Name: Enrolment No:	

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

Course: Energy Derivatives and Risk Management
Semester: III — **Course Code: OGET 8010**
Programme: MBA (Oil & Gas) — **Max. Marks: 100**
Time: 03 hrs.
Instructions:

SECTION A

S. No.		Marks	CO
Q 1	**Explain the following in not more than 2 lines** 1.) Novation 2.) Dodd Franc Act 3.) Limit order 4.) Market risk 5.) CCP 6.) Stack and roll hedge 7.) Brokers recap 8.) CFTC 9.) Vanilla swap 10.) Legal confirmation	**20**	**CO 1,2**

SECTION B

S. No.		Marks	CO
Q 1.	Differentiate between the following: a.) Call and Put option b.) REMIT and EMIR	**5**	**CO 2,3,4**
Q 2.	Explain how commodity trading firms facilitate transformation of commodities to add value to producers and consumers.	**5**	**CO 1**
Q 3.	Explain how basis risk can arise in a hedging transaction.	**5**	**CO 1**
Q 4.	Margin is the deposit money that needs to be paid to buy or sell each contract in an exchange. In this light, explain various kinds of margins?	**5**	**CO 2,3**

SECTION-C

S. No.		Marks	CO
Q 1.	Analyse the scenario with the help of an example in which a trader buys a call and buys a put at the same strike price, have unlimited risk on the downside and substantial upside risk. He has less risk appetite than other traders and expectation of a volatile market.	**15**	**CO 2,3**
Q 2.	Explain the processes by commodity trading firms as how they manage the	**15**	**CO 1**

	following categories of risk : a.) flat price risk b.) basis risk c.) Credit risk d.) Liquidity risk e.) Freight risk		
SECTION-D			
Q1.	**Refer the case below and answer the following questions.** 1.) "Why was it that Enron, a financial services company, in effect, could not release a balance sheet with their earnings statement?" 2.) What is the role of The Sarbanes Oxley Act of 2002 in the case? 3.) What is the conclusion drawn from the Enron collapse? Enron was founded as a result of a merger of gas companies in 1985. Founded by Kenneth Lay it originated in Omaha Nebraska. Despite promising to keep the headquarters in Omaha, Lay almost immediately moved the company to Houston Texas where they began consolidating much of their business into natural gas. Lay was Chairman and CEO of Enron Corporation and had a PhD in Economics. The first signs of trouble for Enron came early when Traders gambling with company assets in the oil market lost $90 million in a period of five days. The company reserves were gone and auditors from the company's accounting firm Arthur Andersen saved the company by "bluffing the numbers" in other words mis-reporting the company's net-worth. This often overlooked event spoke to the corporate culture that was beginning to develop at Enron. Company assets were being gambled in extremely risky investments in order to turn high profits. With company revenues hurting and a need for new life to be breathed into the company, Ken Lay hired an up and coming Harvard Business School graduate Jeff Skilling. Skilling had a big idea about trading energy, especially natural gas, as a commodity. His plan to trade natural gas as a valued asset was only one of his brilliant ideas; the other being adopting an accounting system that would ensure the success of Enron for the foreseeable future. Skilling had a condition on which he would work for Enron, the corporation would have to adopt a new form of accounting called mark to market. Developed by traders in the 1980's this new form of accounting allowed accounting for the fair value of an asset or liability to be based on the current market price, however this figure could also be obtained through any other objective process; in effect accountants could value assets and liabilities at any value they saw fit. Because the accounting system was a new and popular idea and so was the idea of trading natural gas as a commodity, Arthur Andersen, Enron's accounting firm and the Securities	**30**	**CO 2,3,4**

and Exchange Commission both signed off on approval for Enron to adopt Mark to Market Accounting. Regardless of how much revenue Enron was earning, Enron could speculate natural gas futures and record them on their books as earned revenues. Amanda Martin Brock, an Enron Executive described the new system as "Very Subjective, and very, it left it open to manipulation". When Mark to Market was approved the company immediately posted huge earnings and the Executives took the first of many large bonuses from these inflated earnings. The Enron executives literally threw a party when Mark to Market was approved; they immediately paid themselves bonuses based on un-earned revenue. This event was both the beginning, and the beginning of the end for Enron; Enron executives would spend the next 10 years trying to fill the financial void created by their accounting practices, eventually leading to the corporation's demise.

