



APEducate: [www.MicroeconomicsAP.com](http://www.MicroeconomicsAP.com)

### 4.1 EXTERNALITIES: STUDENT LEARNING ACTIVITY

Answer the questions that follow.

#### 1. DEFINITIONS

Define the following terms:

[10 marks]

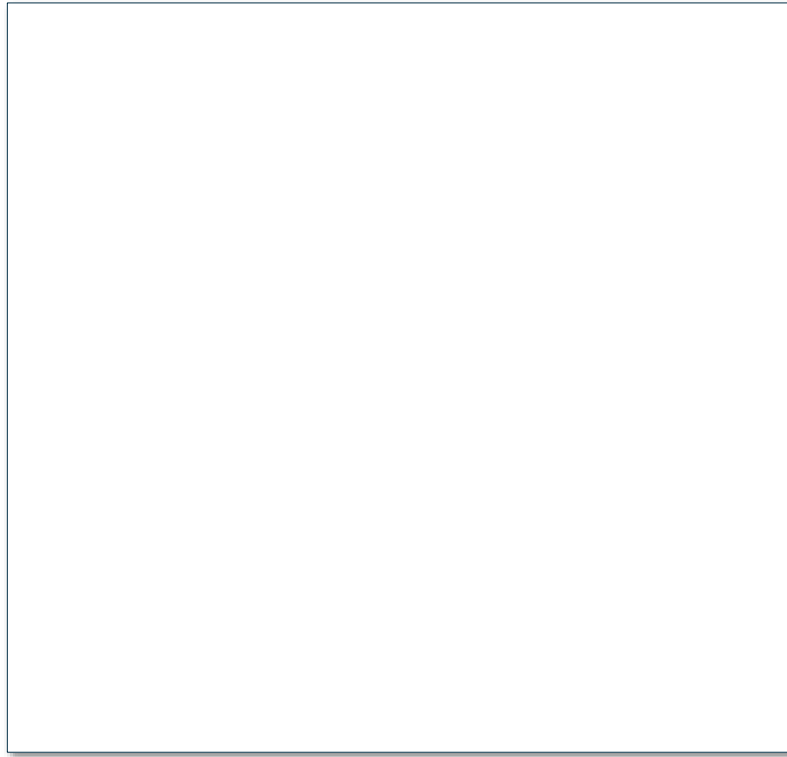
- Factors of production
- Allocative efficiency
- Marginal cost
- Resources
- Equilibrium
- Producer surplus
- Free market
- Surplus
- Shortage
- Benefit
- Marginal benefit
- Law of diminishing marginal utility
- Utility
- Demand curve
- Marginal private benefit
- Spillover effect
- External benefit
- Positive externalities
- Externalities
- Marginal external benefit
- Marginal social benefit
- Private costs
- Quantity supplied
- Industry
- Total cost
- Diminishing marginal returns to a variable factor
- Short run
- Profit
- Social optimum price
- Negative externalities
- External cost
- Marginal private cost
- Marginal external cost
- Marginal social costs
- Social optimum level of output
- Welfare loss
- Private benefit
- Demerit goods
- Market failure
- Real income
- Consumer welfare
- Opportunity cost
- Tradable permits
- Merit good
- Misallocation of resources
- Positive externalities of consumption
- Negative externalities of consumption
- Positive externalities of production
- Negative externalities of production
- Excise tax
- Subsidy



### 4.1 Externalities

#### 2. SHORT-ANSWER QUESTIONS

1. Explain allocative efficiency using the concepts of producer and consumer surpluses, marginal costs and benefits. Use a diagram. **[6 marks]**



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4.1 Externalities

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2. Explain market failure.

