Roll No. .....

Total No. of Questions – **7** Total No. of Printed Pages – **8**

Time Allowed – **3** Hours Maximum Marks – **100**

GDP

Answers to questions are to be given in English except in the case of candidates who have opted for Hindi Medium. If a candidate who has not opted for Hindi medium his answers in Hindi will not be valued.

Question No. **1** is compulsory.

Attempt any **five** from the rest.

Working Notes should form part of the answer.

Marks

1. (a) Mr. Tamarind intends to invest in equity shares of a company the value of which depends upon various parameters as mentioned below : **5**

Factor	Beta	Expected value in %	Actual value in %
GNP	1.20	7.70	7.70
Inflation	1.75	5.50	7.00
Interest rate	1.30	7.75	9.00
Stock market index	1.70	10.00	12.00
Industrial production	1.00	7.00	7.50

If the risk free rate of interest be 9.25%, how much is the return of the share under Arbitrage Pricing Theory ?

(b) The current market price of an equity share of Penchant Ltd is ₹ 420. Within a period of 3 months, the maximum and minimum price of it is expected to be ₹ 500 and ₹ 400 respectively. If the risk free rate of interest be 8% p.a., what sh ... tral' m ... **5**

(c) A Mutual Fund is holding the following assets in ₹ Crore : 5

Investments in diversified equity shares	90.00
Cash and Bank Balances	10.00
	100.00

The Beta of the portfolio is 1.1. The index future is selling at 4300 level. The Fund Manager apprehends that the index will fall at the most by 10%. How many index futures he should short for perfect hedging so that the portfolio beta is reduced to 1.00 ? One index future consists of 50 units.

Substantiate your answer assuming the Fund Manager's apprehension will materialize.

(d) Mr. Tempest has the following portfolio of four shares : 5

Name	Beta	Investment ₹ Lac.
Oxy Rin Ltd.	0.45	0.80
Boxed Ltd	0.35	1.50
Square Ltd	1.15	2.25
Ellipse Ltd	1.85	4.50

The risk free rate of return is 7% and the market rate of return is 14%.

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(ii) Calculate the portfolio Beta.

Marks

2. (a) X Ltd had only one water pollution control machine in this type of block of asset, with no book value under the provisions of the Income Tax Act. 1961 as it was subject to rate of depreciation of 100% in the very first year of installation. **8**

Due to funds crunch, X Ltd decided to sell the machine which can be sold in the market to anyone for ₹ 5,00,000 easily.

Understanding this from a reliable source, Y Ltd came forward to buy the machine for ₹ 5,00,000 and lease it to X Ltd for lease rental of ₹ 90,000 p.a. for 5 years. X Ltd decided to invest the net sale proceed in a risk free deposit, fetching yearly interest of 8.75% to generate some cash flow. It also decided to relook the entire issue afresh after the said period of 5 years.

Another company, Z Ltd also approached X Ltd proposing to sell a similar machine for ₹ 4,00,000 to the latter and undertook to buy it back at the end of 5 years for ₹ 1,00,000 provided the maintenance were entrusted to Z Ltd for yearly charge of ₹ 15,000. X Ltd would utilise the net sale proceeds of the old machine to fund this machine also should it accept this offer.

The marginal rate of tax of X Ltd is 34% and its weighted average cost of capital is 12%.

Which Alternative would you recommend ?
Discounting Factors @ 12%

Marks

(b) A … for **8**
a time horizon of one year. The prevalent interest rates are as follows :

Company	¥ Loan	$ Loan
A Inc	5%	9%
B Inc	8%	10%

The prevalent exchange rate is $1 = ¥120.

They entered in a currency swap under which it is agreed that B Inc will pay A Inc @ 1% over the ¥ Loan interest rate which the later will have to pay as a result of the agreed currency swap whereas A Inc will reimburse interest to B Inc only to the extent of 9%. Keeping the exchange rate invariant, quantify the opportunity gain or loss component of the ultimate outcome, resulting from the designed currency swap.

