INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous) Dundigal, Hyderabad - 500 043

MASTER OF BUSINESS ADMINISTRATION TUTORIAL QUESTION BANK

Course Name	:	FIANCIAL DERIVATIVES
Course Code	:	CMB421
Class		MBA IV SEMESTER
Branch	:	MBA
Academic Year		2017-2018
Course Coordinator	:	Mr. Ramesh, Assistant Professor
Course Faculty	:	Mr. Ramesh, Assistant Professor

COURSE OBJECTIVES (COs);

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The course should enable the students to:

Ι	Demonstrate knowledge and understanding of how forward contracts, futures contracts, swap and
	options work, how they are used and how they are priced.
II	Explain put call parity for European options and explain how put call parity is related to arbitrage and
	construction of synthetic options.
III	Develop a theoretical framework within which all derivatives can be analyzed and valued and provide
	a comprehensive analysis on the properties of options and futures
IV	Understand the basic types of derivatives, their payoff functions, their developments, and the economic
	roles they play in the financial markets

COURSE LEARNING OUTCOMES (CLOs):

Students, who complete the course, will have demonstrated the ability to do the following:

CCMB421.01	Provides the opportunity to build the general taxonomy of financial derivatives and to develop
	intuitions, critical thinking and problem solving skills.
CCMB421.02	Understand the design and pricing of a forward rate agreement; understand the payoff of a
	Eurodollar futures; understand the design of swaps and how to determine the swap rate by using
	no-arbitrage principle
CCMB421.03	Understand the application of option pricing theory in the area of financial engineering and
	corporate finance
CCMB421.04	Calculate and interpret the prices of synthetic call option, synthetic put option, synthetic bond,
	and synthetic underlying stock.
CCMB421.05	Apply the Black-Scholes option formula for the price of a European option and its Greeks.
	Understand the idea of delta-hedging
CCMB421.06	Understanding of the basic building blocks of hedging, and some of the tools and strategies
	available to banks for measuring and hedging the various risks to which they are exposed.
CCMB421.07	Demonstrate critical thinking, analytical and problem solving skills in the context of derivatives
	pricing and hedging practice.
CCMB421.08	Provide participants with an in-depth knowledge of the structure and mechanics of the
	derivatives market/products, as well as the tools needed to price these instruments.

CCMB421.09	Develop innovative skills by structuring solutions to manage the risk exposure of financial assets
	of the company and compare the VAR in various portfolios and interpret the difference
	creatively and critically.
CCMB421.10	Calculate the derivatives of functions given as parametric equations and interpret their meanings geometrically and physically
CCMB421.11	Provide practical and simple investment and corporate financial management strategies using
	derivatives in a manner this will allow students to apply these concepts and skills.
CCMB421.12	Apply the general pricing theory to value new kinds of derivative instruments And are able to
	communicate their knowledge both written and orally.
CCMB421.13	Develop analytical, problem solving, planning, communication, interpersonal and creative skills
	in swaps contract in derivatives
CCMB421.14	Discover the arbitrage opportunities by analyzing historical and recent data and test the
	effectiveness of hedging portfolio in different kinds of scenarios.
CCMB421.15	Understand the working of commodity exchanges in commodity derivatives market and their
	governance, regulatory structures
CCMB421.16	Demonstrate the ability to develop interpersonal skills relevant to swaps in managing the risk
	and pricing the swaps
CCMB421.17	Acquire the knowledge and develop capability to development of models for valuing derivatives
	based upon the mathematics of stochastic calculus.

TUTORIAL QUESTION BANK

S. No	QUESTION	Blooms Taxonomy Level	Course Learning Outcome (CLOs)
	UNIT-I		
	INTRODUCTION TO DERIVATIVES		
	PART-A (SHORT ANSWER QUESTIONS)		
1	Write about the various characteristic features of derivatives market in India?	Remember	CCMB421.01
2	Bring out the development of financial derivatives in Indian markets?	Understand	CCMB421.01
3	Discuss briefly about the various factors contribution towards the growth and development of derivatives?	Understand	CCMB421.01
4	Explain the classification of derivatives market based on the nature of derivative instruments.	Remember	CCMB421.01
5	Discuss the types of derivatives market based on the market in which they have been trading?	Understand	CCMB421.01
6	Explain about the various types of options. Who are the parties involved in option contract?	Remember	CCMB421.01
7	Define swaps in derivatives market. Write about the different types of swaps in derivatives market?	Understand	CCMB421.01
8	Describe the role of derivatives market in the changing business world?	Remember	CCMB421.01
9	Define law of one price. Discuss the assumptions of law of one price in derivatives market?	Understand	CCMB421.01

