International Islamic University Chittagong

Department of Economics & Banking

Semester Ending Examination, Autumn-2023 | Program: BSS (Hons.) in Economics & Banking

Course Code: ECON-3503 | Course Title: Resource and Environmental Economics

Time: 2 hours 30 minutes | Full Marks: 50

[Answer the following questions. All parts of a question must be answered sequentially.]

QN	Description of Questions	Marks	CLOs & PLOs	Cognitive-learning
1(a)	When does an economy attain a fully efficient static allocation of resources? Interpret your answer on the basis of three conditions of efficiency and using appropriate diagram(s).	6	CLO 3 & PLO 5	Analyzing
(b)	How do you maximize social welfare by social welfare functions and what condition to be fulfilled in this case?	4		Understanding
2(a)	Graphically sketch a case of social welfare function where it is outlined that a Pareto improvement is an unambiguously good thing.	4		Evaluating
(b)	How do we proceed if there is no generally accepted Social Welfare Function?	2	CLO 3 & PLO 5	Remembering
(c)	How does the socially efficient outcome can be achieved by ranking alternative allocations? Explain your answer focusing the Kaldor Compensation test with proper example.	4		Analyzing
3(a)	Differentiate between Flow-damage pollution and Stock-damage pollution with proper example/s	3		Understanding
(b)	Signify the pollution control where damages does not depend on the location of the emissions.	3	CLO 3 & PLO 5	Analyzing
(c)	Illustrate the socially efficient level of emission in case of non-uniformly mixing stock pollutant.	4		
4(a)	Experiment the following cases using the concept of inter-temporal analysis of stock pollutant: i) Case A: $r > 0, \alpha > 0$ ii) Case B: $r > 0, \alpha = 0$ where r = the consumption rate; and α = the decay rate	6		Creating
(b)	Explain some effective criteria for the selection of pollution control instruments.	4	CLO 3 & PLO 5	Remembering

	Or,			
4(a)	How does development of social responsibility work as an institutional approach of pollution control instruments?	2	**CLO 4 & PLO 2**	Understanding
(b)	Show the significance of command and control instruments for emission reduction over other instruments. What is the application of it?	4		Applying
(c)	Explain the pollution process and analyze command & control instrument to reduce pollution emission by using a tree diagram.	4		Analyzing
5(a)	Explain the role of the economic incentive instrument as a comparatively economically efficient emission reduction instrument.	4		Applying
(b)	Suppose, the EPA knows the marginal damage function (MD) of emission but has to estimate the marginal abatement cost function (MC) of emissions. If the EPA unknowingly overestimate or underestimate it what will happen? Investigate the relative magnitudes of efficiency loss under an emission tax system and an emission license scheme based on the above information.	6	**CLO 4 & PLO 2**	Evaluating
	Or,			
5(a)	Enumerate the reasons of arising limited information and uncertainty in selecting appropriate pollution policy.	4		Understanding
(b)	Prove that once the existence of non-linearity and/or threshold effects is admitted, general results are harder to find in this case what programs may have taken?	4	**CLO 4 & PLO 2**	Evaluating
(c)	Define the Safe Minimum Standard.	2		Remembering