3. (a) Abhiman Ltd is a subsidiary of Janam Ltd and is acquiring Swabhiman Ltd which is also a subsidiary of Janam Ltd. The following information is given : **8**

	Abhiman Ltd	Swabhiman Ltd
% Shareholding of promoter	50%	60%
Share capital	₹ 200 lacs	100 lacs
Free Reserves and surplus	₹ 900 lacs	600 lacs
Paid up value per share	₹ 100	10
Fr…		
P/…		

Janam Ltd., is interested in doing justice to both companies. The following parameters have been assigned by the Board of Janam Ltd., for determining the swap ratio :

Book value	25%
Earning per share	50%
Market price	25%

You are required to compute

(i) The swap ratio.

(ii) The book value, Earning per share and expected market price of Swabhiman Ltd., (assuming P/E Ratio of Abhiman ratio remains the same and all assets and liabilities of Swabhiman Ltd are taken over at book value)

(b) Jumble Consultancy Group has determined relative utilities of cash flows of two forthcoming projects of its client company as follows : **8**

Cash Flow in ₹	– 15000	– 10000	– 4000	0	15000	10000	5000	1000
Utilities	– 100	– 60	– 3	0	40	30	20	10

The distribution of cash flows of project A and Project B are as follows :

Project A

Cash Flow (₹)	– 15000	– 10000	15000	10000	5000
Probability	0.10	0.20	0.40	0.20	0.10
Project B					
Cash Flow (₹)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Probability	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Which project should be selected and why ?

4. (a) Shares of Voyage Ltd are being quoted at a price earning ratio of 8 times. The company retains 45% of its earnings which are ₹ 5 per share. 8(3+3+2)

You are required to compute

(1) The cost of equity to the company if the market expects a growth rate of 15% pa.

(2) If the anticipated growth rate is 16% per annum, calculate the indicative market price with the same cost of capital.

(3) If the company's cost of capital is 20% pa and the anticipated growth rate is 19% pa., calculate the market price per share.

(b) An investor purchased 300 units of a Mutual Fund at ₹ 12.25 per unit on 31st December, 2009. As on 31st December, 2010 he has received ₹ 1.25 as dividend and ₹ 1.00 as capital gains distribution per unit. 8

Required :

(i) The return on the investment if the NAV as on 31st December, 2010 is ₹ 13.00.

(ii) The return on the investment as on 31st December, 2010 if all dividends and capital gains distributions are reinvested into additional units of the fund at ₹ 12.50 per unit.

5. (a) Simple Ltd and Dimple Ltd are planning to merge. The total value of the 8

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of the

two companies.

Marks

Business Condition	Probability	Simple Ltd ₹ Lacs	Dimple Ltd ₹ Lacs
High Growth	0.20	820	1050
Medium Growth	0.60	550	825
Slow Growth	0.20	410	590

The current debt of Dimple Ltd is ₹ 65 lacs and of Simple Ltd is ₹ 460 lacs.

Calculate the expected value of debt and equity separately for the merged entity.

(b) Tender Ltd has earned a net profit of ₹ 15 lacs after tax at 30%. Interest cost charged by financial institutions was ₹ 10 lacs. The invested capital is ₹ 95 lacs of which 55% is debt. The company maintains a weighted average cost of capital of 13%. Required, 8

(a) Compute the operating income.

(b) Compute the Economic Value Added (EVA).

(c) Tender Ltd has 6 lac equity shares outstanding. How much dividend can the company pay before the value of the entity starts declining ?

6. (a) The following information is given for QB Ltd. 8

Earning per share	₹ 12
Dividend per share	₹ 3
Cost of capital	18%
Internal Rate of Return on investment	22%
Retention Ratio	40%

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(i)

(ii) Walters formula

Marks

(b) (i) Mention the functions of a stock exchange. 8(4+4)

(ii) Mention the various techniques used in economic analysis.

7. Answer any **four** from the following : 4 × 4 = 16

(a) Explain the significance of LIBOR in international financial transactions.

(b) Discuss how the risk associated with securities is effected by Government policy.

(c) What is the meaning of :

(i) Interest rate parity and

(ii) Purchasing power parity ?

(d) What is the significance of an underlying in relation to a derivative instrument ?

(e) What are the steps for simulation analysis ?