Name: **Enrolment No:**	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End-Term Examination, December 2019

Course: Risk Management & Insurance **Semester: III**
Programme: MBA PM **C.Code:** PIUI8009
Time: 03 hrs. **Max. Marks: 100**
Instructions:

SECTION A

S. No.	Attempt all questions	Marks	CO
Q1	What is the difference between Uncertainty and Risk?	2	CO1
Q2	What is risk register?	2	CO2
Q3	The forward rate for any two currencies is generally a function of their spot rate and: (a) Trade Difference (b) Difference in the exchange rate (c) Int. rate differential between them (d) Both B and C	2	CO3
Q4	Explain the concept of balance of payment.	2	CO3
Q5	What is the difference between standalone risk and portfolio risk?	2	CO1
Q6	What is Put-Call Parity?	2	CO4
Q7	What are the determinants of currency option premium	2	CO4
Q8	Arbitrage is a strategy of taking advantage of ______ between two markets. (a) Price differential (b) theoretical prices (c) Interest rate differential (d) timing	2	CO2
Q9	Distinguish between exposure and risk.	2	CO1
Q10	Futures contracts are attractive for market participants as compared to OTC contracts because futures contracts have _________. (a) a settlement guarantee mechanism. (b) a greater money making potential (c) zero risk (d) minimum volatility	2	CO4

SECTION B

S.No.	Attempt any four questions		
Q 1	Explain hedging of fixed rate and floating rate loans using swap.	5	CO2

Q2	The following table, gives the rate of return on stock of Apple Computers and on the market portfolio for five years *Year* — *Return on the stock Apple Computers* (%) — *Return Market Portfolio* (%) 1 — -13 — -3 2 — 5 — 2 3 — 15 — 8 4 — 27 — 12 5 — 10 — 7 What is the market risk (beta) of the stock of Apple Computers?	**5**	**CO3**
Q3.	What are the various kinds of business risks? Distinguish between systematic risk and unsystematic risk	**5**	**CO2**
Q4.	If the price of the British Pound is USD 1.92, the annual interest rate is 4% in the US and 6% in the UK. What should be the price of a 90-day futures contract?	**5**	**CO4**
Q5.	Explain how currency forwards can be used to hedge the risk in foreign exchange deals	**5**	**CO4**
	SECTION-C		
S.No.	Attempt any two questions		
Q1	What is Enterprise Risk management? Discuss the process of Enterprise risk management.	**10**	**CO1**
Q2	A 2-month call option on an asset with strike price of Rs 2,100 is selling for Rs 140 when the share is trading at Rs 2,200. Find out the following: i) What is the intrinsic worth of the call option? ii) Why should one buy the call for a price in excess of intrinsic worth? iii) Under what circumstances the option holder would exercise his call? iv) At what price of the asset the call option holder would break even? v) If the price of the asset becomes Rs 2,150, should the option holder exercise the call option? vi) What is the profit/loss of the holder and writher if the price of the asset is Rs 2,000, Rs 2,250 and Rs 2,500 on the date of expiry of the option?	**10**	**CO4**

<table>
<tr><td>Q3.</td><td>Explain how currency forwards can be used to hedge the risk in foreign exchange deals.</td><td>10</td><td>CO3</td></tr>
<tr><td>Q4.</td><td>What is foreign exchange market? What are the functions of forex market? Who are the participants of forex market</td><td>10</td><td></td></tr>
<tr><td colspan="4">SECTION-D</td></tr>
<tr><td>S.No.</td><td>Attempt any one question</td><td></td><td></td></tr>
<tr><td>Q1.</td><td>. Given the following information about an asset:

Current Market Price: Rs 50, Annual Volatility: 30%, Risk Free Interest Rate for 3months: 10%

Find out the value of 3-month call option with strike prices of (a) Rs 40; (b) Rs 50 and (c) Rs 60. What are the intrinsic and time value of the calls?</td><td>15</td><td>CO3</td></tr>
<tr><td>Q2.</td><td>Two Indian firms X and Y are contemplating to raise finance of Rs 100 crore each. They have been offered following loans by a bank
<table><tr><td></td><td>Fixed rate Market</td><td>Floating rate Market</td></tr><tr><td>Firm X</td><td>12%</td><td>MIBOR +70 bps</td></tr><tr><td>Firm Y</td><td>11%</td><td>MIBOR+30 bps</td></tr></table>Another bank acting as swap intermediary is willing to work out a swap arrangement for a fee a 5 bps from each firm. . Firm X believes that interest rate would fall and hence, wants to raise funds in the floating rate basis. Y feels otherwise and likes to raise funds on fixed interest rate basis. What swap can be arranged between two parties? What would be the saving in financing cost of each firm?</td><td>15</td><td>CO2</td></tr>
<tr><td>Q3.</td><td>i) What is the minimum and maximum bound on the value of the call option? Explain.
ii) Why can not the difference of two call prices exceed the difference of their strike prices? If so, how would you benefit? Explain with the help of an example
iii) What is put call parity? Provide the relationship for call and put prices for European options.</td><td>15</td><td></td></tr>
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