**[6 marks]**



4.1 Externalities

3. Outline what an externality is.

[2 marks]

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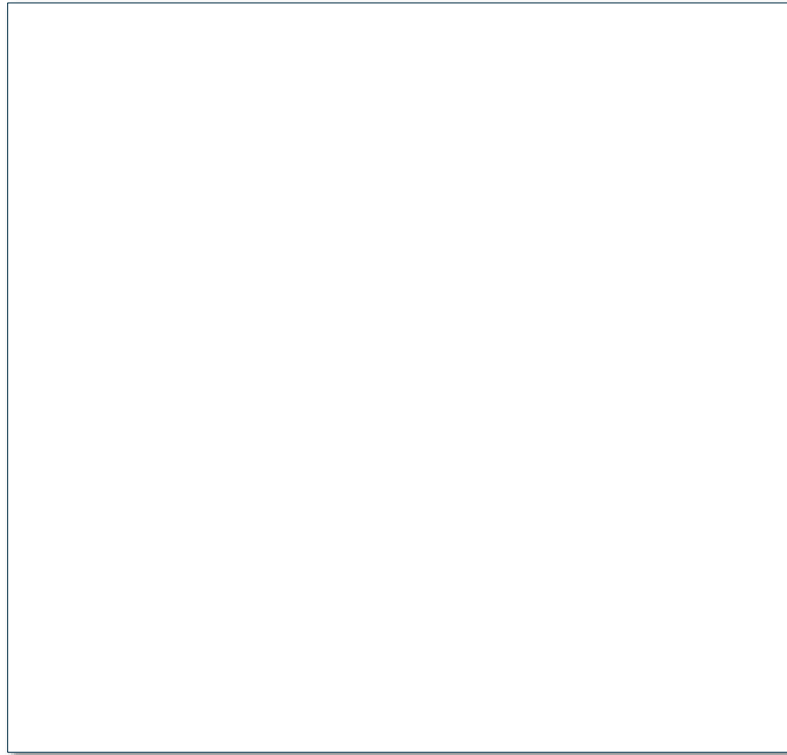
4. Outline how allocative efficiency helps to explain the relationship between externalities and market failure by using the concept. [6 marks]



4.1 Externalities

5. Distinguish between marginal private and marginal social benefit.

[4 marks]



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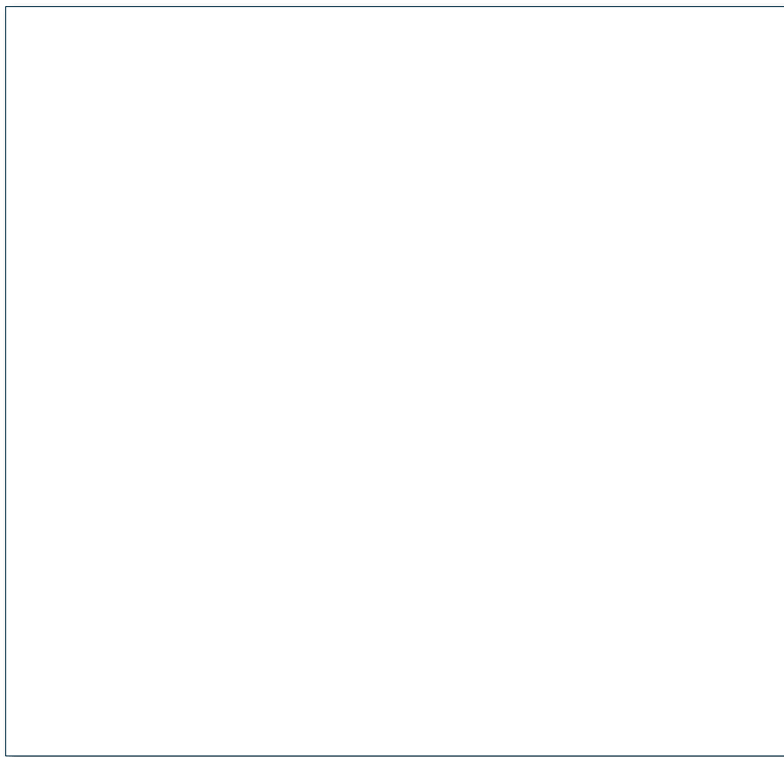
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4.1 Externalities

6. Distinguish between marginal private and marginal social cost.

[4 marks]



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4.1 Externalities

7. Use examples to distinguish between:

[8 marks]

i. Negative externalities of production

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ii. Positive externalities of production

