Paper-12: FINANCIAL MANAGEMENT & INTERNATIONAL FINANCE

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

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

Working notes should form a part of the answer

"Wherever necessary, suitable assumptions should be made and indicated in answers by the candidates"

PART A (25 Marks)

1.(a) For each of the questions given below, one out of four answers is correct. Indicate the correct answer and give your workings/ reasons briefly. **[5 × 3=15]**

(i) Calculate the price of 3 months ADS futures, if ADS (FV ₹10) quotes ₹ 440 on NSE and 3 months future price quotes at ₹430 and the 1 month borrowing rate is given as 15% and the expected annual dividend yield is 25% per annum payable before expiry.

(A) ₹ 454
(B) ₹ 464
(C) ₹ 444
(D) ₹ 450

(ii) RBI sold a 91 days T-Bill of face value of ₹ 100 at an yield of 7%. What was the issue price?

(A) ₹ 98.00
(B) ₹ 98.08
(C) ₹ 98.18
(D) ₹ 98.28

(iii) A one day repo is entered into on Jan 10, 2013 on an 11.99% 2014 security, maturing on April 7, 2014. The face value of the transaction is ₹ 5 Crores. The price of the security is ₹ 115.00. Assume that RBI has lent securities in the first leg to PNB. If the repo rate is 6%, what is the settlement amount on Jan 10, 2013? [Use 360 days convention]

(A) ₹ 5,90,45,161
(B) ₹ 5,90,55,261
(C) ₹ 5,90,65,361
(D) ₹ 5,90,75,461

(iv) 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 ₹ 12,50,000.

(A) ₹ 25,000
(B) ₹ 1,25,000
(C) ₹ 2,50,000
(D) ₹ 1,50,000

(v) The value of a share of MN Ltd. after right issue was found to be ₹75/-. The theoretical value of the right is ₹ 5. The number of existing shares required for a rights share is 2. The subscription price at which were issued were:
(A) ₹ 22.50
(B) ₹ 40.00
(C) ₹ 65.00
(D) ₹ 82.00

(b) Write if each of the following sentences is T (true) or F (false) [5]

(i) While designing the capital structure of a business the earnings capacity becomes a less important factor than the each flow ability.

(ii) An operating lease is one where a significant part of risk-bearing burden is on the lessee.

(iii) Swapping from fixed to floating may save the original borrower if interest rates decline.

(iv) LIBOR for treasury bill rate is the example of basis swaps.

(v) TRIPS are the international agreement on intellectual property rights.

PART B (75 MARKS)

2. (a) Y Ltd. is foreseeing a growth rate of 14% per annum in the next 2 years. The growth rate is likely to fall to 10% for the third year and fourth year. After that the growth rate is expected to stabilize at 8% per annum. If the last dividend paid was ₹ 1.50 per share and the investors' required rate of return is 16%, find out the intrinsic value per share of Y Ltd. as of date. You may use the following table:

Years	0	1	2	3	4	5
Discounting Factor at 16%	1	0.86	0.74	0.64	0.55	0.48

[8]

(b) A firm's sales, variable costs and fixed cost amount to ₹ 37,50,000, ₹ 21,00,000 and ₹ 3,00,000 respectively. It has borrowed ₹ 22,50,000 at 9% and its equity capital totals ₹ 27,50,000.

i. What is the firm's ROI?

ii. Does it have favourable financial leverage?

iii. If the firm belongs to an industry whose asset turnover is 3, does it have a high or low asset leverage?

iv. What are the operating, financial and combined leverages of the firm? [1+1+1+3]

3. (a) The present capital structure of a company is as follows:

	₹(million)
Equity share (Face value = ₹10)	240
Reserves	360
11% Preference shares (Face value =₹10)	120

12% Debentures	120
14% Term Loans	360
	1,200

Additionally the following information are available:

Company's equity beta	1.05
Yield on long-term treasury bonds	10%
Stock market risk premium	6%
Current ex-dividend equity share price	₹15
Current ex-dividend preference share price	₹12
Current ex-interest debenture market value ₹102.50 per	₹100
Corporate tax rate	40%

The debentures are redeemable after 3 years and interest paid annually. Ignoring floatation costs, calculate the company's weighted average cost of capital (WACC). **[8]**

(b) A Ltd. has present annual sales of 5,000 units at ₹600 per unit. The variable cost is ₹400 per unit and the fixed costs amount to ₹3,00,000 per annum. The present credit period allowed by the company is 1 month. The company is considering a proposal to increase the credit period to 2 months and 3 months and has made the following estimates:

	Existing	Proposed	
Credit Policy	1 month	2 months	3 months
Increase in sales	-	20%	30%
% of bad debts	1%	3%	5%

There will be increase in fixed cost by ₹ 50,000 on account of increase of sales beyond 25% of present level. The company plans on a pre-tax return of 20% on investment in receivables.

