

Roll No.

Total No. of Questions – 7

Total No. of Printed Pages – 11

Time Allowed – 3 Hours

Maximum Marks – 100

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

Question No. 1 is compulsory.

Attempt any five questions from the remaining six questions.

Wherever appropriate, suitable assumption/s should be made and indicated in answer by the candidate.

Working notes should form part of the answer.

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1. (a) A Bank sold Hong Kong Dollars 40,00,000 value spot to its customer at ₹ 7.15 and covered itself in London Market on the same day, when the exchange rates were :

US\$ = HK\$ 7.9250 7.9290

Local interbank market rates for US\$ were

Spot US\$ 1 = ₹ 55.00 55.20

You are required to calculate rate and ascertain the gain or loss in the transaction. Ignore brokerage.

You have to show the calculations for exchange rate up to four decimal points.

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- (b) ABC Limited is considering acquisition of DEF Ltd., which has 3.10 crore shares issued and outstanding. The market price per share is ₹ 440,00 at present. ABC Ltd.'s average cost of capital is 12%. The cash inflows of DEF Ltd. for the next three years are as under :

Year	₹ in crores
1	460.00
2	600.00
3	740.00

You are required to calculate the range of valuation that ABC Ltd. has to consider.

Take P.V.F. (12%, 3) = 0.893, 0.797, 0.712

- (c) Ramesh owns a plot of land on which he intends to construct apartment units for sale. No. of apartment units to be constructed may be either 10 or 15. Total construction costs for these alternatives are estimated to be ₹ 600 lakhs or ₹ 1025 lakhs respectively. Current market price for each apartment unit is ₹ 80 lakhs. The market price after a year for apartment units will depend upon the conditions of market. If the market is buoyant, each apartment unit will be sold for ₹ 91 lakhs, if it is sluggish, the sale price for the same will be ₹ 75 lakhs. Determine the current value of vacant plot of land. Should Ramesh start construction now or keep the land vacant ? The yearly rental per apartment unit is ₹ 7 lakhs and the risk free interest rate is 10% p.a.

Assume that the construction cost will remain unchanged.

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- (d) XYZ Limited borrows £ 15 Million of six months LIBOR + 10.00% for a period of 24 months. The company anticipates a rise in LIBOR, hence it proposes to buy a Cap Option from its Bankers at the strike rate of 8.00%. The lump sum premium is 1.00% for the entire reset periods and the fixed rate of interest is 7.00% per annum. The actual position of LIBOR during the forthcoming reset period is as under :

Reset Period	LIBOR
1	9.00%
2	9.50%
3	10.00%

You are required to show how far interest rate risk is hedged through Cap Option.

For calculation, work out figures at each stage up to four decimal points and amount nearest to £. It should be part of working notes.

2. (a) XYZ Ltd. is planning to procure a machine at an investment of ₹ 40 lakhs. 8
The expected cash flow after tax for next three years is as follows :

₹ (in lakh)					
Year - 1		Year - 2		Year-3 -	
CFAT	Probability	CFAT	Probability	CFAT	Probability
12	.1	12	.1	18	.2
15	.2	18	.3	20	.5
18	.4	30	.4	32	.2
32	.3	40	.2	45	.1

The Company wishes to consider all possible risks factors relating to the machine.

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The Company wants to know :

- (i) the expected NPV of this proposal assuming independent probability distribution with 7% risk free rate of interest.
- (ii) the possible deviations on expected values.

(b) On January 1, 2013 an investor has a portfolio of 5 shares as given below :

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Security	Price	No. of Shares	Beta
A	349.30	5,000	1.15
B	480.50	7,000	0.40
C	593.52	8,000	0.90
D	734.70	10,000	0.95
E	824.85	2,000	0.85

The cost of capital to the investor is 10.5% per annum.

You are required to calculate :

- (i) The beta of his portfolio.
- (ii) The theoretical value of the NIFTY futures for February 2013.
- (iii) The number of contracts of NIFTY the investor needs to sell to get a full hedge until February for his portfolio if the current value of NIFTY is 5900 and NIFTY futures have a minimum trade lot requirement of 200 units. Assume that the futures are trading at their fair value.

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- (iv) The number of future contracts the investor should trade if he desires to reduce the beta of his portfolios to 0.6.

No. of days in a year be treated as 365.

Given : $\ln(1.105) = 0.0998$

$$e^{(0.015858)} = 1.01598$$

3. (a) Mr. Suhail has invested in three Mutual Fund Schemes as given below :

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Particulars		Scheme A	Scheme B	Scheme C
Date of investment		1-4-2011	1-5-2011	1-7-2011
Amount of Investment	₹	12,00,000	4,00,000	2,50,000
Net Asset Value (NAV) at entry date	₹	10.25	10.15	10.00
Dividend received up to 31-7-2011	₹	23,000 ✓	6,000	Nil
NAV as at 31-7-2011	₹	10.20	10.25	9.90

You are required to calculate the effective yield on per annum basis in respect of each of the three Schemes to Mr. Suhail up to 31-7-2011.

Take one year = 365 days.

Show calculations up to two decimal points.

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- (b) ABC Limited has a capital of ₹ 10 lakhs in equity shares of ₹ 100 each. The shares are currently quoted at par. The company proposes to declare a dividend of ₹ 15 per share at the end of the current financial year. The capitalisation rate for the risk class of which the company belongs is 10%. What will be the market price of share at the end of the year, if

- (i) a dividend is declared ?
- (ii) a dividend is not declared ?
- (iii) assuming that the company pays the dividend and has net profits of ₹ 6,00,000 and makes new investment of ₹ 12,00,000 during the period, how many new shares should be issued ? Use the MM model.