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iii. Negative externalities of consumption

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iv. Positive externalities of consumption

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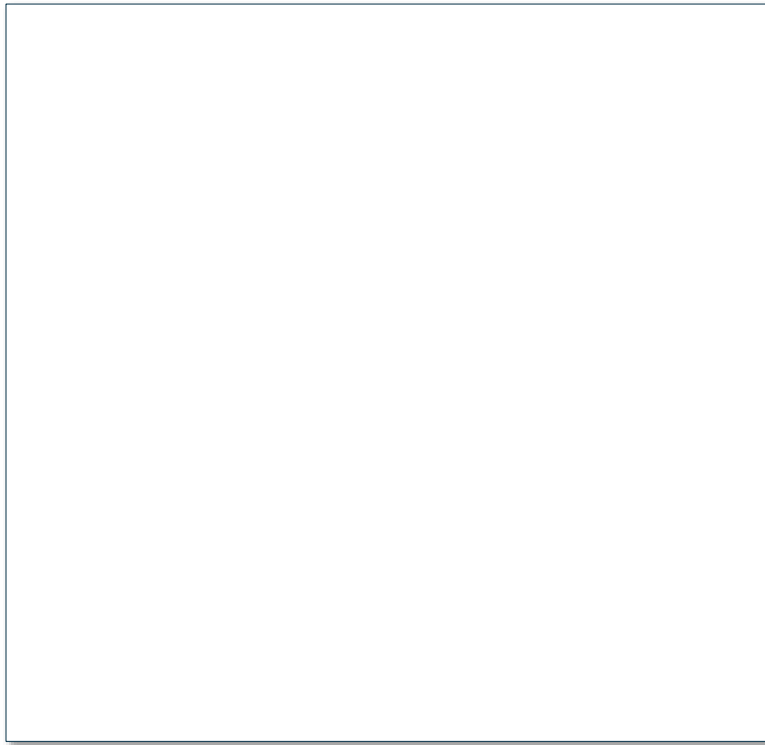
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4.1 Externalities

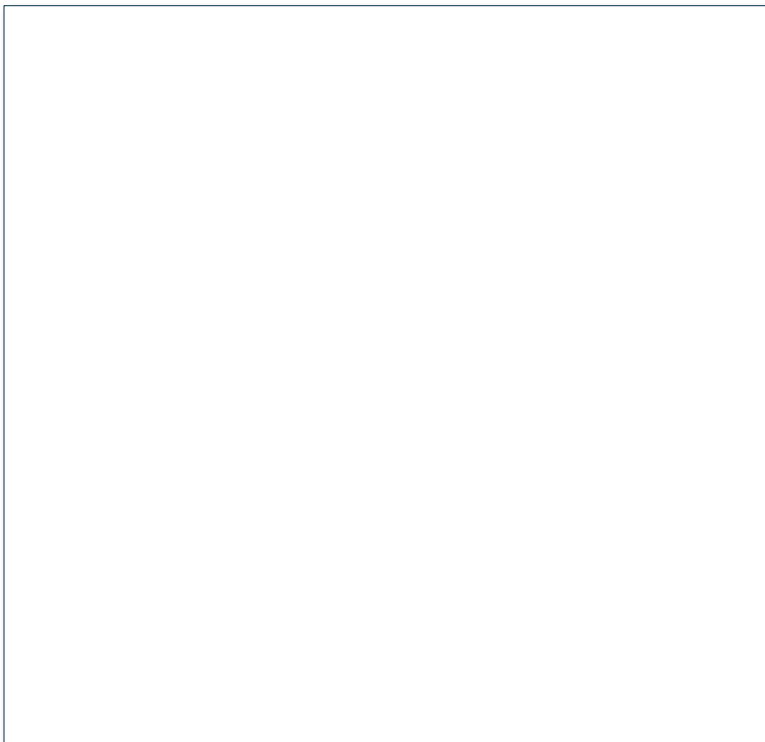
8. Use diagrams to distinguish between:

