ROLL NO:

PRESIDENCY UNIVERSITY, BENGALURU

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

SCHOOL OF MANAGEMENT

MID TERM EXAMINATION

Odd Semester: 2018-19 **Date**: 29 October 2018

Course Code: FIN 304 **Time**: 2 Hours

Course Name: Derivatives and Risk Management **Max Marks**: 40

Branch & Sem: MBA III Sem **Weightage**: 20%

Instructions:

(i) ***Use Non Programmable Calculators***

Part A

Answer **all** the Questions. **Each** question carries **two** marks. (6x2=12)

1. State any two advantages of Derivatives Markets.
2. What is In the Money, At the Money and Out of the Money Options?
3. What is a Strangle Strategy in Options? When is it used?
4. What is the difference between Contingent and Commitment Contracts in Derivatives.
5. State the relationship between Time to Maturity and Options Premiums.
6. What is the difference between a Holder and Writer of Option Contracts?

Part B

Answer **all** the Questions. **Each** question carries **four** marks. (3x4=12)

7. Briefly explain the classification of Derivative Contracts.
8. The Option Premiums of a Stock with a Spot Price today of Rs 2500 with one month expiry , is given below :

Strike Price (Rs)	Premiums (Rs)	
	Call Option	Put Option
2000	510	5
2100	420	10
2200	330	15
2300	245	25
2400	165	50
2500	85	75
2600	60	160
2700	40	240
2800	20	320
2900	10	410
3000	5	505

Using the above data, answer the following questions:

a) What is the Time Value of Rs 2700 Call Option?
b) What is the Intrinsic Value of Rs 2200 Put Option?
c) Which of the Put Option contracts is In the Money?
d) Show the legs of the trade involved in a Bear Call Spread.

9. An Indian manufacturer imported goods worth \$ 15 Million, the payment of which is expected to be made in 3 months. The current rupee – dollar exchange rate is Rs 72/\$. The importer wants to hedge his foreign exchange risk using the following option contracts:

Strike Price (Rs.)	Option Type	Premium (Rs.)
72.00	Call	0.25
72.00	Put	0.35

The company is thinking of two alternatives:

i) Write a Put Option
ii) Buy a Call Option

You are required to determine the cost per \$ of these alternatives if the closing price at the end of 3 months is either Rs 76 or Rs 68.

Part C

Answer the Question. Question carries **sixteen** marks. (1x16=16)

10. Mr Gurunath is a speculator in Derivatives Market. He expects that due to the ensuing election results in 3 important states, the market index which is currently Rs 10600 could move up to 11000. He seeks your advice on the strategy to be adopted to profit from the upward movement using option contracts. The current price of the option contracts are as follows:

Strike Price (Rs)	Premiums (Rs)	
	Call Option	Put Option
10100	510	5
10200	420	10
10300	330	15
10400	245	25
10500	165	50
10600	85	75
10700	60	160
10800	40	240
10900	20	320
11000	10	410
11100	5	505

Using the above information suggest and create **two strategies** for Mr Gurunath and determine their Maximum Profit, Maximum Loss, Break Even Point and the net profit/loss of such strategies if the Market Index at the end of the month is either 11000 or 10700.

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PRESIDENCY UNIVERSITY
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SCHOOL OF MANAGEMENT

END TERM FINAL EXAMINATION

Odd Semester: 2018-19 **Date**: 07 January 2019

Course Code: FIN 304 **Time**: 3 Hours

Course Name: Derivatives and Risk Management **Max Marks**: 80

Programme & Sem: MBA & III Sem **Weightage**: 40%

Instructions:

(i) ***Answer all the questions***

Part A

Answer **all** the Questions. **Each** question carries **five** marks. (4Qx5M=20)

1. What is a Currency Swap? What are its advantages?
2. What is a Long Call Butterfly Strategy? Show its trade legs.
3. What is Short Hedge in Futures? Who uses it? Explain with an example.
4. What is Put Call Parity? Explain.

Part B

Answer **all** the Questions. **Each** question carries **ten** marks. (3Qx10M=30)

5. The Share Price of UNO Ltd. today is Rs 280. This stock is expected to go up 15% and down 10% every year for the next two years. If risk free interest rate is 8% pa, using the Binomial Model, find the price of a 2 Year At the Money Call Option and also the Put Option on the Stock.

6. Find the Futures price from the following:
   a) US Interest rate is 2.50%pa and German Interest rate is 1.50%pa. The Spot Price of the Currency is 1 DEM = 0.60USD. Based on the above, calculate the 60 Day Futures price of USD contract. (5 Marks)

   b) Spot Nifty today is at at Rs 10600. The Nifty 1 month Futures Price is Rs 10690. Annual Dividend Yield on Nifty Index is1.5%pa and the Risk Free Interest Rate is 7% pa. Using the information, calculate the Fair Value of a 3 Month Nifty Futures Contract. (5 Marks)

7. The Premium on a Call Option of a Stock is Rs 50. The Spot Price of the Stock is Rs 580. The interest rate in the economy is 8% pa. Using the Put Call Parity equation find the value of :
   a) the Put Option of the same Strike Price
   b) the Put Option of Rs 600 Strike Price

Part C

Answer **both** the Questions. **Each** question carries **fifteen** marks. (2Qx15M=30)

8. Big Box Ltd and Yes Meal.Com would like to enter into an 3 Year Rs 50 Crore, Interest Rate Swap wherein Big Box Ltd. requires Fixed Rate and Yes Meal.Com requires Floating Rate. The rates offered by their respective banks for both type of loans is as follows:

Company	**Fixed Rate Loan**	**Floating Rate Loan**
Big Box Ltd.	9.00%	MIBOR + .25%
Yes Meal.Com	11.00 %	MIBOR + .65%

The settlement of the swap is annual. From the above information design the swap and show the cash flows that occur to both the parties from inception till termination of the swap assuming the below given MIBOR rates :

Settlement Period	**MIBOR Rate**
End of 1st Year	7.25%
End of 2nd Year	7.75%
End of 3rd Year	8.25%

9. Mr Mohan Das is a position trader in futures market. He bought 5 lots of Reliance Industries Future Contract (1 Lot = 500 shares) 3rd December 2018 for a price of Rs 940 when the spot price was Rs 934. The initial margin is fixed at 10% of the closing share price and maintenance margin is fixed at Rs 70 per share. The closing futures price for the period of holding of the contract is as follows :

Date	Closing Futures Price
03.12.2018	962.00
04.12.2018	946.00
05.12.2018	924.00
06.12.2018	900.00
07.12.2018	928.00
10.12.2018	954.00

The trader squared up his contract on 11.12.2018 for a price of Rs 976.00.

From the above information:

a) Prepare a margin statement showing the daily cash flows including when margin calls are made;

b) Calculate the final pay-in/pay-out and its break-up to Mr. Mohan Das from the trade.