

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

MBA (AM) – SEMESTER – 8 • EXAMINATION – WINTER - 2019

Subject Code: 4180507

Date: 22/11/2019

Subject Name: Risk Management

Time: 2:30 to 5:30

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 (a) What are the Derivatives? Explain various Derivative Instruments. 07

(b) How Hedger, Arbitrageur and Speculator differ from each other? Also explain which type of trading is better from the view point of investors. 07

Q.2 (a) The price of crude oil is highly volatile and on September 1, the price of Brent crude oil is at INR 3278 per barrel. You believe that the organization of the Petroleum exporting countries (OPEC) is going to meet on September 5 and the countries are likely to cut down the supply of oil; hence, you expect the crude oil price to increase on September 6 and want to speculate using futures. Currently crude oil futures are available with expiry in October and the contract delivery unit is 50000 barrels. The future price is at INR 3295 per barrel on September 1. 07

(i) How would you use futures to speculate on the price of crude oil?

(ii) If the crude oil spot price on September 5 is INR 3400 per barrel and the October future price on September 5 is INR 3468 per barrel, what will be your gain from the speculation?

(b) What are the future contracts? Differentiate between forward and future contracts.

07

OR

(b) Enlist different trading strategies. How hedging strategies can be helpful using futures?

07

Q.3 (a) Elaborate – “There are so many types of risk associated with business.” 07

(b) What do you mean by Risk Management? Explain various types of risk.

07

OR

Q.3 (a) Define following terms:

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- Basis cash price v/s Future price
- Option Pricing
- OTC Market
- Perfect Hedge & Imperfect Hedge
- Open Interest & Volume
- Speculation
- Credit Default Swap

(b) Explain various principles of put call parity.

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Q.4 (a) ABC limited wants to enter into a 3 year swap. The current yield curve for interest rate is given below:

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Term	Yield
90 days	5%
1 year	6%
2 years	7%
3 years	8%

Calculate the forward swap rate for the fixed rate.

(b) “Option writer has limited profit and unlimited losses whereas option buyer has limited losses and unlimited profit.” Give your opinion regarding this sentence.

07

OR

Q.4 (a) Write Short note: Greek letters.

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(b) On March 1, call options are available on SBI shares with expiry on March 27 and exercise price of INR 2600. SBI shares are priced at INR 2500 on March 1. The contract size or SBI options is 132. Ravi writes 10 call options and the option premium is INR 170. Option premium, upside theoretical price for SBI call option on March 1, March 2 and March 3 are given below:

07

	March 1	March 2	March 3
Option premium	70	78	85
Upside theoretical price	67	74	79
Downside theoretical price	74	82	88

Calculate premium margin, risk margin and total margin for the 3 days.

Q.5 (a) Explain exotic options. Also explain various types of exotic options.

07

(b) What do you mean by swaps? How swaps are different from options.

07

OR

Q.5 Consider a floating rate loan taken on January 1, 2009, with the following characteristics:

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Principal amount	INR 1 million
Interest reset period	Every 6 months
Maturity of loan	3 years
Base rate	6 month MIBOR
Premium over base rate	200 basis point or 2%

Assume that the actual rates on January 1, 2009; July 1, 2009 and January 1, 2010 are:

6-months MIBOR as of January 1, 2009	5%
6-months MIBOR as of July 1, 2009	5.4%
6-months MIBOR as of January 1, 2010	4.8%

(i) What will be the interest rate starting January 1, 2009; July 1, 2009 and January 1, 2010?

(ii) What will be the amount of Interest payments on June 30; December 31, 2009 and June 30, 2010?
