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 out of the remaining six questions.

Wherever appropriate, suitable assumptions may be made and indicated in the answer by the candidate.

Working notes should form part of the answer.

Marks

1. (a) A bank enters into a forward purchase TT covering an export bill for **5** Swiss Francs 1,00,000 at ₹ 32.4000 due on 25th April and covered itself for same delivery in the local inter bank market at ₹ 32.4200. However, on 25th March, exporter sought for cancellation of the contract as the tenor of the bill is changed.

In Singapore market, Swiss Francs were quoted against US dollars as under :

Spot	USD 1 = Sw.Fcs. 1.5076 / 1.5120
One month forward	1.5150 / 1.5160
Two months forward	1.5250 / 1.5270
Three months forward	1.5415/ 1.5445

and in the interbank market US dollars were quoted as under :

Spot	USD 1 = ₹ 49.4302 / .4455
Spot / April	.4100 / .4200
Spot / May	.4300 / .4400
Spot / June	.4500 / .4600

Calculate the cancellation charges, payable by the customer if exchange margin required by the bank is 0.10% on buying and selling.

(b) The following data is available for a bond :   5

Face Value	₹ 1,000
Coupon Rate	11%
Years to Maturity	6
Redemption Value	₹ 1,000
Yield to Maturity	15%

(Round-off your answers to 3 decimals)

Calculate the following in respect of the bond :

(i) Current Market Price.

(ii) Duration of the Bond.

(iii) Volatility of the Bond.

(iv) Expected market price if increase in required yield is by 100 basis points.

(v) Expected market price if decrease in required yield is by 75 basis points.

(c) Mr. Dayal is interested in purchasing equity shares of ABC Ltd. which   5
are currently selling at ₹ 600 each. He expects that price of share may
go upto ₹ 780 or may go down to ₹ 480 in three months. The chances of
occurring such variations are 60% and 40% respectively. A call option
on the shares of ABC Ltd. can be exercised at the end of three months
with a strike price of ₹ 630.

   (i)   What combination of share and option should Mr. Dayal select if
he wants a perfect hedge ?

   (ii) What should be the value of option today (the risk free rate is 10%
p.a.) ?

   (iii) What is the expected rate of return on the option ?

(d) XYZ, an Indian firm, will need to pay JAPANESE YEN (JY) 5,00,000   5
on 30th June. In order to hedge the risk involved in foreign currency
transaction, the firm is considering two alternative methods i.e. forward
market cover and currency option contract.

On 1st April, following quotations (JY/INR) are made available :

Spot   3 months forward
1.9516/1.9711   1.9726 / 1.9923

The prices for forex currency option on purchase are as follows :
Strike Price   JY 2.125
Call option (June)   JY 0.047
Put option (June)   JY 0.098

For excess or balance of JY covered, the firm would use forward rate as
future spot rate.

You are required to recommend cheaper hedging alternative for XYZ.

2. (a) The following information is provided relating to the acquiring   10
company E Ltd., and the target company H Ltd :

Particulars	E Ltd. (₹)	H Ltd. (₹)
Number of shares (Face value ₹ 10 each)	20 Lakhs	15 Lakhs
Market Capitalization	1000 Lakhs	1500 Lakhs
P/E Ratio (times)	10.00	5.00
Reserves and surplus in ₹	600.00 Lakhs	330.00 Lakhs
Promoter's Holding (No. of shares)	9.50 Lakhs	10.00 Lakhs

The Board of Directors of both the companies have decided to give a fair deal to the shareholders. Accordingly, the weights are decided as 40%, 25% and 35% respectively for earnings, book value and market price of share of each company for swap ratio.

Calculate the following :

(i)   Market price per share, earnings per share and Book Value per share;

(ii)   Swap ratio;

(iii) Promoter's holding percentage after acquisition;

(iv)   EPS of E Ltd. after acquisitions of H Ltd;

(v)   Expected market price per share and market capitalization of E Ltd.; after acquisition, assuming P/E ratio of E Ltd. remains unchanged; and

(vi)   Free float market capitalization of the merged firm.