S. No	QUESTION	Blooms Taxonomy Level	Course Learning Outcome (CLOs)	
10	Explain the role of derivatives market in economic development in risk management of business transactions.	Remember	CCMB421.01	
11	Define hedging. State the different hedging strategies in derivatives market for managing risk?	Understand	CCMB421.01	
12	"Financial derivatives are associated with certain myths and misconceptions" comment?	Remember	CCMB421.01	
13	Discuss the benefits to companies and institutional investors in derivatives market?	Understand	CCMB421.01	
14	Write the criticisms/Misuses of derivatives market which causes unstable market situations?	Remember	CCMB421.01	
15	Write the differences between the forward contracts and future contracts in derivatives market ?	Remember	CCMB421.01	
	PART-B (LONG ANSWER QUESTIONS)			
1	Discuss the growth and development of financial derivatives market in India in detail?	Understand	CCMB421.01	
2	Furnish the classification of derivatives based on the nature of i) Derivative instruments ii) Underlying asset iii) markets	Remember	CCMB421.01	
3	Narrate the useful economic functions of derivative instruments in the changing business world?	Understand	CCMB421.01	
4	Comment on the fundamental linkage existing between spot and derivative markets in detail?	Remember	CCMB421.01	
5	Explain the role of derivative market in economic development of a nation in general with regard to price discovery in particular.	Understand	CCMB421.01	
6	Write about the various uses and misuses of derivatives market in detail?	Remember	CCMB421.01	
7	Define derivatives. Discuss how financial derivatives use hedging strategies for managing risk?	Understand	CCMB421.01	
8	Who are traders in derivatives markets? How do they differ from the participants in the derivatives market?	Understand	CCMB421.01	
9	"Derivatives are associated with different types of risks" elaborate?	Remember	CCMB421.01	
10	Compare and contrast over the counter contracts and exchange traded derivatives in derivatives market?	Understand	CCMB421.01	
PART-C (PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)			NS)	
1	"One form of classification of derivative instruments is between commodity derivatives and financial derivatives" explain with a neat diagram.	Remember	CCMB421.01	
	UNIT-II			
FUTURE AND FORWARD MARKET				
	PART-A(SHORT ANSWER QUESTIONS)			

S. No	QUESTION	Blooms Taxonomy Level	Course Learning Outcome (CLOs)
1	The spot price of silver is Rs.45 per ounce. The storage costs are Rs.0.34 per ounce P.A, payable quarterly in advance. Assuming that interest rates are 10% per annum for all maturities, calculate the price of silver for delivery in six months.	Remember	CCMB421.06
2	What is forward contract in derivatives market? Write the features of forward contracts?	Understand	CCMB421.06
3	Discuss the types of forward contracts, according to the forward contracts act, 1952 in India?	Remember	CCMB421.05
4	Define futures contract in derivatives. Write the features of futures contact in derivatives?	Remember	CCMB421.02
5	Briefly explain the types of financial future contracts in derivatives contract?	Understand	CCMB421.06
6	What are the functions of futures contract in derivatives market in India?	Remember 7	CCMB421.04
7	Write the advantages of forward contracts and future contracts in derivatives market in detail?	Understand	CCMB421.04
8	Explain the distinction between the futures and forward contracts in derivatives market.	Understand	CCMB421.06
9	Discuss the various types of hedges in futures contracts in derivatives market?	Remember	CCMB421.03
10	What is hedge ratio? Discuss the two methods for calculating the hedge ration in derivatives market?	Understand	CCMB421.05
11	Discuss the different types of interest rates in interest rate futures in derivatives market?	Understand	CCMB421.03
12	Explain in detail about Forward rate agreement (FRA) in forward contract in derivatives market.	Remember	CCMB421.03
13	Write a note on i) currency futures ii) currency forwards	Remember	CCMB421.03
14	Briefly explain about the trading mechanism of forward contract in derivatives market?	Understand	CCMB421.03
15	Write a note on i) treasury bills futures ii) LIBOR	Remember	CCMB421.03
16	What is payoff in derivatives market? Explain about payoff in long and short position.	Understand	CCMB421.03
	PART-B (LONG ANSWER QUESTIONS)		
1	Define forward contract in derivatives market. Write a note on the forward rate agreement in forward contract in derivatives market?	Remember	CCMB421.06
2	How do you determine the pay off in a forward contract in derivatives market for long and short position? Explain with the help on a diagram.	Remember	CCMB421.06
3	What are the features of forward contract in derivatives market? State the advantages and disadvantages of forward contract in derivatives market?	Understand	CCMB421.05

