XLRI Xavier School of Management, For the greater good, 1949 EXCELLENCE & INTEGRITY	**BM – FM2 Course**

Quiz III Examination, Date:			
Weightage	**20%**	**Duration**	**70 minutes**

Name ______________________________ **Roll No.** _________________________

INSTRUCTIONS

1. Closed book exam.
2. Students cannot use laptop. Students cannot bring their mobiles inside exam room.

You are not allowed to borrow papers, calculators, etc. you are required to work out the complete solution in the answer sheets provided. Please answer each question in a new page.

Anyone who resorts to unfair practices, as judged by the examiner, the minimum penalty will be zero in this segment of evaluation, while the maximum penalty could be expulsion from the institute. There will be no further warnings.

1. **Options Quotes** The following data on NIFTY, i.e., NSE's primary index has been taken from Business Standard Newspaper dated August 7, 2012.[1]

Instrument No. INSTRUMENT FEATURES	1 CALL OPTION	2 PUT OPTION
Expiry Date	29-08-2012	29-08-2012
Strike Price	1080	1080
Premium Open/High/Low(Rs.)	32/32/13	31/31/10
Traded Qty.	65200	15200
No. of Contracts	326	76
Notional Value (Rs.Lakhs)	730.36	170.01
Open Interest	91000	14200

Based on the above information, answer the following questions:

a) On the above date, the market closed below its open price' - Yes or No? Discuss. *(Max 1 marks)*

b) If it is known that (i) NIFTY on 29-08-2012 closed at 1001; and (ii) on the above date, Raghuvir invested a total of Rs. 100 in either of above two instruments; compute the maximum profit and maximum loss Raghuvir would have incurred? *(Max 2 marks)*

2. **Capital Budgeting** Lakhpati Equipment has an investment opportunity in Europe. The project costs €12 million and is expected to produce cash flows of €2.7 million in year I, €3.5 million in year 2, and €3.3 million in year 3. The current spot exchange rate is $1.22/€ and the current risk-free rate in the United States is 4.8 percent, compared to that

[1] Ignore transaction costs and time value of money for this section (unless asked)

in Europe of 4.1 percent. The appropriate discount rate for the project is estimated to be 13 percent, the U.S. cost of capital for the company. In addition, the subsidiary can be sold at the end of three years for an estimated €7.4 million. What is the NPV of the project? *(Max 4 marks)*

3. When the Brahmaputra Computer Ltd filed for bankruptcy under the relevant act of the Indian Law, it had the following balance sheet information:

Liquidating Value		Claims (Figures in Rs Crore)	
		Trade credit	3
		Secured mortgage notes	6
		Senior debentures	5
		Junior debentures	9
Total assets	15.5	Book equity	-7.5

Assuming there are no legal fees associated with the bankruptcy, as trustee, what distribution of liquidating value do you propose? *(Max 3 marks)*

4. **Mergers and Shareholder Value** Chetan Corp. and Bhagat Manufacturing are considering a merger. The possible state of the economy and each company's value in that state are shown here:

State	**Probability**	**Chetan**	**Bhagat**
Boom	.70	$300,000	$260,000
Recession	.30	$110,000	$80,000

Chetan currently has a bond issue outstanding with a face value of $140,000. Bhagat is an all-equity company.

a) If the companies continue to operate separately, what are the total value of the companies, the total value of the equity, and the total value of the debt? *(Max 1 marks)*

b) What would be the value of the merged company? What would be the value of the merged company's debt and equity? *(Max 1 marks)*

c) Is there a transfer of wealth in this case? Why? *(Max 1 marks)*

d) Suppose that the face value of Chetan's debt was $100,000. Would this affect the transfer of wealth? *(Max 1 marks)*

5. **Forward Pricing** This morning you agreed to buy a one-year Treasury bond in six months. The bond has a face value of $1,000. Use the spot interest rates listed here to answer the following questions:

Time	Effective Annual Rate
6 months	7.42%
12 months	8.02%
18 months	8.79%
24 month	9.43%

a) What is the forward price of this contract? *(Max 1 marks)*

b) Suppose shortly after you purchased the forward contract, all rates increased by 30 basis points. For example, the six-month rate increased from 7.42 percent to 7.72 percent. What is the price of a forward contract otherwise identical to yours given these changes? *(Max 2 marks)*

6. Modeling Insurance Navita, aged 34, a working professional, took a pure risk insurance plan from Life Insurance Corporation (LIC) of India. The LIC insurance product was known as Anmol Jeevan. The product involved Navita to pay Rs. 3,055 at the start of every year. In an unfortunate scenario of death of the insured person during the term of the policy (i.e., the one year period), LIC would have paid her a sum assured of Rs. 10 Lakhs. In all other scenarios, the customer (i.e., the insured person) would have got a zero sum from LIC, i.e., on maturity, the insurance product value was 'nil'. What type of option is LIC's Anmol Jeevan? (Please be specific in your answer) *(Max 1 marks)*
7. **Convertible Bond Value** Refer to the box given below about Television Eighteen's ZCSPCD offer. For every hundred shares held, how much amount would an investor need to invest? Can we state that the amount needed for investment would be nearly 17% of the market value of 100 shares? *(Max 1 marks)*
8. **Convertible Offer Details** Refer to the box given below about Television Eighteen's ZCSPCD offer. Can it be said that the shareholders will get a chance to subscribe to two shares for every 13 held? Can we also state that the shareholders get the above chance with a lock-in-period of 12 months? Discuss. *(Max 1 marks)*

Television Eighteen's ZCSPCD Offer

In 19th January 2003, Television Eighteen's shares closed on the BSE at Rs. 68.75. The company had recently announced that its shareholders could subscribe to the rights offer of Zero Coupon Secured Partly Convertible Debentures (ZCSPCD). The company stated that the rights offer presented investors an opportunity to reduce the cost of acquisition of their original holdings.

TV 18 operates the CNBC India channel. It holds a 100 percent stake in Television Eighteen Mauritius (TEM) which, in turn, holds a 49 percent stake in CNBC India. TV 18 sells content to TEM, which receives subscription revenues and sells 50 percent of the advertising time to Indian advertisers. TEM passes the subscription and advertising revenues to CNBC India after adjusting the cost of content and profit margin. TEM also funds its share of losses of CNBC India.

At the end of July 2002, TV 18 had to recover Rs 67.65 crore from TEM. This included loans given to TEM to finance the losses of CNBC India. With an equity investment of Rs 17.18 crore, TV 18's total exposure to TEM worked out to a little more than 80 percent of its net worth. The exposure to TEM would only increase given the objective of the rights offer was to increase the financial support to TEM. Cash recoveries from TEM would commence in a meaningful manner only when CNBC India started breaking even. Analysts agreed that the pay-offs would depend on CNBC India--which was incurring losses at the time. And they would be significant if the venture broke even.

The shareholders were offered one ZCSPCD, at Rs 150, for every 13 shares held. Subscription to one ZCSPCD would lead to allotment of two shares at Rs 10 each, a day prior to the completion of 12 months after allotment. Investors would receive Rs 24.38 per ZCSPCD at the end of the third, fourth and fifth years. And at the end of sixth year they would receive Rs 89.38.

Source: Excerpt from The Hindu Business Line newspaper dated 19th January 2003, by Suresh Krishnamurthy.