MASTER OF BUSINESS ADMINISTRATION (FINANCIAL MARKETS) (MBAFM)

Term-End Examination 00321

June, 2013

MCT-075 : DEPT MANAGEMENT

Time : 3 hours *Maximum Marks : 100*

Instructions to Examinees :

(i) *The Exam consists of two parts.* ***Part - A*** *contains questions with Multiple Choice answers and* ***Part - B*** *contains questions with long form answers.*

(ii) *All questions in* ***Part - A*** *carry* ***equal*** *marks.*

(iii) *The marks for questions in* ***Part - B*** *are indicated against all the question.*

(iv) *Please answer all questions in a separate answer sheet.*

(v) *In the case of* ***Part - A*** *only the correct answer choice needs to be marked. There is no need to provide detailed computations.*

(vi) *Please write the question number and your answer choice legibly and clearly in the answer sheet.*

(vii) *For questions in* ***Part - B*** *please provide detailed computation steps (if required by the question) or explanations as asked in the question.*

(viii) *For* ***Part - B*** *marks will be awarded for the approach taken to solve/answer the question and not merely providing the correct solution in brief. Answering the question with detailed steps would therefore be beneficial to the examinee.*

(ix) *Please write legibly.*

PART - A

Multiple Choice Questions

1. The price of a bond which pays a fixed cash flow of \$10 per annum perpetually, is \$96. What is the annualised yield at this price ? 4

   (1) 10.4% (2) 11.1% (3) 10% (4) 11%

2. Macaulay duration of a bond is 6 years. What is it's modified duration, if the bond trades at a semi annual yield to maturity of 9% ? 4

   (1) 5.77 (2) 5.74 (3) 5.50 (4) 5.91

3. The 2 year semi annual compounded rate is 8%. What is the equivalent continuous compounded rate ? 4

   (1) 7.84% (2) 8.04% (3) 7.57% (4) 7.69%

4. The 5 year and 8 year annualised spot rates are 8% and 10% respectively. What's the implied 3 year annualised forward rate 5 years from now ? 4

   (1) 15.16% (2) 13.42% (3) 13.07 (4) 12.00%

5. There are 21 primary dealers in India. During one of the auctions for government securities the minimum underwriting commitment in the case of a particular security was 358 crores per primary dealer. What is the notified amount for the auction of that security ? 4

   (1) 2500 crores (2) 5000 crores

   (3) 10000 crores (4) 15000 crores

6. Which of the following is a participant in the call money market ? 4

   (1) Deutsche Bank (2) LIC (3) UTI (4) NABARD

7. If the NDTL of a bank on the reporting Friday of December 7, 2012 is Rs. 5000 crores and CRR is 5.0% then the bank will have to maintain as cash balance with RBI : 4

   (1) A product of 250.0 crores in the week beginning December 22, 2012

   (2) A product of 250.0 crores in the fortnight beginning December 22, 2012

   (3) A product of 250.0 crores in the fortnight beginning December 8, 2012

   (4) A product of 250.0 crores in the week beginning December 8, 2012

8. In the case of interest rate future contracts that are settled by delivery, the cheapest to deliver security is the one with : 4

(1) Lowest basis and highest implied repo rate

(2) Highest basis and lowest implied repo rate

(3) Lowest basis and lowest implied repo rate

(4) Highest basis and highest implied repo rate

9. The yield based auction for government securities witnessed bids as under : 4

8.30% - 2500 crores

8.25% - 3000 crores

8.20% - 2500 crores

8.15% - 1500 crores

If the cut off was 8.25% and partial allotment was 66.67%, what was the notified amount ?

