

**EC111 Introduction to Economics: Class Exercises 10 (week 16)**

- 1) a) What is meant by Pareto efficiency?
  - b) What are the conditions required for a first-best Pareto efficient allocation in the economy?
  - c) Why is a perfectly competitive equilibrium Pareto efficient?
  - d) Show using diagrams how market failure can occur as a result of monopoly in one industry.
  - e) Discuss possible policy responses to this distortion.
  
- 2) The Rainbow Paint Co. is situated on a river, which it pollutes by manufacturing paint, which is sold on a perfectly competitive market. Downstream there is a trout farm whose marginal cost is increased (because it has to filter the water) the more paint is produced. Neither firm owns the river.
  - a) Show on a diagram the Rainbow Paint Co's marginal private cost and its marginal social cost curves. Identify the deadweight loss arising from the externality.
  - b) Illustrate and explain the appropriate level for a Pigouvian tax on the output of Rainbow Paint.
  - c) Suppose that the trout farm and the paint company could reach an agreement to reduce pollution. Who compensates whom and by how much?
  - d) What are the likely obstacles to reaching an agreement like the one in (c) above?