

M.A. Examination, 2019
Semester-IV
Economics
Course: OP-12 (Optional)
(Environment and Resource Economics)

Time: 3 Hours

Full marks: 40

Questions are of value as indicated in the margin

Answer *any four* questions.

1. Derive the socially optimal level of pollution with the help of marginal benefit and cost schedules. Under certain conditions, can it be achieved without any government intervention? Discuss. 10
 2. Explain how a Tradable Pollution Permit system can ensure efficiency in attaining a pollution abatement target. 10
 3. Derive the time path of price of a non-renewable resource which has a backstop technology available. 10
 4. Explain the relationship between 'growth' and 'stock' of a renewable resource like fish. What are the equilibrium values of stock level in this context? Discuss on the stability of these equilibrium values. 4+2+4=10
 5. Define 'sustainable yield' and 'effort' in the context of a renewable resource like fish. Derive the relationship between effort level and sustainable yield. 4+6=10
 6. Show how an increase in discount rate can quicken the optimum harvesting time of timber for the owner of a plantation forest with homogeneous trees. 10
 7. Distinguish between 'revealed' and 'stated' preference methods of environmental valuation. Give an example of environmental service or amenity that can be valued by one of the revealed preference methods. Provide a brief outline of the method that you want to apply following your example. 5+5=10
 8. Write short notes on *any two* of the following: 2×5=10
 - (i) Green Accounting
 - (ii) Environmental Kuznets Curve
 - (iii) User cost of a non-renewable resource
 - (iv) Non-use values of ecosystem services
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