(1) 4000 crores (2) 4500 crores (3) 5000 crores (4) 6000 crores

10. Macaulay Duration of a bond is equal to the time remaining to maturity in the case of : 4

(1) a bond where coupon is equal to yield

(2) a bond trading at discount

(3) a zero coupon bond

(4) none of the above

11. Which of the following bonds' price is likely to be most sensitive to interest rate movements ? 4

(1) Bond with 6% coupon and 5 years to maturity trading at 8% yield

(2) Bond with 6% coupon and 5 years to maturity trading at 9% yield

(3) Bond with 6% coupon and 7 years to maturity trading at 8% yield

(4) Bond with 7% coupon and 7 years to maturity trading at 8% yield

12. In an Interest Rate Swap transaction, a corporate had to receive 8.5% p.a fixed rate payments in exchange for paying LIBOR (both payments to be made in US Dollar). If the swap was for a 5 year duration and the payments were exchanged on the first day of a calendar quarter, the corporate's position was equivalent to : 4

(1) a long position in a 5 year bond which pays 8.5% quarterly and a short position in a 5 year bond which pays out LIBOR quarterly.

(2) a short position in a 5 year bond which pays Libor quarterly and a long position in a 5 year bond which pays 8.5% p.a quarterly.

(3) a short position in a 5 year bond which pays 8.5% annually and a long position in a 5 year bond which pays out LIBOR quarterly.

(4) a long position in a 5 year bond which pays 8.5% annually and a short position in a 5 year bond which pays out LIBOR annually.

13. Under the New Pension Scheme (NPS), investment managers are now allowed to charge a management fee of : 4

(1) 0.009% p.a. (2) 0.0009% p.a. (3) 0.25% p.a. (4) 0.50% p.a.

14. A portfolio manager manages a portfolio of primary fixed rate bonds. He has now succumbed to the charms of a smart sales lady from a leading investment bank who has convinced him to enter into an interest rate swaps transaction wherein the portfolio manager pays fixed and receives floating rate payments. By entering into such a transaction the portfolio manager is effectively : 4

(1) Increasing his overall duration

(2) Reducing his overall duration

(3) The swap transaction has no impact on the overall duration

(4) Difficult to predict whether the swap would increase or decrease the overall duration

15. The continuously compounded rate is 8%. What is the equivalent semi annual compounded rate ? 4

(1) 8.16% (2) 8.10% (3) 8.04% (4) 8.20%

PART - B

Long Form Questions

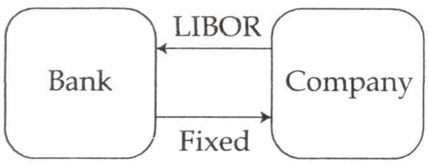
1. A corporate bond of 5 years maturity and 9% coupon payable annually is trading at an annual yield of 10%. 8
   Treasury securities with coupon of 9% and maturity of 5 years trade at a price of 98.20% of face value.
   Compute the probability of default of the corporate bond.

2. Explain the process of securitization (preferably pictorially) depicting the various entities involved along with the relevant transactions between them. Also, explain in a few sentences the benefits of securitization. 6

3. Calculate the price of the following bond from first principles. Show the intermediate steps in your calculation too. 8
   Coupon : 10% payable semi annually
   Maturity : 3 years
   Face Value : 100
   Yield : 8% semi annual yield to maturity

4. What are the various stages, from the announcement to the actual close, in the auction of a government security. Briefly list them in chronological order. 6

5. An interest rate swap transaction has the following structure : 12



If the bank and the company decide to enter into a three year swap with annual payments and the term structure of interest rates on zero coupon bonds of different maturities is as follows, compute the fair fixed rate that the bank would need to pay to the company.

1 year zero rate : 7% p.a. 2 year zero rate : 8% p.a.
3 year zero rate : 9% p.a

Six months after entering into the swap, the yield curve has flattened and the relevant interest rates are as follows :

6 month zero rate : 7% p.a.
18 month zero rate : 7.5% p.a.
2.5 year zero rate : 8.5% p.a.

Compute the value of the swap per $ 100 of notional value. Who gains when interest rates move in this manner - the bank or the company ?