Skilling was an innovator; he brought a corporate culture to Enron that was Darwinian to the point of near insanity. His survival of the fittest tactics were reflected in his PRC policies or Performance Review Committees. These committees would rate their peers on a 1-5 scale and the bottom 10% or so of employees would be systematically fired each year. Ken Lay described their culture by saying "Our culture is a tough culture, it's a very uh, very aggressive culture." This statement rang true as rumors of Enron's reputation spread through the financial world. Enron traders wouldn't do business with entities that defied them or disagreed with their speculations; they were the biggest bull in the market and Jeff Skilling's macho culture fueled the cutthroat attitudes of his employees. Skilling encouraged risk taking and extreme behaviors. Corporate retreats were often spent engaging in extreme sports and the macho persona was reflected and rewarded in the company. Stock market analysts would use certified documents from Enron's accounting firm in order to make buy and sell recommendations on Enron's stock, the only problem was the company continually had a buy rating, thus driving the price higher. The first person to notice this otherwise unheard of financial anomaly was a Merrill Lynch analyst named John Olsen. When he raised questions about the companies reporting practices he was fired, it was said that in return Merrill Lynch was given two analyst jobs that paid $50 Million each; $100 Million in order to silence anyone who would raise suspicion about their company. Around this time Lou Pai, a sort of hidden Enron CEO became prevalent in the public eye. As CEO of Enron Energy Services, he netted around $120 Million for the company before leaving shortly thereafter following a scandal in his private life.

In the year 2000 Enron announced a plan to trade bandwidth; as it had developed a market for energy so it would with the tech revolution of the turn of the century. Enron formed a deal with Blockbuster to stream movies via the internet to customers using idle bandwidth, claiming to have developed the technology and

instilling themselves as the new industry leader. Enron's PR campaign was so effective at this point that the stock price rose to a new record high; despite the fact that the blockbuster deal fell through completely. Despite not earning any revenue from the Blockbuster deal, Enron posted $53 Million in earnings based on projections from the deal. Executive bonuses were paid out based on this figure and despite the loss, the stock price continued to rise. In the wake of the failed Blockbuster deal, insiders, mostly Enron top executives started to sell off large quantities of their stock. The public image of the company continued to improve while the executives sold nearly $1 Billion in personal stock, Ken Lay and Jeff Skilling leading the charge selling around $300 Million and $200 Million of their own shares respectively. On August 23rd 2000, Enron announced that they would be speculating and trading weather reports in Enron's newest scheme to expand into new markets. Enron stock was trading at $90/share, but this most recent ploy was a desperate almost comical move, despite this they were once again named the world's most innovative company by Fortune Magazine.

By now investor confidence was weakening after the public outrage over energy in California, Jeff Skilling was losing control of his traders as the cutthroat culture he had helped foster were managing to trade the company out from under him. The main contributing factor to the failure of Enron as a company was greed. It started from the moment that Jeff Skilling incorporated mark to market accounting into Enron's policies, and then that system was immediately taken advantage of. The initial bonuses paid out to executives were based on speculations in futures that were never realized. The company spent the next ten years trying to generate new revenue streams in order to make their company as successful as they always said it was. Often times these revenue streams were sustained through unethical or even illegal dealings on the part of Enron and the companies they did business with. Greed and cutthroat attitudes were ingrained into Enron's corporate culture and at every turn employees were manipulating the system in order to make bonuses, or mis-represent numbers from their department. When this is the corporate culture and your corporation is one of the largest in the world, it is difficult for individuals within the company to stand up for their own system of values. Whenever a problem arose it would be sent up the ladder and would end with a "let me run it by Jeff". Enron executives sold over $1 Billion in personal stock options in the two years leading up to the collapse of the corporation. When the corporation went bankrupt 20,000 employees working directly for Enron lost their jobs. The average severance pay was $4500 while the top executives collected final bonuses totaling $55 Million. In 2001 employees of Enron Corporation lost $1.2 Billion in retirement funds and retirees lost over $2 Billion in pension funds. Meanwhile executives sold $116 Million in stock as the company was going under. Despite making remorseful statements about the employees of the company, executives showed throughout the life of the

company that there was no end to their corporate greed.

The Sarbanes Oxley Act of 2002 was signed into law in order to encourage trust in publicly traded companies. In the wake of the Enron scandal more concise accounting and reporting practices are now required. According to the SEC website “The Act mandated a number of reforms to enhance corporate responsibility, enhance financial disclosures and combat corporate and accounting fraud, and created the "Public Company Accounting Oversight Board," also known as the PCAOB, to oversee the activities of the auditing profession.” The creation of PCAOB would hopefully prevent another Arthur Andersen situation from occurring in the future. While some argue that the cost of implementing the higher standards of Sarbanes Oxley is too expensive for small businesses, the overall effect of the legislation could be considered effective. Investor confidence was temporarily restored, until security speculation much like commodity speculation in the Enron case sent the U.S. financial system spiraling once again in 2008. The resulting policies do require more accurate accounting principles, and greater regulation of oversight companies providing accounting audits for that company.