Roll No.

Total No. of Questions – **7**

Total No. of Printed Pages – **8**

Time Allowed – **3** Hours

Maximum Marks – **100**

DKF

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 who has not opted for Hindi Medium answer in Hindi, his/her answers in Hindi will not be valued.

Question **No. 1** is compulsory.

Candidates are also required to answer any **five** questions from the remaining **six** questions.

In case, any candidate answers extra question(s) / sub-question(s) over and above the required number, then only the requisite number of questions first answered in the answer-book shall be valued and subsequent extra questions(s) answered shall be ignored.

Whenever appropriate, suitable assumptions may be made and indicated in the answers by the candidate.

Working notes should form part of the respective answers.

Marks

1. (a) SBI mutual fund has a NAV of ₹ 8.50 at the beginning of the year. At the end of the year NAV increases to ₹ 9.10. Meanwhile fund distributes ₹ 0.90 as dividend and ₹ 0.75 as capital gains. **5**

   (i) What is the fund's return during the year ?

   (ii) Had these distributions been re-invested at an average NAV of ₹ 8.75 assuming 200 units were purchased originally. What is the return ?

Marks

(b) A call option on gold with exercise price ₹ 26,000 per ten gram and three months to expire is being traded at a premium of ₹ 1,010 per ten gram. It is expected that in three months time the spot price might change to ₹ 27,300 or 24,700 per ten gram. At present this option is at-the-money and the rate of interest with simple compounding is 12% per annum. Is the current premium for the option justified ? Evaluate the option and comments. **5**

(c) If the present interest rate for 6 months borrowings in India is 9% per annum and the corresponding rate in USA is 2% per annum, and the US$ is selling in India at ₹ 64.50/$. **5**

Then :

(i) Will US$ be at a premium or at a discount in the Indian forward market ?

(ii) Find out the expected 6-month forward rate for US$ in India.

(iii) Find out the rate of forward premium/discount.

(d) 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 one year and 3 years from now using purchasing power parity theory. **5**

2. (a) ABC Computers Ltd. is desiring to install a "Software Developing Unit" costing ₹ 60 lacs. In order to leverage its tax position, it has requested the vendor to quote for a three year lease with rentals payable at the end of each year but in a diminishing manner such that they are in the ratio of 3 : 2 : 1. Depreciation can be assumed to be on WDV basis @ 25% and the vendor's marginal tax rate is 35%. The target rate of return for the vendor is 10%. You are required to find out the year wise rental the vendor is required to quote to ABC Computer Limited. **8**

Marks

(b) Indian Newsprint Ltd. (INL) a leading manufacturer of newsprint in the country, is planning to start manufacturing card board unit. Planning & Strategy division of the company has placed before the board of directors the "Detail Project Report" of the card board unit. The report, inter alia, includes the following cash flow : **8**

(Fig. in ₹ lacks)

Year	Cost of the plant	Recurring cost	Savings
0	1000		
1		400	1200
2		500	1400

The cost of the capital is 9 %.

You are required to measure the sensitivity of the project to changes in the levels of plant value, recurring cost and savings (considering each factor at a time) such that the NPV becomes zero. The present value factor at 9% are given below :

Year	PVF 9%
0	1
1	0.917
2	0.842

Advise the board of directors which factor is the most sensitive to affect the acceptability of the project ?

Marks

3. (a) Bharat Bank Ltd. has entered into a plain vanilla swap through on Overnight Index Swap (OIS) on a principal of ₹ 1 crore and agreed to receive MIBOR overnight floating rate for a fixed payment on the principal. The swap was entered into on Monday, 10^{th} July 2017 and was to commence on and from 11^{th} July 2017 and run for a period of 7 days. 8

Respective MIBOR rates for Tuesday to Monday were :

8.75 %, 9.15 %, 9.12 %, 8.95 %, 8.98 % and 9.15 %

T W T F S M

If Bharat Bank Ltd. received ₹ 417 net on settlement, calculate fixed rate and interest under both legs.

Notes : (i) Sunday is a holiday

(ii) Work in rounded rupee and avoid decimal working

(iii) Consider 365 days in a year.

(b) A reputed financial institution of the country floated a Mutual fund having a corpus of ₹ 10 crores consisting of 1 crore units of ₹ 10 each. Mr. Vijay invested ₹ 10,000 for 1000 units of ₹ 10 each on 1^{st} July 2014. For the financial year ended 31^{st} March 2015, the fund declared a dividend of 10% and Mr. Vijay found that his annualised yield from the fund was 153.33%. The mutual fund during the financial year ended 31^{st} March 2016, declared a dividend of 20%. Mr. Vijay has reinvested the entire dividend in acquiring units of this mutual fund at its appropriate NAV. On 31^{st} March 2017 Mr. Vijay redeemed all his balances of 1129.61 units when his annualized yield was 73.52%. 8

You are required to find out NAV as on 31^{st} March 2015, 31^{st} March 2016 and 31^{st} March 2017.

