should be undertaken. Assume that projects are indivisible and there is no alternative use of the money allocated for capital budgeting.