You are required to calculate the most viable credit policy for the company. **[7]**

4. (a) The following information has been extracted from the records of a company:

Product Cost sheet	₹/ unit
Raw Materials	45
Direct labour	20
Overheads	40
Total	105
Profit	15

Selling Price	**120**

- **Raw materials are in stock on an average of two months.**
- **The materials are in process on an average for 4 weeks. The degree of completion is 50%.**
- **Finished goods stock on an average is for one month.**
- **Time lag in payment of wages and overheads is $1^1/_2$ weeks.**
- **Time lag in receipt of proceeds from debtors is 2 months.**
- **Credit allowed by suppliers is one month.**
- **20% of the output is sold against cash.**
- **The company expects to keep a cash balance of ₹2,00,000.**
- **Take 52 weeks per annum.**

The company is poised for a manufacture of 1,50,000 units in the year. You are required to prepare a statement showing the Working Capital requirements of the Company. [7]

(b) ABC Limited has decided to go in for a new model of Mercedes Car. The cost of the vehicle is 40 lakhs. The company has two alternatives: (i) taking the car on finance lease or (ii) borrowing and purchasing the car.

BMN Limited is willing to provide the car on finance lease to ABC Limited for five years at an annual rental of ₹ 8.75 lakhs, payable at the end of the year.

The vehicle is expected to have useful life of 5 years, and it will fetch a net salvage value of 10 lakhs at the end of year five. The depreciation rate for tax purpose is 40% on written-down value basis. The applicable tax rate for the company is 35%. The applicable before tax borrowing rate for the company is 13.8462%.

What is the net advantage of leasing for ABC Limited?

The present value interest factor at different rates of discount are as under:

Rate of Discount	Y-1	Y-2	Y-3	Y-4	Y-5
0.138462	0.8784	0.7715	0.6777	0.5953	0.5229
0.09	0.9174	0.8417	0.7722	0.7084	0.6499

[8]

5. A large profit making company is considering the installation of a machine to process the waste produced by one of its existing manufacturing process to be converted into a marketable product. At present, the waste is removed by a contractor for disposal on payment ₹60 lakhs per annum for the next four years. The contract can be terminated upon installation of the aforesaid machine on payment of a compensation of ₹30 lakhs before the processing operation starts. This compensation is not allowed as deduction for tax purposes.

The machine required for carrying out the processing will cost ₹200 lakhs to be financed by a loan repayable in 4 equal instalments commencing from the end of year 1. The interest rate is 16% per annum. At the end of the 4th year, the machine can be sold for ₹ 20 lakhs and the cost of dismantling and removal will be ₹15 lakhs.

Sales and direct costs of the product emerging from waste processing for 4 years are estimated as under:

(₹ in lakhs)

Year	1	2	3	4
Sales	322	322	418	418
Material consumption	30	40	85	85
Wages	75	75	85	85
Other Expenses	40	45	54	70
Factory Overheads	55	60	110	145
Depreciation (as per income-tax rules)	50	38	28	21

Initial stock of materials required before commencement of the processing operations is ₹ 20 lakhs at the start of year 1. The stock levels of materials to be maintained at the end of year 1, 2 and 3 will be ₹ 55 lakhs and the stock at the end of year 4 will be nil. The storage of materials will utilize space which would otherwise have been rented out for ₹10 lakhs per annum. Labour costs include wages of 40 workers, whose transfer to this process will reduce idle time payments of ₹15 lakhs in year 1 and ₹ 10 lakhs in year 2. Factory overheads include apportionment of general factory overheads except to the extent of insurance charges of ₹30 lakhs per annum payable on this venture. The company's tax rate is 35%.

Present value factors for four years are as under:

Year	1	2	3	4
Present value factors	0.870	0.756	0.658	0.572

Advise the management on the desirability of installing the machine for processing the waste. All calculations should form part of the answer. [15]

6. (a) Define Swap. State the reasons why swaps are becoming popular. [1+4]

 (b) Write short note on trading blocks. [5]

 (c) Explain the major functions and features of WTO. [5]

7. (a) (i) The rate of inflation in USA is likely to be 3% per annum and in India it is likely to be 6.5%. The current spot rate of US $ in India is ₹ 43.40. Find the expected rate of US $ in India after 1 year and 3 years from now using purchasing power parity theory.

 (ii) On April1, 3 months interest rate in the UK £ and US $ are 7% and 3% per annum respectively. The UK £ /US $ spot rate is 0.7570. What would be the forward rate for US $ for delivery on 30th June? [4+3]

(b) The following market data is available:

Spot USD/JPY 116

Deposit rates p.a.	USD	JPY
3 months	4.50%	0.25%
6 months	5.00%	0.25%

Forward Rate Agreement (FRA) FOR Yen is Nil.

1. **The 6&12 months LIBORS are 5% & 6.5% respectively. A bank is quoting 6/12 USD FRA at 6.50-6.75%. Is any arbitrage opportunity available?**

   Calculate profit in such case. [8]

8. A local record company is considering an investment in a new ₹40,000 CD-pressing machine so that it can start making CDs .The machine has an economic life of 5 years and it is depreciated by a straight-line method towards a zero salvage value. The company currently faces a cost of capital of 12%, and its corporate tax rate is 35%. The financial manager knows that there are 20%, 70% and 10% chances that the best case, normal case and worst case scenarios will take place.

	Best	Normal	Worst
CD unit sales	3,000	2,400	1,800
Price per CD	₹18	₹16	₹11
Variable cost	₹8	₹9	₹10
Machine modification cost	₹3,000	₹3,700	₹4,200

Calculate the NPV of the project for each of the three scenarios. What is your conclusion about the project? [15]