AP® Micro Economics (Operational)
2004 Sample Student Responses

Write in the box the number of the question you are answering on this page as it is designated in the examination.

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a) The externality is negative, because the social cost for each additional unit is higher than the private cost for that unit.

b) The socially optimal output is at Q_2, because that is where marginal social cost = marginal social benefit.

c) i) An unregulated monopoly would produce at Q_1, because that is where the ~~production~~ marginal production costs (marginal private costs) = marginal revenue.

ii) To move output from Q_1 to Q_2, a government subsidy is required.

iii) The subsidy should be \$3 per unit. This would push marginal private costs down to \$4, which would then intersect the marginal revenue curve at Q_2, the desired output.

d) ~~i) A perfect~~

i) A perfectly competitive firm would produce at an equilibrium output of Q_3, because that is where their marginal private cost = demand.

ii) To move output from Q_3 to Q_2, the government should tax the industry.

iii) A \$5 tax is needed, which would move the marginal private cost curve up to \$12. This makes the marginal private cost intersect the demand curve at the desired output of Q_2.

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(A) The externality is negative because it has a greater marginal social cost than marginal private cost.

(B) The socially optimum output is Q_2 because that is where the Marginal Social Benifit is equal to the Marginal Social Cost.

(C) A profit-maximizing mopopoly will produce at the level where Marginal Private Cost equals Marginal Revenue, therefore producès Q_1 units of good X. To produce a socially optimum output, Q_2, the government should tax the firm \$1 dollar per-unit.

(D) A perfectly competative industry will produce at Q_3, where MPC is equal to Demand. To produce a socially optimum output of Q_2 the government should subsidize the firms in this Industry at a rate of \$5 per-unit.

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1.

(a) The ~~exter~~nality is negative because it exists below the Marginal Social Benefit.

(b) The socially optimum output would be Q_2 because here it exceeds or meets all costs & benefit.

(c) (i) Q_1 because it is where MPC crosses MR, however they would set price up to B where Q_1 leads up to demand.

(ii) It should tax the firm because at this level they are attaining an economic profit.

(iii) \$6

(d) (i) Q_1 where MPC meets MR.

(ii) They should subsidize the firm because they are producing at a level where they are not meeting demand. There exists a shortage.

(iii) \$3