

Name:
Enrolment No:

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2019

Course: Environmental Economics
Program: BA (H), Specialization in Energy Economics
Course code: ECON3001
Instructions: Do as directed

Semester: V
Time: 03 Hours
Max. Marks: 100

SECTION A

		Marks	CO
Q1.	Choose the correct answer		
i.	Circle the correct/best statement. (a) Environmental economics does not deal with scarcity of resources because environmental resources are abundant. (b) Environmental economics deals with optimal quality of those environmental resources that cannot be subdivided into smaller physical units, like air quality and ecology. (c) Environmental economics deals with optimal quantity of those natural resources that can be divided into smaller physical units, like barrels of crude oil etc. (d) Both b and c are correct.	[2]	CO1
ii.	Two principal characteristics of "economics approach" are (a) Rationality and anthropocentricity. (b) Rationality and efficiency. (c) Efficiency and cost effectiveness. (d) Efficiency and equity.	[2]	CO1
iii.	Circle the correct/best statement. (a) A society faces a tradeoff between the amount of market goods and the level of environmental quality it can enjoy. (b) A society faces a tradeoff between the amount of market goods it can enjoy in the short run and the amount of market goods it can enjoy in the long run. (c) Both (a) and (b) are correct. (d) Both (a) and (b) are not correct.	[2]	CO1
iv.	According to the economics approach, (a) A forest owner who does not allow any trees to be cut for lumber despite offers would always be considered using the resource inefficiently. (b) A forest owner who does not allow any trees to be cut for lumber despite offers would always be considered using the resource efficiently. (c) A forest owner who does not allow any trees to be cut for lumber despite offers would be considered using the resource efficiently if benefits of letting trees stand exceed the amount of offers made for lumber. (d) A forest owner who does not allow any trees to be cut for lumber despite offers would be considered using the resource efficiently if the amount of offers made for lumber exceed benefits of letting the trees stand.	[2]	CO1
v.	Which is the efficiency rule? (a) Equalizing social MB to social MC. (b) Equalizing MC across all plants to achieve the desired level of emission reduction.	[2]	CO1

	(c) Equalizing total net benefit to zero. (d) None of the above.														
SECTION B															
Q2.	Differentiate between willingness to pay and willingness to accept.	[4]	CO1												
Q3.	Explain the existence and bequest value of an environmental good.	[4]	CO2												
Q4.	You are supposed to assess the Environmental Impact of an express highway project. Explain the methodology which you will employ and also enumerate its data requirements.	[4]	CO3												
Q5.	State and explain the steps for employing Travel Cost Method for measuring the economic values of a Biodiversity/ National park.	[4]	CO3												
Q6.	State the advantages of Costs-Benefit Analysis in the allocation of resources for the conservation of environmental Capital.	[4]	CO2												
SECTION-C															
Q 7.	Delineate the significance of “Potential Pareto Improvement” as an underlying principle of Cost-Benefit Analysis.	[5]	CO3												
Q8.	Suppose the two marginal savings functions are given by : $MS_1(x_1) = 10 - 2x_1$ $MS_2(x_2) = 5 - 3x_2$ Construct an aggregate marginal savings function.	[5]	CO4												
Q9.	What are the theoretical explanations of Environmental Kuznets Curve, and why is empirical evidence on the evidence of such a relationship so mixed?	[5]	CO4,5												
Q10.	“To the extent the emission of fund pollutant exceeds the assimilative capacity of the environment; they accumulate and share some of the characteristics of stock pollutants. When the emission rate is low enough, however, the discharge can be assimilated by the environment, with the result that the link between present emission and future damage may be broken”. Comment.	[5]	CO5												
SECTION-D															
Q11.	A beekeeper and a farmer with an apple orchid are neighbors. This is convenient for the orchid owner since the bees pollinate the apple trees: one beehive pollinates one acre of orchard. Unfortunately, there are not enough bees next door to pollinate the whole orchard and pollination costs are Rs. 10 per acre. The beekeeper has total cost of $TC = TC = H^2 + 10H + 10$ and marginal cost $MC = 10 + 2H$ where H is the number of hives. Each hive yields Rs. 20 worth of honey. a. How many hives would the beekeeper maintain if operating independently of the farmer? b. What is the socially efficient number of hives?	[20]	CO4,5												
Q12.	A researcher estimated choice experiment data using conditional logit model and the results are given in the following table: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Attribute</th> <th>Coefficient.</th> </tr> </thead> <tbody> <tr> <td>Endangered Species</td> <td>0.76867</td> </tr> <tr> <td>Afforestation</td> <td>0.40578</td> </tr> <tr> <td>Research & Education</td> <td>0.52253</td> </tr> <tr> <td>Cost</td> <td>-0.0062</td> </tr> <tr> <td>ASC</td> <td>2.23544</td> </tr> </tbody> </table>	Attribute	Coefficient.	Endangered Species	0.76867	Afforestation	0.40578	Research & Education	0.52253	Cost	-0.0062	ASC	2.23544	[15]	CO5
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	Calculate willingness to pay for Endangered Species, Afforestation and Research & Education		
Q13.	“The fundamental presumption of Environmental Economics is that the environment and economy are inter-linked and inter-dependent entities and, therefore, changes in one affect the other. Traditional economics does not explicitly take into consideration the inter-dependence between economy and environment and does not seek to explain how economic decisions affect environment and vice-versa”. Explain with reference to the context.	[15]	CO5