Question 3

5 points (2+1+2)

(a)   2 points:
- One point is earned for identifying the consumer surplus as P_3JM.
- One point is earned for identifying the producer surplus as P_1P_3M.

(b)   1 point:
- One point is earned for identifying the socially optimal quantity as q_1.

(c)   2 points:
- One point is earned for identifying the consumer surplus as P_5JK.
- One point is earned for indicating that there is no deadweight loss.

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

$\boxed{3.}$ 3A

ai. $P_3 MJ$

ii. $P_3 MP_1$

b. q_1

ci. $P_5 KJ$

ii. There is no dead-weight loss.

3

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

3B

a) (i) JP_3M

   (ii) P_3P_1M

b) U because due to its negative externality it attaches to the MPC curve

c) (i) JP_5K

   (ii) KMR

#3

Write in the box the number of the question you are answering 3C
on this page as it is designated in the exam.

a)(i) Consumer surplus is represented by the triangle created by J, P_3, M

(ii) Producer Surplus is represented by the triangle created by P_3, M, P_2

b) the Socially optimal quantity is at Q_4

c) (i) the area of triangle M, Q_3, T

Question 3

Overview

This question assessed students' understanding of consumer surplus, producer surplus, socially optimal output and deadweight loss in a product market with negative externalities.

Sample: 3A
Score: 5

The student answered all parts correctly and so earned all 5 points.

Sample: 3B
Score: 3

The student lost 1 point in part (b) for failing to identify the socially optimal quantity. The student lost 1 point in part (c)(ii) for failing to recognize that there is no deadweight loss.

Sample: 3C
Score: 1

The student earned 1 point in part (a)(i) for correctly identifying the area of consumer surplus.