

Ex/UG/ECO/DSE 5·1/3/2025

BACHELOR OF ARTS EXAMINATION, 2025

(3rd Year, 1st Semester)

ECONOMICS

Course : ECO/DSE 5·1/3

Resource and Environmental Economics

Time : Two Hours

Full Marks : 30

1. Answer *any two* questions. The answer must be precise.

10×2=20

(a) Show that in the short-run, tax or subsidy will have the same impact on the pollution level, if the firms are identical. If firms are heterogeneous in age, then show that older firms may have to quit under tax while subsidies may enable both older and newer firms to remain in the industry. Also show that in the long-run under subsidy, there will be more firms in the industry than under tax.

4+4+2

(b) What do you mean by sustainable development? Distinguish between weak sustainability and strong sustainability. How do you measure the sustainability of any country? How does Hartwick's rule propose maintaining consumption levels despite declining non-renewable resources? What are its two limitations?

2+2+3+2+1

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[Turn Over]

(2)

(c) How does the hedonic price method differ from other environmental valuation techniques like the contingent valuation method? How would you use the hedonic price method to value the impact of a new highway on nearby residential properties? What are the potential challenges and limitations of using the hedonic price method?

2+6+2

2. Answer *any two* questions. The answer must be precise.

5×2=10

(a) Write two implications of the laws of thermodynamics in the context of environmental economics. 5

(b) Under what conditions do the results of 'Coase Theorem' hold? How does the result of the theorem, eliminate the need for government intervention? 2+3

(c) Examine the impact of 'cost of extraction' and 'demand' on the optimal price path produced by the Hotelling rule.

2·5×2=5

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