4. (a) X Limited, just declared a dividend of ₹ 14.00 per share. Mr. B is planning to purchase the share of X Limited, anticipating increase in growth rate from 8% to 9%, which will continue for three years. He also expects the market price of this share to be ₹ 360.00 after three years.

You are required to determine :

- (i) the maximum amount Mr. B should pay for shares, if he requires a rate of return of 13% per annum. 4
- (ii) the maximum price Mr. B will be willing to pay for share, if he is of the opinion that the 9% growth rate can be maintained indefinitely and require 13% rate of return per annum. 2

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- (iii) the price of share at the end of three years, if 9% growth rate is achieved and assuming other conditions remaining same as in (ii) above. 2

Calculate rupee amount up to two decimal points.

	Year-1	Year-2	Year-3
FVIF @ 9%	1.090	1.188	1.295
FVIF @ 13%	1.130	1.277	1.443
PVIF @ 13%	0.885	0.783	0.693

- (b) On 1-4-2012 ABC Mutual Fund issued 20 lakh units at ₹ 10 per unit. 8
Relevant initial expenses involved were ₹ 12 lakhs. It invested the fund so raised in capital market instruments to build a portfolio of ₹ 185 lakhs. During the month of April 2012 it disposed off some of the instruments costing ₹ 60 lakhs for ₹ 63 lakhs and used the proceeds in purchasing securities for ₹ 56 lakhs. Fund management expenses for the month of April 2012 was ₹ 8 lakhs of which 10% was in arrears. In April 2012 the fund earned dividends amounting to ₹ 2 lakhs and it distributed 80% of the realized earnings. On 30-4-2012 the market value of the portfolio was ₹ 198 lakhs.

Mr. Akash, an investor, subscribed to 100 units on 1-4-2012 and disposed off the same at closing NAV on 30-4-2012. What was his annual rate of earning ?

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5. (a) M/s. Earth Limited has 11% bond worth of ₹ 2 crores outstanding with 10 years remaining to maturity. 6

The company is contemplating the issue of a ₹ 2 crores 10 year bond carrying the coupon rate of 9% and use the proceeds to liquidate the old bonds.

The unamortized portion of issue cost on the old bonds is ₹ 3 lakhs which can be written off no sooner the old bonds are called. The company is paying 30% tax and its after tax cost of debt is 7%. Should Earth Limited liquidate the old bonds?

You may assume that the issue cost of the new bonds will be ₹ 2.5 lakhs and the call premium is 5%.

- (b) XY Limited is engaged in large retail business in India. It is contemplating for expansion into a country of Africa by acquiring a group of stores having the same line of operation as that of India. 10

The exchange rate for the currency of the proposed African country is extremely volatile. Rate of inflation is presently 40% a year. Inflation in India is currently 10% a year. Management of XY Limited expects these rates likely to continue for the foreseeable future.

Estimated projected cash flows, in real terms, in India as well as African country for the first three years of the project are as follows :

	Year-0	Year-1	Year-2	Year-3
Cash flows in Indian ₹ (000)	- 50,000	- 1,500	- 2,000	- 2,500
Cash flows in African Rands (000)	- 2,00,000	+ 50,000	+ 70,000	+ 90,000

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XY Ltd. assumes the year 3 nominal cash flows will continue to be earned each year indefinitely. It evaluates all investments using nominal cash flows and a nominal discounting rate. The present exchange rate is African Rand 6 to ₹ 1.

You are required to calculate the net present value of the proposed investment considering the following :

- (i) African Rand cash flows are converted into rupees and discounted at a risk adjusted rate.
- (ii) All cash flows for these projects will be discounted at a rate of 20% to reflect it's high risk.
- (iii) Ignore taxation.

	Year-1	Year-2	Year-3
PVIF @ 20%	.833	.694	.579

6. (a) Longitude Limited is in the process of acquiring Latitude Limited on a share exchange basis. Following relevant data are available : 8

		Longitude Limited	Latitude Limited
Profit after Tax (PAT)	₹ in Lakhs	140	60
Number of Shares	Lakhs	15	16
Earning per Share (EPS)	₹	8	5
Price Earnings Ratio (P/E Ratio)		15	10

(Ignore Synergy)

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You are required to determine :

- (i) Pre-merger Market Value per Share, and
- (ii) The maximum exchange ratio Longitude Limited can offer without the dilution of

(1) EPS and

(2) Market Value per Share

Calculate Ratio/s up to four decimal points and amounts and number of shares up to two decimal points.

- (b) M/s. Parker & Co. is contemplating to borrow an amount of ₹ 60 crores for a period of 3 months in the coming 6 months' time from now. The current rate of interest is 9% p.a., but it may go up in 6 months' time. The company wants to hedge itself against the likely increase in interest rate. 8

The Company's Bankers quoted an FRA (Forward Rate Agreement) at 9.30% p.a.

What will be the effect of FRA and actual rate of interest cost to the company, if the actual rate of interest after 6 months happens to be

- (i) 9.60% p.a. and (ii) 8.80% p.a. ?

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7. Write short notes on any **four** of the following :

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=16

- (a) Credit Rating
 - (b) Asset Securitization
 - (c) Call Money
 - (d) Euro Convertible Bonds
 - (e) Financial Restructuring
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