

Name:	
Enrolment No:	

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

Course: Energy Economics	Course Code: LLBD 507	Semester: V
Program: BALLB		Time: 03 hrs.
Instructions: Please answer all the sections/questions		

SECTION A

S. No.		Marks	CO
Q 1	Please answer the following questions stating true or false :	10x2=20	
	a. Loss of economic efficiency results in drain on governmental finances	T/F	CO1
	b. Price Leadership is associated discriminatory pricing	T/F	CO1
	c. PDO is a NOC of Oman	T/F	CO1
	d. Healthy completion and market efficiency are desired characteristics of Of an economy.	T/F	CO2
	e. Energy Security should be promoted	T/F	CO2
	f. Royalties range as high as 15%	T/F	CO2
	g. Emerging markets imply developed economies	T/F	CO1
	h. Most Government participation range from 10% to 15%	T/F	CO2
	i. OVL is a subsidiary of ONGC	T/F	CO2
	j. Cost saving results in energy saving promotion measures	T/F	CO2

SECTION B

Q 2	Please read the questions and answer in brief:	6x5=30	
	a. Explain upstream . midstream and downstream sector and the problems being faced by the in Indian context.		CO1
	b. Explain in brief the objectives of Integrated Energy Policy . Highlight the importance of conserving Energy and reducing costs in your own words.		CO3
			CO2

	<p>c. What do you understand by Energy Security and what is the importance of being energy secure.</p> <p>d. Explain the energy policy and write briefly about HPCL, BPCL, ESSAR OIL, GSPC and CPCL. in terms of capacity, products, location, etc</p> <p>e. “ International Relations shape and influence the trade relations between countries in the oil and gas sector” Please justify this statement explaining geopolitics and briefly write about the oil shocks.</p>		
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SECTION-C

Q 3	Please read the questions and answer in details:	10x3=30	
	<p>a. Explain your understanding about PSC (Production Sharing Contract) . Explain the “Contractors Take” with its derivation and also explain the relevance and importance of the various stages of deductions and additional features.</p> <p>b. What do you understand by Administered Price Mechanism (APM). Give the features of APM giving the recommendations of Rangarajan Committee, advantages, disadvantages and problems of APM. Explain also the future scenarios and critical success factors and every thing leading to dismantling of APM.</p> <p>c. How is crude oil priced ? Explain what is meant by Paper Market. Explain the players in the physical market and the roles they play. Give the Invoice price formula of crude oil.</p>		<p align="center">CO3</p> <p align="center">CO4</p> <p align="center">CO4</p>

SECTION-D

Q4	Please read the case and answer the questions:	10X2=20	
	<p>Scarcity is now a critical issue in many of the world's fisheries because the demand for seafood products is increasing in all types of societies more rapidly than additional fish can be caught. In industrial nations seafood is used increasingly as fodder for other animals and in the cuisine of the affluent. In developing nations seafood is used increasingly to meet basic nutritional</p>		

needs or to generate foreign exchange, often to serve their large international debt. The increase in demand for seafood products increases the price of many commercial species, which, in turn, increases the fishing pressure on those species. Much of that fishing pressure is enhanced by new technologies that are increasingly effective at targeting and harvesting fish. The problem is compounded in some fisheries by the consistent inability of both free market and government policies to effectively limit fishing effort at levels below that which destroys fish stocks and fisheries. As conventional offshore fisheries resources are depleted, technological "improvements" in aquaculture such as intensive cage farming are sometimes adopted. These technologies sometimes have environmental costs that are as bad or worse than the depleted resource they replace. The purpose of this analysis is to demonstrate the synergy among natural resource depletion and/or scarcity, industrial energy use, technological change, and environmental degradation in fisheries. Industrial energy is the fossil fuel that is used directly and indirectly to harvest fish. The link between resource scarcity and environmental impact is examined by calculating the energy return on investment (EROI) and carbon intensity of protein harvest in the New Bedford fisheries from 1968 to 1988. EROI is the ratio of the energy content of the edible fish protein harvested to the quantity of industrial energy used directly in the harvesting process. Carbon intensity is the quantity of carbon dioxide (CO₂) released per calorie of edible fish protein harvested. The results of the empirical analysis are discussed in the context of current management strategies in the George's Bank fisheries.

Resource scarcity has manifestations in the market and in the biophysical world. The market manifestations are rising monetary costs and prices. The biophysical manifestation of scarcity is the use of, and often the depletion of, increasing amounts of natural capital to deliver a unit of resource to society. Natural capital is the fuel and material created by natural processes that are the raw material and foodstuff inputs to the economic process (coal, fish, copper, timber, water, etc.), and the waste assimilation and life support services provided by ecosystems and the biogeochemical cycles of the environment. A decline in the quality of the natural resource base due to cumulative depletion, an increase in the instantaneous rate of exploitation, or an increase in the scale of extraction, increases the amount of natural capital used to extract a unit of natural resource. The biophysical perspective of scarcity measures the cost of obtaining natural resources in physical terms and, thereby, emphasizes the throughput of energy and materials required to extract resources and the resultant impact of that throughput on a broad array of ecosystem services in different quantities and spatial scales.

	<p>The biophysical perspective of scarcity uses energy cost to measure the physical resource requirements of resource extraction. In their natural state, resources are not useful inputs to the production process. They must be located, extracted, re refined, transported, and upgraded in other ways to useful raw materials or products. Increasing the organizational state of a material requires energy. The biophysical model measures the cost of that transformation process in energy terms. Some of that energy is used directly in the extraction process, such as the fuel burned in the engines of fishing vessels. Energy also is used indirectly to manufacture, operate, and maintain capital, materials, and labor. The focus on energy requirements directs our attention from the market to the physical world upon which humans are ultimately dependent for their biological and economic existence.</p> <p>Q1. Explain in detail the synergy among natural resource depletion and/or scarcity, industrial energy use, technological change, and environmental degradation using the case of fisheries.</p> <p>Q2. Explain your understanding of the biophysical perspective of scarcity of energy resources and their environmental connection.</p>		<p>CO4</p> <p>CO4</p>