



Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2018

Course: MBA OG Programme: Financing Petroleum Sector Projects Time: 03 hrs. Instructions: Scientific Calculator is allowed	Semester: III Course Code: FINC 8002 Max. Marks: 100
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SECTION A

S. No.	Multiple Choice Questions	Mar ks	CO
Q 1	Option which may be exercised even before maturity is known as a. American Option b. Cylinder Option c. European Option d. Preference Option	2	1,2
Q 2	Change in Premium/Change in Volatility is knownin Option Pricing a. Theta b. Vega c. Delta d. RHO	2	2
Differentiate the Following:			
Q 3	Call and Put Option	2	1
Q4	NPV and Annual Capital Charge	2	1,2
Fill in the Blanks			
Q 5	Certainty Equivalent Value range between	2	1,2
Q 6	Conditions of Risk are	2	1
Q 7	Business risk refers to	2	1
Q 8	Suppose an investor buys Can Dollar futures (Can \$ 200000) at US\$0.80 on Monday maturing in 2 days. If the price moves up to US\$ 0.85 or if falls to US\$ 0.75 , MTM will be	2	2
Q 9	Hierarchical structure comprising of task and sub task Analyzing risks (determine likelihood, consequence, urgency, and customer priorities and preferences and determine risk handling priorities) is called as.....	2	1,2
Q 10	An iterative process to identify, assess, reduce, accept, and control risks in a systematic, proactive, comprehensive and cost effective manner, taking into account the business, costs, technical, quality and schedule programmatic constraints is called as.....	2	1,2,3

SECTION B			
Q 11	“Swaps are important tool used to hedge the Risk”. Briefly discuss the Interest Rate Swap with example	5	4
Q 12	<p>Growing level of uncertainty and Risk, causing all firms facing wavering and non deterministic future. All groups and corporations resort to effective risk management, either formal or informal, depending on the size of the organization. Effective Risk Management is getting attention in the corporate world. It requires very specialized organization approach and skills to implement and handle the risk management process. Without Risk Management it would be very difficult to survive in the competitive world. The firms are resorting to number of practices to manage the risk.</p> <p>Based on this, discuss the various approaches and steps involved in the risk management function in Oil and Gas Sector Projects</p>	5	3
Q 13	<p>Write Short Notes on the following:</p> <ol style="list-style-type: none"> a. Phases of Project Life Cycle b. Securitization c. Process of Financial Markets 	5	4
Q 14	<p>Dividend expected next year is Rs. 12. Duration of Super Normal Growth (Phase I is 5 years). Growth rate during the super normal growth (Phase I) is 18%. Duration of Super Normal Growth (Phase II is 2 Years). Growth rate during the super normal growth (Phase II) is 15%. Normal growth rate after the super normal growth period is over is 10%. Ke is 14%</p> <p>Compute the Price of equity share</p>	5	3
SECTION-C			
Q 15	<p>A project costs Rs. 150 to initiate. After one year it could return Rs. 130 with probability of 0.70 or Rs. 90 with probability 0.30. If Rs. 130 return materialized then there is a 0.40 chance of a Return of Rs. 120 and a 0.60 chance of return of Rs. 70 after 2 years. If the return of Rs. 90 occurred in the first year then the return in year 2 may be Rs. 130 with a probability of 0.50 and Rs. 100 with probability 0.50. Assuming the cost of capital to be 10%, Find the Coefficient of Variation after making Decision Tree.</p>	10	3

Q 16	<p>The MTC Company has developed the following data.</p> <table border="1" data-bbox="245 422 1317 831"> <thead> <tr> <th>State (s)</th> <th>Probability (pj)</th> <th>Market Return (RM)</th> <th>Security return (Rj)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.05</td> <td>-0.20</td> <td>-0.30</td> </tr> <tr> <td>2</td> <td>0.25</td> <td>0.10</td> <td>0.05</td> </tr> <tr> <td>3</td> <td>0.35</td> <td>0.15</td> <td>0.20</td> </tr> <tr> <td>4</td> <td>0.20</td> <td>0.20</td> <td>0.25</td> </tr> <tr> <td>5</td> <td>0.15</td> <td>0.25</td> <td>0.30</td> </tr> </tbody> </table> <p>Calculate:</p> <ol style="list-style-type: none"> The expected return on the security. The variance and standard deviation of the security returns. The covariance of the security returns with the market returns. 	State (s)	Probability (pj)	Market Return (RM)	Security return (Rj)	1	0.05	-0.20	-0.30	2	0.25	0.10	0.05	3	0.35	0.15	0.20	4	0.20	0.20	0.25	5	0.15	0.25	0.30	10	2
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Q 17	<p>Jai Petroleum Limited, Mumbai has long USD 1 million on 1 June 2018 for maturity 30 June 2018 at 44.50 USD/INR with exchange. The client has hired you as his financial consultant to let him know about the following:</p> <ol style="list-style-type: none"> MTM position Margin money which he shall pay or receive to the bank on account of such MTM. <table border="1" data-bbox="245 1493 1040 1829"> <thead> <tr> <th>Date</th> <th>Market Rate</th> </tr> </thead> <tbody> <tr> <td>5 June</td> <td>44.75</td> </tr> <tr> <td>8 June</td> <td>45.00</td> </tr> <tr> <td>14 June</td> <td>45.15</td> </tr> <tr> <td>17 June</td> <td>44.55</td> </tr> </tbody> </table>	Date	Market Rate	5 June	44.75	8 June	45.00	14 June	45.15	17 June	44.55	10	1,2														
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21 June	44.65
23 June	44.35
25 June	44.00
27 June	44.15
30 June	44.50

OR

Compute the Net Present Values of the two projects for each of the possible cash flows using Sensitivity Analysis