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(b) Mr. A will need ₹ 1,00,000 after two years for which he wants to make   6
one time necessary investment now. He has a choice of two types of
bonds. Their details are as below :

	Bond X	Bond Y
Face value	₹ 1,000	₹ 1,000
Coupon	7% payable annually	8% payable annually
Years to maturity	1	4
Current price	₹ 972.73	₹ 936.52
Current yield	10%	10%

Advice Mr. A whether he should invest all his money in one type of
bond or he should buy both the bonds and, if so, in which quantity ?

Assume that there will not be any call risk or default risk.

3. (a) On April 1, 2015, an investor has a portfolio consisting of eight   8
securities as shown below :

Security	Market Price	No. of Shares	β value
A	29.40	400	0.59
B	318.70	800	1.32
C	660.20	150	0.87
D	5.20	300	0.35
E	281.90	400	1.16
F	275.40	750	1.24
G	514.60	300	1.05
H	170.50	900	0.76

The cost of capital for the investor is 20% p.a. continuously
compounded. The investor fears a fall in the prices of the shares in the
near future. Accordingly, he approaches you for the advice to protect
the interest of his portfolio.

You can make use of the following information :

(i)   The current NIFTY value is 8500.

(ii)   NIFTY futures can be traded in units of 25 only.

(iii) Futures for May are currently quoted at 8700 and Futures for June are being quoted at 8850.

You are required to calculate :

(i)   the beta of his portfolio.

(ii)   the theoretical value of the futures contract for contracts expiring in May and June.

      Given ($e^{0.03} = 1.03045$, $e^{0.04} = 1.04081$, $e^{0.05} = 1.05127$)

(iii) the number of NIFTY contracts that he would have to sell if he desires to hedge until June in each of the following cases :

      (A)   His total portfolio

      (B)   50% of his portfolio

      (C)   120% of his portfolio

(b)   The Finance manager of ABC Corporation is analyzing firms policy   **8**
regarding computers which are now being leased on yearly basis on rental amounting to ₹ 1,00,000 per year. The computers can be bought for ₹ 5,00,000. The purchase would be financed by 16% and the loan is repayable in 4 equal annual installments.

On account of rapid technological progress in the computer industry, it is suggested that a 4-year economic life should be used instead of a 10-year physical life. It is estimated that the computers would be sold for ₹ 2,00,000 at the end of 4 years.

The company uses the straight line method of depreciation. Corporate tax rate is 35%.

(i)   Whether the equipment be bought or be taken on lease ?

(ii)   Analyze the financial viability from the point of view of the lessor, assuming 14% cost of capital.

(iii) Determine the minimum lease rent at which lessor would break even.

4. (a) XYZ Ltd., a company based in India, manufactures very high quality   8
modern furniture and sells to a small number of retail outlets in India
and Nepal. It is facing tough competition. Recent studies on
marketability of products have clearly indicated that the customer is
now more interested in variety and choice rather than exclusivity and
exceptional quality. Since the cost of quality wood in India is very high,
the company is reviewing the proposal for import of woods in bulk
from Nepalese supplier.

The estimate of net Indian (₹) and Nepalese Currency (NC) cash flows
for this proposal is shown below :

Net Cash Flows (in millions)

Year	0	1	2	3
NC	−25.000	2.600	3.800	4.100
Indian (₹)	0	2.869	4.200	4.600

The following information is relevant :

(i) XYZ Ltd. evaluates all investments by using a discount rate of
9% p.a.. All Nepalese customers are invoiced in NC. NC cash
flows are converted to Indian (₹) at the forward rate and
discounted at the Indian rate.

(ii) Inflation rates in Nepal and India are expected to be 9% and 8%
p.a. respectively. The current exchange rate is ₹ 1 = NC 1.6

Assuming that you are the finance manager of XYZ Ltd., calculate the
net present value (NPV) and modified internal rate of return (MIRR) of
the proposal.

You may use following values with respect to discount factor for ₹ 1
@ 9%.

	Present Value	Future Value
Year 1	0.917	1.188
Year 2	0.842	1.090
Year 3	0.772	1

(b) Mr. X on 1.7.2012, during the initial public offer of a Mutual Fund   8
(MF) invested ₹ 1,00,000 at Face Value of ₹ 10. On 31.3.2013, the MF
declared a dividend of 10% when Mr. X calculated that his holding
period return was 115%. On 31.3.2014, MF again declared a dividend
of 20%. On 31.3.2015, Mr. X redeemed all his investment which had
accumulated to 11,296.11 units when his holding period return was
202.17%.

