

Name:  
Enrolment No:



UNIVERSITY WITH A PURPOSE

**UNIVERSITY OF PETROLEUM & ENERGY STUDIES**  
**Online End Semester Examination, December 2020**

**Course: Energy Trading Markets and Risk Management**  
**Program: MA Energy Economics**  
**Course Code: OGET 8006**

**Semester: III**  
**Time: 3 Hours**  
**Max. Marks: 100**

**SECTION A**

1. Each Question will carry 5 Marks
2. Instruction: Explain each briefly in not more than 5 lines

S.No	Question	COs
Q1	Rho	CO 2
Q2	Black scholes model	CO 2
Q3	A call option at a strike of Rs.176 is selling at a premium of Rs.18. At ..... price will it be at break even for the buyer of the option?	CO 4
Q4	Stress Testing	CO 3
Q5	Pit Trading	CO 2
Q6	Vega	CO 2

**Section B**

1. Each question will carry 10 marks
2. Instruction: Write short / brief notes

Q7	Explain the processes by commodity trading firms as how they manage the following categories of risk : a.) flat price risk b.) basis risk c.) Credit risk d.) Liquidity risk e.) Freight risk	CO 1
Q8	Explain the concept of plain vanilla swaps with the help of an example.	CO 2
Q9	Explain the option strategy which should be adopted If a trader buys a call and buys a put at the different strike price, He have limited loss and unlimited profit potential. He has less risk appetite than other traders.	CO 4
Q10	Value at risk (VAR) is a probabilistic measure of the range of values a firm's portfolio could lose due to market volatility. What are the various methods of calculating VAR for a simple portfolio?	CO 3

Q11	Define technical analysis. Evaluate the ways in which, it is useful in studying the oil and gas markets?	CO 1
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**Section C**

**1. Each Question carries 20 Marks.**

**2. Instruction: Write long answer.**

Q12		
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Calculate the value of a European call option by illustrating stock and options lattice for a period of 4 years with the following details.

Lattice Parameters	
Initial Price	100
Strike Price	110
R	1.05
U	1.08
D	0.93
Q	55.53%
1-q	44.47%

CO 4