Name:

Enrolment No:

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2018

Course: Risk Management **Semester: III**
Programme: MBA PM/UISC **Course Code:PIUI 8009**
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**	**CO1**
Q7	What are the determinants of currency option premium	**2**	**CO1**
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

<table>
<tr><td>S.No.</td><td>Attempt any four questions</td><td></td><td></td></tr>
<tr><td>Q 1</td><td>Explain hedging of fixed rate and floating rate loans using swap.</td><td>5</td><td>CO2</td></tr>
<tr><td>Q2</td><td>The following table, gives the rate of return on stock of Apple Computers and on the market portfolio for five years
<table>
<tr><td><i>Year</i></td><td><i>Return on the stock</i>
<i>Apple Computers</i> (%)</td><td><i>Return</i>
<i>Market Portfolio</i> (%)</td></tr>
<tr><td>1</td><td>-13</td><td>-3</td></tr>
<tr><td>2</td><td>5</td><td>2</td></tr>
<tr><td>3</td><td>15</td><td>8</td></tr>
<tr><td>4</td><td>27</td><td>12</td></tr>
<tr><td>5</td><td>10</td><td>7</td></tr>
</table>
What is the market risk (beta) of the stock of Apple Computers?</td><td>5</td><td>CO3</td></tr>
<tr><td>Q3.</td><td>What are the various kinds of business risks? Distinguish between systematic risk and unsystematic risk</td><td>5</td><td>CO2</td></tr>
<tr><td>Q4.</td><td>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?</td><td>5</td><td>CO4</td></tr>
<tr><td>Q5.</td><td>Explain how currency forwards can be used to hedge the risk in foreign exchange deals</td><td>5</td><td>CO4</td></tr>
<tr><td colspan="4">SECTION-C</td></tr>
<tr><td>S.No.</td><td>Attempt any three questions</td><td></td><td></td></tr>
<tr><td>Q1</td><td>What is Enterprise Risk management? Discuss the process of Enterprise risk management.</td><td>10</td><td>CO1</td></tr>
<tr><td>Q2</td><td>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?</td><td>10</td><td>CO4</td></tr>
</table>

<table>
<tr><td></td><td>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?</td><td></td><td></td></tr>
<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>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</td><td>10</td><td>CO2</td></tr>
<tr><td colspan="4">SECTION-D</td></tr>
<tr><td>S.No.</td><td>Attempt any two questions</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.</td><td>15</td><td>CO2</td></tr>
</table>

	What swap can be arranged between two parties? What would be the saving in financing cost of each firm?		
Q3.	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.	**15**	**CO4**