	Project X ('000 Rs.)	Project Y ('000 Rs.)
Initial Cash Outlay (t=0)	80	80
Cash Flow Estimates (t=1-15)		
Worst	12	0
Most Likely	16	16
Best	20	32
Required Rate of Return	0.10	0.10
Economic Life (in Years)	15	15

SECTION-D

<p>Q 18</p>	<p>The following information of Toyota Ltd is available to you for your perusal:</p> <p>The present book value capital structure is as follows:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: right;">Rs. In Lakh</th> </tr> </thead> <tbody> <tr> <td>Equity Capital</td> <td style="text-align: right;">200</td> </tr> <tr> <td>15% Preference Capital</td> <td style="text-align: right;">120</td> </tr> <tr> <td>Retained Earnings</td> <td style="text-align: right;">50</td> </tr> <tr> <td>13% Debentures</td> <td style="text-align: right;">130</td> </tr> <tr> <td>15% Loan</td> <td style="text-align: right;">200</td> </tr> <tr> <td></td> <td style="text-align: right;">700</td> </tr> </tbody> </table> <p>Anticipated external financing opportunities are:</p> <p>i. Rs 1000 per debenture redeemable at par; 5 year maturity,13% coupon rate , Premium @12% (Lump Sum), The Corporate tax rate is 30%.</p> <p>ii Rs 1000, 15% preference shares redeemable at par: 6 years maturity, Discount @ 12% (Lump Sum), floatation Cost is 3%. Dividend Tax is 5%</p> <p>iii Equity shares are sold at Rs.40 . Expected Dividend is Rs. 18 per share . Growth Rate is 10%</p> <p>You are required to determine the weighted average cost of capital using the book value weights</p>	Rs. In Lakh		Equity Capital	200	15% Preference Capital	120	Retained Earnings	50	13% Debentures	130	15% Loan	200		700	<p>15</p>	<p>1,2</p>
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<p>Q 19</p>	<p>Read the case and answer the following questions:</p> <p><i>Currency Futures is a ready shaver to make the contract more hedged and attractive investment. It will protect the investor like a mothers' womb.</i></p> <p>This study attempts to bring out the relevant aspects and need associated with the introduction of currency futures in India. An attempt has also been made to analyze the present trends prevailing in the currency futures and the future forecast. Currency futures are contracts to buy or sell one currency (only dollar rupee as of now) against another at a specified price and date in the future. It is a type of financial futures contract where the underlying is the currency exchange rate. It gives the holder the right to buy or sell in</p>	<p>15</p>	<p>5</p>														

contrast to the option contract which gives the holder the right, but not the obligation to buy or sell the underlying asset. Therefore, both the parties to the futures contract must fulfill their novation on the settlement date.

In the early 1990's number of structural reforms embarked India in the foreign exchange market. Economies were not fully integrated and the rupee was partially convertible. Number of barriers existed which restricted the international finance and trade. Due to this liberalization and globalization- the two important terms for international trade came into picture. India had a pegged exchange rate regime which was made partially floated in March 1992 and fully in march 1993, seeing the impact of south East Asian crisis. The economies suffered and the pressure on their exchange rates mounted to such an extent that the countries had to give up the peg to the dollar and float their currencies. Thus an important step was taken by the RBI towards current account convertibility which was achieved in august 1994. These issues attracted a great deal of interest from policy makers and investors. Recent step had been taken by the RBI towards capital account convertibility i.e. rupee is on a urge to be made fully convertible which will increase the scope of the international finance and trade and thus foreign exchange market in India.

The rupee has been convertible on the current account since 1994 which implies it can be converted into foreign currency for only trade specific transactions like imports, remittances of interest etc. if required. However, it is not convertible on capital account which means local assets cannot be freely moved into foreign assets and vice versa. Thus RBI currently has a five year plan to move towards full capital account convertibility which prolongs till 2011.

In lieu of this, Recent development by the RBI along with securities and exchange board of India (SEBI) for the launch of currency futures has taken place on august 6, 2008. This has been viewed as a welcome move towards further integration of the Indian financial markets with the global markets. Excessive volatility in the foreign exchange market due to interest rate and exchange rate fluctuations forced RBI on April 20, 2007 to move for issuing guidelines on the usage of foreign currency forwards, swaps and options in the OTC market. At the same time advantages of introducing currency futures was also explored. Thus the report of the internal working group of RBI was submitted in April 2008, recommending the introduction of exchange traded currency futures.

Further currency futures has been introduced for the hedging purposes allowing only residents of India to take positions and thus helps traders and investors in undertaking their economic activity and minimizing their exposures. *For e.g. A person invests \$200,000 abroad for a year when \$1 = Rs.43. If his investments yield 20 per cent returns in a year thereby making \$ 40,000 or Rs. 17.2 lakhs in rupee terms. However, if the dollar weakens to Rs. 40, the returns would fall to Rs. 16 lakhs thus a loss of Rs. 1.2 lakhs. But if the person had sold a 12-month futures contract at the spot price of Rs. 43 amounting to \$200,000 and the dollar did fall to Rs.40, he could cover the transaction by buying the dollar and*

	<p><i>make good the loss incurred in the international market.</i></p> <p><i>The upfront payment will be 1.75 per cent of \$ 200,000 i.e. \$3500. Supposing if rupee weakens to say 45, the losses in the future market would be made up by profits in the international market. This is how the investor is hedged against both a rise and fall in currency thereby ensuring safe returns.</i></p> <p>Q (i): Briefly outline the Summary of the Case</p> <p>Q (ii) Considering the Above mentioned Case, Mention the Basic Characteristics in Currency Futures</p> <p>Q (iii) Briefly discuss the application of the futures in the given example in the case</p>		