Name: **Enrolment No:**	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2020 (ONLINE MODE)

Course: Energy Economics **Semester: Third**
Program: MBA-ET **Time : 3 hrs**
Course Code: ECON-8002 **Max. Marks: 100**

Instructions:

1. *The student must write his/her name and enrolment no. in the space designated above.*
2. *The questions have to be answered as per the instructions given in the respective sections.*

SECTION –A

1. **Each Question will carry 5 Marks**
2. **Instruction: Select the correct answer(s)**

S. No.		CO
Q1	GDP elasticities of energy demand indicate a. Rate of change of energy demand b. Rate of change in economic output c. Either (1) or (2) d. Both	**CO1**
Q2	Root Mean Square (RMS) refer as a. the deviation of the forecast from its calculated value b. the deviation of the forecast from its notinal value c. the deviation of the forecast from its actual value d. the minimizes deviation of the forecast from its actual value	**CO1**
Q3	DSM encompasses the following categories of activities a. Load Management b. Energy Conservation	**CO1**

	c. Fuel Substitution and Load Building d. All of them	
Q4	Inverse of the diversity factor is called a. CUF b. Load factor c. Coincidence factor d. None of them	**CO1**
Q.5	Under recovery to OMCs is the difference between a. desired price and actual selling price b. actual selling price and desired price c. perceived price and actual selling price d. total cost and actual selling price	**CO4**
Q.6	A market based mechanism to enhance cost effectiveness of improvements in energy efficiency in energy-intensive large industries and facilities, through certification of energy savings that could be traded such mechanism is called: a. PAT b. MTEE c. EEFP d. FEEED	**CO1**
SECTION –B **1. Each question will carry 10 marks** **2. Instruction: Write short / brief notes**		
Q.1	What is the order of recovery in case of production sharing contracts? Explain briefly each of the items?	**CO2**
Q.2	Discuss briefly evolution energy demand with respect to crude oil price crisis and also explain the distinct features of energy demand in developing countries.	**CO3**
Q.3	Suppose a person wants to travel 10 km in a car. Car mileage is 10 km per liter. Transportation loss from refinery to end user 5 percent, refinery's operating efficiency 95 per cent gasoline production 30 per cent of crude oil used and crude oil recovery rate from the national field is 20 per cent. How much oil required covering the distance and also what will be the oil quantity required to cover the same distance when crude oil recovery rate from national oil field improves from 20 to 30 percent.	**CO2**
Q.4	Explain the relationship between consumer surplus and price elasticity.	**CO3**
Q.5	Analyse the following Load Management Options: (a) Peak Clipping (b) Valley Clipping (c) Load Shifting (d) Energy Conservation	**CO4**
	SECTION –C **1. Each question will carry 20 marks** **2. Instruction: Write Long Answer**	
Q.1	Assume that Tyler Co. is involved in Petroleum Operation in Trinidad. Tyler has 49% Working Interest (WI) while Local Oil Company has 51% WI. Annual Gross production is to be split in the following order: 1. Royalty is 15% of annual gross production and is to be paid in kind. 2. VAT is equal to 5% of annual gross production and is to be paid in kind. 3. Cost Oil is limited to 60% of gross production, with costs to be recovered in the following order: i. Operating expenses ii. Exploration Cost (Paid entirely by Co.) iii. Development Cost (49 % by Co. and 51% by local oil co.) 4. Any excess remaining after cost recovery becomes profit oil: i. The government receives 12% of the profit oil.	**CO5**

	ii. the remainder split between the co and local oil company based on their WI For 2015 assume the following: • Recoverable Operating cost total $7,000,000 • Exploration cost (unrecovered to date) total 70,000,000. • Development Cost (unrecovered to date) total 700,000,000. • Any cost not recovered in the current year may be carried forward to be recovered in future years. • The gross production for the year is 4,000,000 bbl of oil. • The agreed up price is $ 70/bbl. Prepare the Crude Oil Production Sharing to Parties Statement.	