S. No	QUESTION	Blooms Taxonomy Level	Course Learning Outcome (CLOs)
4	Define futures in derivatives market. Explain the structure and mechanism of the futures in derivatives market with a diagram.	Understand	CCMB421.06
5	"Hedging is the basic functions of futures market". Discuss the statement in the light of uses of futures contract?	Remember	CCMB421.06
6	Clearly discuss the application of forward contracts to manage commodity price risk in derivatives market?	Understand	CCMB421.06
7	Discuss briefly about the pricing model for index futures and commodity futures in derivative contract?	Remember	CCMB421.02
8	What are the different types of interest rates? Explain the applications of interest rate futures in detail.	Understand	CCMB421.04
9	What are the various decisions involved regarding the hedging with currency futures contract?	Remember	CCMB421.04
10	Explain the forward foreign exchange market. Write the important features of currency forward contract in detail?	Remember	CCMB421.06
	PART-C (PROBLEM SOLVING AND CRITICAL THINKIN	G QUESTIO	NS)
1	The current price of wheat is Rs. 3.4 per bushel and interest rates are at 4%. The storage cost per one year runs at about 0.1 per bushel, which is to be paid up front. What is the 1 year forward price of wheat?	Understand	CCMB421.04
2	The current price of NIFTY is Rs.1500. the stock underlying this index provides an yield of 3% P.A. the continuously compounding rate of interest is 6%. What will be the price of 4 months NIFTY?	Remember	CCMB421.06
	UNIT-III		
	OPTIONS AND BASIC OPTION STRATEGI	ES	
	PART-A(SHORT ANSWER QUESTIONS)		
1	Define options in derivatives market. Write the types of options in derivatives market?	Remember	CCMB421.08
2	Write a note oni)American optionii)European option	Remember	CCMB421.08
3	Explain the concept of in the money, at the money and out of the money of option contract.	Understand	CCMB421.08
4	Discuss about the over the counter options in derivatives market in detail?	Understand	CCMB421.08
5	Write a note on i) Stock options ii) Index options 	Remember	CCMB421.08
6	What are the different types of transaction costs that are involved in option trading in derivatives market?	Understand	CCMB421.08
7	"A call option need not be exercised, its minimum value is zero" explain	Remember	CCMB421.08

S. No	QUESTION	Blooms Taxonomy Level	Course Learning Outcome (CLOs)
8	What are the principles of put option pricing? Discuss about the value of a put at expiration?	Remember	CCMB421.08
09	Explain the assumptions in Binomial Option pricing model in derivatives market.	Understand	CCMB421.08
10	Discuss some of the bullish strategies in basic option strategies in options under derivatives market?	Remember	CCMB421.08
11	State any two methods of the neutral strategies in advanced option strategies in options under derivatives market?	Understand	CCMB421.08
12	Write about the advantages of option trading in derivatives market?	Reme ^{mber}	CCMB421.08
13	Explain the various strategies used by the hedgers to manage their exposure to price risk.	Remember	CCMB421.08
14	State some of the features of currency options in derivatives market?	Understand	CCMB421.08
15	Discuss any five determinants of currency options in derivatives market?	Remember	CCMB421.08
16	What are the various strategies which need to be adopted for trading currency options?	Remember	CCMB421.08
	PART-B(LONG ANSWER QUESTIONS)		
1	Define options in derivatives market. Write options features, types of options in derivatives market?	Remember	CCMB421.08
2	Distinguish between call option and put option in derivatives market in detail?	Understand	CCMB421.08
3	What do you mean by options and futures in derivatives market? Bring out the differences between options and futures?	Remember	CCMB421.08
4	Briefly explaini)The maximum value of a callii)The value of a call at expirationiii)The effect of time to expiration in options	Remember	CCMB421.08
5	What is put option? Explain the principles of put option pricing in derivatives market in detail.	Understand	CCMB421.08
6	What is binomial option pricing model? What are the various assumptions of binomial option pricing model?	Understand	CCMB421.08
7	Discuss in brief how BSOPM has further extended and explained on discrete dividends and continuous dividend stream?	Understand	CCMB421.08
8	Briefly explain the significance of information and data bank in project selections during implementation of the project?	Understand	CCMB421.08
9	Explain the various steps involved in Hertz Simulation procedure with a neat diagram.	Remember	CCMB421.08
10	Discuss the 3 different cases of Hiller expected Net present Value and standard deviation of Net present Value?	Remember	CCMB421.08