Marks

(a) A textile manufacturer has taken floating interest rate loan of ₹ 40,00,000 on 1st April, 2012. The rate of interest at the inception of loan is 8.5 % p.a. interest is to be paid every year on 31st March, and the duration of loan is four years. In the month of October 2012, the Central bank of the country releases following projections about the interest rates likely to prevail in future. 8

(i) On 31st March, 2013, at 8.75%; on 31st March, 2014 at 10%; on 31st March, 2015 at 10.5% and on 31st March, 2016 at 7.75%. Show how this borrowing can hedge the risk arising out of expected rise in the rate of interest when he wants to peg his interest cost at 8.50% p.a.

(ii) Assume that the premium negotiated by both the parties is 0.75% to be paid on 1st October, 2012 and the actual rate of interest on the respective due dates happens to be as : on 31st March, 2013 at 10.2%; on 31st March, 2014 at 11.5%; on 31st March, 2015 at 9.25%; on 31st March, 2016 at 9.0% and 8.25%. Show how the settlement will be executed on the perspective interest due dates.

(b) East Co. Ltd. is studying the possible acquisition of Fost Co. Ltd. by way of merger. The following data are available in respect of the companies. 8

	East Co. Ltd.	Fost Co. Ltd.
Earnings after tax (₹)	2,00,000	60,000
No. of equity shares	40,000	10,000
Market value per share (₹)	15	12

Marks

(i) If the merger goes through by exchange of equity share and the exchange ratio is based on the current market price, what are the new earnings per share for East Co. Ltd. ?

(ii) Fort Co. Ltd. wants to be sure that the merger will not diminish the earnings available to its shareholders. What should be the exchange ratio in that case ?

5\. (a) JKL Ltd. is an export business house. The company prepares invoice in customers' currency. 8

Its debtors of US$. 20,000,000 is due on April 1, 2017.

Market information as at January 1, 2017 is :

Exchange rates US$/INR		Currency Futures US$/INR	
Spot	0.016667	Contract size : 31,021,218	
1-month forward	0.016529	1-month	0.016519
3-months forward	0.016129	3-months	0.016118

	Initial Margin	**Interest rates in India**
1-Month	₹ 32,500	7%
3-Months	₹ 50,000	8%

On April 1, 2017 the spot rate US$/INR is 0.016136 and currency future rate is 0.016134.

Which of the following methods would be most advantageous to JKL Ltd. ?

(i) Using forward contract

(ii) Using currency futures

(iii) Not hedging the currency risk

Marks

(b) Rahim Enterprises is a manufacturer and exporter of woollen garments to European countries. Their business is expanding day by day and in the previous financial year the company has registered a 25% growth in export business. The company is in the process of considering a new investment project. It is an all equity financed company with 10,00,000 equity shares of face value of ₹ 50 per share. The current issue price of this share is ₹ 125 ex-dividend. Annual earning are ₹ 25 per share and in the absence of new investments will remain constant in perpetuity. All earnings are distributed at present. A new investment is available which will cost ₹ 1,75,00,000 in one year's time and will produce annual cash inflows thereafter of ₹ 50,00,000. Analyse the effect of the new project on dividend payments and the share price. **8**

6. (a) The return of security 'L' and security 'K' for the past five years are given below : **10**

Year	Security-L Return %	Security-K Return %
2012	10	11
2013	04	– 06
2014	05	13
2015	11	08
2016	15	14

Calculate the risk and return of portfolio consisting above information.

Marks

(b) Sea Rock Ltd. has an excess cash of ₹ 30,00,000 which it wants to invest in short-term marketable securities. 6

(i) Expenses resulting to investment will be ₹ 45,000. The securities invested will have an annual yield of 10%. The company seeks your advice as to the period of investment so as to earn a pre-tax income of 6%.

(ii) Also find the minimum period for the company to break-even its investment expenditure. Ignore time value of money.

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

(a) Various processes of strategic decision making

(b) Financial restructuring

(c) Chop Shop method of valuation

(d) What are P-notes ? Why it is preferable route for foreigners to invest in India ?

(e) Differentiate between 'Off-shore funds' and 'Asset Management Mutual Funds'.