Calculate the NAVs as on 31.03.2013, 31.03.2014 and 31.03.2015.

5. (a) ABC Ltd., a US Firm, will need £ 5,00,000 in 180 days. In this   8
connection, the following information is available :

Spot Rate 1£ = $ 2.00

180 days forward rate of £ as of today is $ 1.96

Interest rates are as follows :	US	UK
180 days deposit rate	5.0%	4.5%
180 days borrowing rate	5.5%	5.0%

A call option on £ that expires in 180 days has an exercise price of
$ 1.97 and a premium of $ 0.04.

ABC Ltd. has forecasted the spot rates for 180 days as below :

Future rate	Probability
$ 1.91	30%
$ 1.95	50%
$ 2.05	20%

Which of the following strategies would be cheaper to ABC Ltd. ?

(i)   Forward Contract;

(ii)   A money market hedge;

(iii)   A call option contract; and

(iv)   No hedging option

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(b) On 1st April, an open ended scheme of mutual fund had 300 lakh units   8
outstanding with Net Assets Value (NAV) of ₹ 18.75. At the end of
April, it issued 6 lakh units at opening NAV plus 2% load, adjusted for
dividend equalization. At the end of May, 3 Lakh units were
repurchased at opening NAV less 2% exit load adjusted for dividend
equalization. At the end of June, 70% of its available income was
distributed.

In respect of April – June quarter, the following additional information
are available :

	₹ in lakh
Portfolio value appreciation	425.47
Income of April	22.950
Income for May	34.425
Income for June	45.450

You are required to calculate

(i) income available for distribution;

(ii) issue price at the end of April;

(iii) repurchase price at the end of May; and

(iv) net asset value (NAV) as on 30th June.

6. (a) XYZ Ltd. wants to purchase ABC Ltd. by exchanging 0.7 of its share   10
for each share of ABC Ltd.. Relevant financial data are as follows :

Equity shares outstanding	10,00,000	4,00,000
EPS (₹)	40	28
Market price per share (₹)	250	160

(i) Illustrate the impact of merger on EPS of both the companies.

(ii) The management of ABC Ltd. has quoted a share exchange ratio of 1:1 for the merger. Assuming that P/E ratio of XYZ Ltd. will remain unchanged after the merger, what will be the gain from merger for ABC Ltd. ?

(iii) What will be the gain/loss to shareholders of XYZ Ltd. ?

(iv) Determine the maximum exchange ratio acceptable to shareholders of XYZ Ltd.

(b) X Ltd. is a Shoes manufacturing company. It is all equity financed and has a paid-up Capital of ₹ 10,00,000 (₹ 10 per share) .   **6**

X Ltd. has hired Swastika consultants to analyse the future earnings. The report of Swastika consultants states as follows :

(i) The earnings and dividend will grow at 25% for the next two years.

(ii) Earnings are likely to grow at the rate of 10% from 3rd year and onwards.

(iii) Further, if there is reduction in earnings growth, dividend payout ratio will increase to 50%.

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The other data related to the company are as follows :

Year	EPS (₹)	Net Dividend per share (₹)	Share Price (₹)
2010	6.30	2.52	63.00
2011	7.00	2.80	46.00
2012	7.70	3.08	63.75
2013	8.40	3.36	68.75
2014	9.60	3.84	93.00

You may assume that the tax rate is 30% (not expected to change in future) and post tax cost of capital is 15%.

By using the Dividend Valuation Model, calculate

(i)   Expected Market Price per share

(ii)   P/E Ratio.

7.   Write short notes on any **four** of the following :   4×4 =16

(a)   Assumptions of Modigliani & Miller Hypothesis.

(b)   Define the following Greeks with respect to options :

   (i)   Delta

   (ii)   Gamma

   (iii)   Vega

   (iv)   Rho

(c)   Money Market Mutual Funds

(d)   Instruments of international finance

(e)   Forfaiting Vs Export factoring

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