S. No	QUESTION		Blooms Taxonomy Level	Course Learning Outcome (CLOs)	
	PART-C (PROBLEM SOLV	ING AND CRITICAL THINKIN	IG QUESTIO	NS)	
1	The share of a Ltd company is price price of Rs.150are priced at Rs.25 i) Calculate the intrinsic value ii) What is the time value of opt iii) If the share price falls to Rs the holder and writer of	d at Rs.140 put options with a strike of options? tions? .80, what would be the gain/ loss for the options?	Remember	CCMB421.08	
2	The stock value of GMR industries in option contract is of Rs.350. the price price the option will be at the money the option is both call as well as put o	a spot market is Rs.350 and 3 months e of an option is 12% share. At what 7, out of money and in the money, if ption?	Understand	CCMB421.08	
3	A stock price is currently Rs.80. it is it will be either Rs.75 or Rs.85. the i continuous compounding. What is the option with a strike price of Rs.80?	the value of four months four months the value of four months four month European put	Remember	CCMB421.08	
4	Consider the following data Stock price Months to expiration Risk free rate of interest S.D of stock	Rs.50 3 months 10% PA 40%		CCMB421.08	
	Exercise price Option type Calculate the value of call option as p	Rs.55 European call per Black-Scholes model			
UNIT-IV					
	COMMOL PART-A (S	DITY MARKET DERIVATIVESHORT ANSWER QUESTIONS)			
1	Define commodity market derivatives markets?	. Write the features of commodity	Remember	CCMB421.11	
2	Discuss the product category or categories in commodity markets?	ories of commodities that are traded	Understand	CCMB421.11	
3	Discuss the benefits of commodity fur risk management?	tures markets as an efficient price	Remember	CCMB421.11	
4	What are the commodity options in co call option hedge?	ommodity markets? Write a note on	Understand	CCMB421.11	
5	Give various types of commodity swa	ps in commodity markets	Understand	CCMB421.11	
6	Write a note on agro swap hedges in c	commodity markets?	Remember	CCMB421.09	
7	Write about the role of commodity exchanges for investors and commodity buyers?		Understand	CCMB421.09	
8	Explain about the 3 national level commodity exchanges to trade in all permitted commodities.		Remember	CCMB421.09	
9	Write about the functions of futures comarkets?	ommodity markets in commodity	Understand	CCMB421.09	
10	State the classification of bullion prod	lucts in commodity markets in India?	Remember	CCMB421.09	
11	What are the carbon credits issu Convention on Climate Change (UNF	ed by United Nation Framework CCC)?	Remember	CCMB421.09	

S. No	QUESTION	Blooms Taxonomy Level	Course Learning Outcome (CLOs)	
12	Briefly explain i) Spread position ii) Cross hedging	Understand	CCMB421.09	
13	Who are the participants in the commodity markets?	Remember	CCMB421.09	
14	Write about the metal products that are traded in commodity markets?	Understand	CCMB421.09	
15	Write the structure of the National Commodity and Derivatives Exchange Limited (NCDEX)?	Understand	CCMB421.09	
	PART-B (LONG ANSWER QUESTIONS)			
1	Define derivatives. Explain the different types of bullion products and metal products in detail.	Understand	CCMB421.09	
2	Write the problems and prospects with the commodities derivatives market in India?	Remember	CCMB421.11	
3	Write about the trading of commodity options in exchanges? What do you mean by call option hedge, put option hedge and long combo hedge?	Understand	CCMB421.13	
4	What are the swaps in commodities derivatives market? Write about the types of commodity swaps in detail?	Remember	CCMB421.09	
5	Write a note on i) Energy swap hedges ii) Agro swap hedges	Understand	CCMB421.10	
6	Discuss how the commodity exchanges help farmers and trades developing country like India hedge their respective risks?	Understand	CCMB421.09	
7	Write in detail about Multi Commodity Exchange (MCX) of India limited?	Remember	CCMB421.09	
8	Explain about the National Commodity and Derivatives Exchange (NCDEX) Limited.	Remember	CCMB421.13	
9	Narrate the clearing, settlement and delivery mechanism in commodity exchanges in India?	Remember	CCMB421.11	
10	What steps are generally taken by the commodities exchanges to protect the interests of the genuine traders against the misuse by unscrupulous speculators?	Understand	CCMB421.11	
	PART-C (PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)			

