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

Course: Basics of Energy Economics   **Semester: I**
Programme: BAEE(H) Specialization in Energy Economics   **CC: ECON 1005**
Time: 03 hrs.   **Max. Marks: 100**
Instructions: Do as directed

SECTION A

S. No.		Marks	CO
Q 1	Fill in the blanks	**10**	**CO1**
	According to the law of energy, …………. can neither be ………………… nor be ……………………. but can be …………………… from one form to another. Energy ……………. from the physical environment and ultimately ……………. there. An energy market is ………………. where there are large number of ………………. and ……………. The product they sell is ………………………		
	Define the following:	**10**	**CO1**
	a. Energy Elasticity b. Energy Conservation c. Energy Intensity d. Energy Management e. Energy Planning		

SECTION B

Q 2	Differentiate between:		
	i. Energy Economics and Environmental Economics ii. Renewable and Non-renewable Energy iii. Economic Development and Sustainable Development iv. Energy security and Energy efficiency v. Energy planning and Sustainable energy planning	**20**	**CO2**

SECTION-C

Q 3	Attempt *any three* questions from this section		
	I. Explain the nature and emergence of energy economics as a sub-discipline of economics.	**10**	**CO3**
	II. Given the following demand and supply function of an energy product, determine equilibrium price and quantity: a) $Q_d = 10 - 2P$, $Q_s = -2 + P$ b) $Q_d = 20 - P$, $Q_s = -80 + 7P$	**10**	**CO4**

	c) $Q_d = 25 - 3P$, $Q_s = -15 + 5P$		
	III. Energy is the basic and fundamental requirement for economic development of a country like India. Elaborate.	10	CO3
	IV. Explain different types of energy resources with examples.	10	CO3
SECTION-D			
Q4	Attempt *all questions* from this section		
	I. Assume that Uttrakhand government is the only seller of electricity (monopoly) and its demand and cost function is given by: $$P = 2 - 0.0004Q \text{ and } C = 800 + 0.2Q + 0.0001Q^2$$ What Q^* maximizes the government's profit (or minimizes its loss)? At Q^*, what is the price and the profit?	15	CO4
	II. Write short notes on the following: i. ONGC ii. OPEC iii. Impact of energy on environment	15	CO3