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Register Number:

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**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BANGALORE-27**

**MA ECONOMICS – II SEMESTER**

**SEMESTER EXAMINATION: APRIL 2019**

**EC 0218: Environmental Economics**

**Time- 2 ½ hrs Max Marks-70**

**This paper contains ONE printed page and THREE parts**

**PART A Answer any FIVE of the following 2 X5=10**

1. Write the types of property rights and problem associated to common property.
2. What is market failure?
3. Explain the concept of carrying capacity.
4. Mention the use values and non-use values of a river.
5. Zero pollution is not socially optimal. Explain.
6. Distinguish between WTP and WTA.
7. Distinguish between use value and existence value.

**PART B Answer any THREE of the following 10x 3=30**

1. Describe and explain Cap and Trade mechanism.
2. Describe and explain the Hotelling rule for extraction of non-renewable resource.
3. Describe the Environmental Kuznets theory. Describe the three components affecting it.
4. Describe Hedonic valuation method of pollution.
5. Discuss how externalities cause market failure. Describe a potential tax-based solution to the externality problem.

**PART C Answer any TWO of the following 15 X2=30**

1. What is the impact of Pigouvian tax on firm which is a monopolist in the bads market but competitive in the goods market where the marginal damage is set at the level of the bad production?
2. Consider a Steel factory generating pollutants affecting a Laundary shop downstream. Use the Coasian framework to show that optimal amount of smoke will be generated regardless of who owns the property right to pollute.
3. Suppose the factory NitroStar Inc. produces fertilizer. As a by-product of this fertilizer production, they also produce dangerous emissions of toxic gases. The De-Lite bread factory, down the road, experiences a negative externality from this production process. Suppose that the supply curve (private marginal costs) for the fertilizer factory is X = (2/5)P - 2, and it faces a market demand of X = 15 - P/2. The marginal damages caused by the production of fertilizer can be written as X = P - 1/2. How much should the fertilizer factory be taxed per unit of fertilizer to achieve socially efficient level of fertilizer production? Show your work.

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