S. No	QUESTION	Blooms Taxonomy Level	Course Learning Outcome (CLOs)
1	 In later part of Aug 2016, a black pepper wholesale merchant from kerala is contemplating whether to buy now or buy in the month of Oct2016. i. The spot price is Rs.11380 for 100 Kg ii. The storage cost of black pepper is Rs.15 per 100 Kg per month iii. The black pepper Nov 2016 futures is quoting Rs.11700 per 100 kg iv. The historical basis between Oct 2016 and Nov 2016 futures averages at minus (-)210. However keeping in view the relatively good production news, the wholesaler is anticipating the basis to strengthen by Rs.30 by Oct 2016 v. Cost of funds is 7% per annum continuously compounded. Answer the following questions, using the above data a) What would be September 2016 spot price? b) Whether the wholesaler should buy spot new or enter into a futures contract? 	Remember	CCMB421.09
	UNIT-V FINANCING DECISIONS		
	PART_A (SHORT A NSWER OUFSTIONS)		
1	Discuss the features of swaps contract in derivatives market in India?	Understand	CCMB421 14
2	Define interest rate swap in derivatives. Write the different types of interest rate swaps in derivatives?	Understand	CCMB421.14
3	Write a note on currency swaps contract in derivatives market?	Understand	CCMB421.14
4	How do you value the currency swaps contract in derivatives market based o the present values of the conventional bonds?	Remember	CCMB421.14
5	Define commodity swaps in derivatives contract. Discuss the various types of commodity swaps?	Remember	CCMB421.14
6	Explain the characteristics and advantages of equity indexed swaps in derivatives market.	Understand	CCMB421.14
7	Define credit risk. Write about the credit risk in swaps contract in the derivatives market?	Remember	CCMB421.14
8	Name any three main swaps contract that enables an organization to manage credit risk more efficiently?	Understand	CCMB421.14
9	Write a note on the following credit swaps i) i) Total return swaps ii) Credit default swaps	Understand	CCMB421.15
10	Discuss the role of interest rate swaps contract to lower borrowing costs in managing interest rate risk?	Remember	CCMB421.15
11	How can you use currency swaps a tool to hedge against risk of a decline in revenue in derivatives?	Remember	CCMB421.15
12	What is plain vanilla swap contract in derivatives market? Write its importance?	Understand	CCMB421.15
13	Define Credit Linked Notes (CLN) in derivatives. Write its types and structure?	Understand	CCMB421.15
14	Define credit swaps in derivatives. Explain credit swaps with on example.	Remember	CCMB421.15
15	Discuss how borrowing costs can be decreased in foreign country by using currency swaps?	Understand	CCMB421.15
	PART-B (LONG ANSWER QUESTIONS)		

S. No	QUESTION					Blooms Taxonomy Level	Course Learning Outcome (CLOs)
1	What do you understand by swaps in derivatives market? Explain the swaps concept and nature in detail.				Remember	CCMB421.14	
2	Discuss the major types of swaps contract which are traded in derivative market in India?					Remember	CCMB421.14
3	Explain the concept of interest rate swaps. Discuss the various features of interest rate swaps with suitable examples.					Understand	CCMB421.14
4	"Plain vanilla swap is simplest form of interest rate swap contract available in interest rate swap market" discuss with the help of an example explaining its structure and mechanism					Apply	CCMB421.14
5	What is currency swaps in derivatives market? Discuss the three steps flow of currency swaps with an example?					Remember	CCMB421.14
6	What are commodity swaps in derivatives? Write about the different types of commodity swaps in detail?					Understand	CCMB421.14
7	Write a note on i) Credit risk in swaps contract ii) Credit swaps in derivatives					Understand	CCMB421.15
8	When do we use swaps as a hedging tool? Explain the silent features of currency and interest rate swaps with an example.					Remember	CCMB421.15
9	Discuss how interest rate swaps are priced at the time of origination and after origination in swaps contract?					Understand	CCMB421.15
10	"Commodity swaps are priced in the same way as interest rate and currency swaps". Explain with the help of an example.					Remember	CCMB421.14
	PART-C (PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)						
1.	On October01,2016 , the spot term structure12 months24 months362.525.087.7Determine the fixed rate on a 4 year swap		cture is as follows36 months48 months7.7310.4wap for the pay fixed part?		Remember	CCMB421.14	
2	Companies A and B have Rs.20million 5 year loan Company A Company B Company A requires a flo loan. Design a swap that y annum and that will appear	been offered Fixed rate 5% 6.4% Dating rate low will net a bat ar equally att	a the follow ban, compan nk, acting a ractive to bo	Float Float LIBC LIBC y B re s inter oth con	es per annum on a ing rate DR+0.1% DR+0.6% quires a fixed rate mediary, 0.1% per npanies.	Understand	ССМВ421.15

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