[12 marks]

i. Negative externalities of production

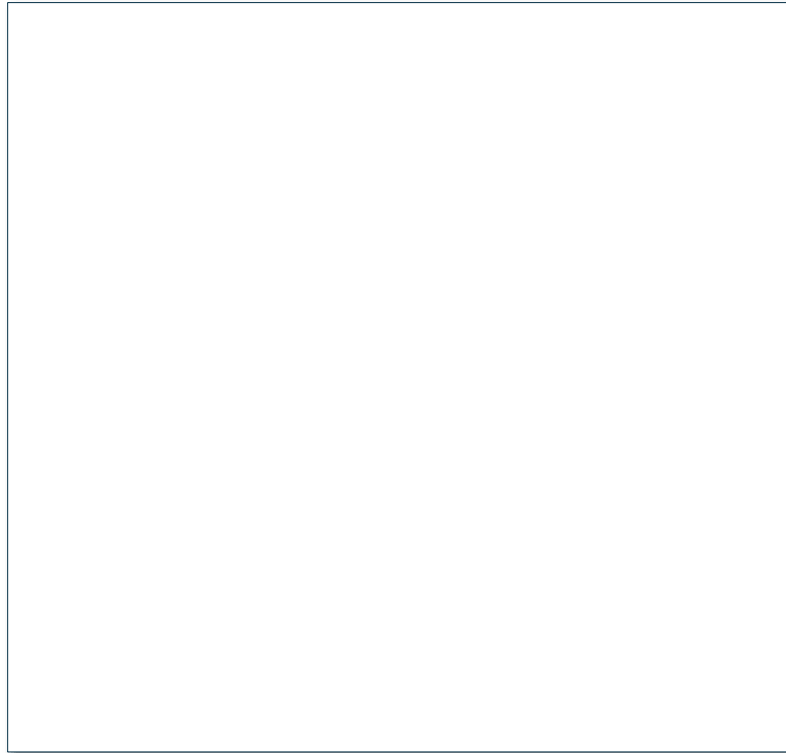


ii. Positive externalities of production

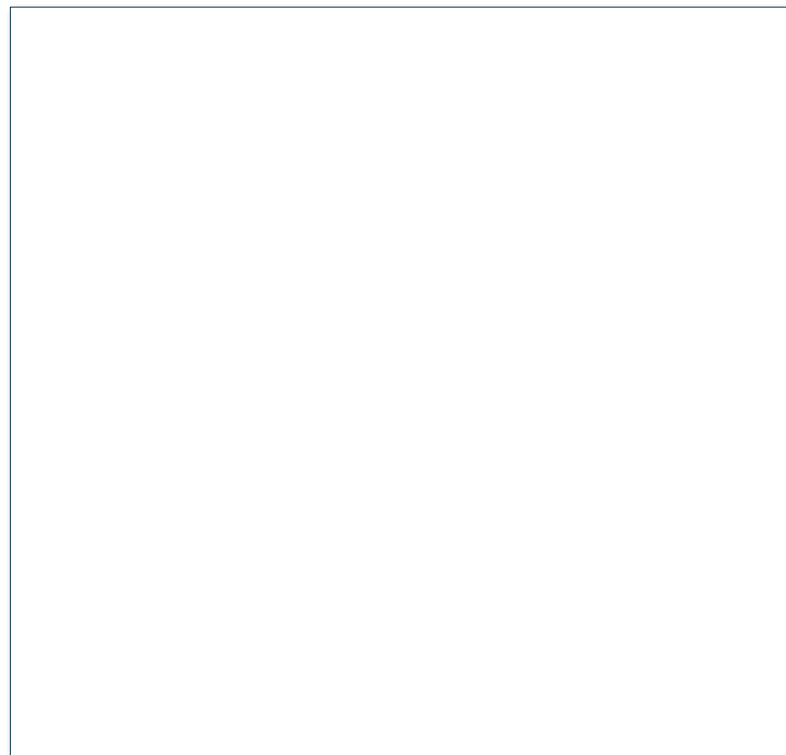


### 4.1 Externalities

iii. Negative externalities of consumption



iv. Positive externalities of consumption

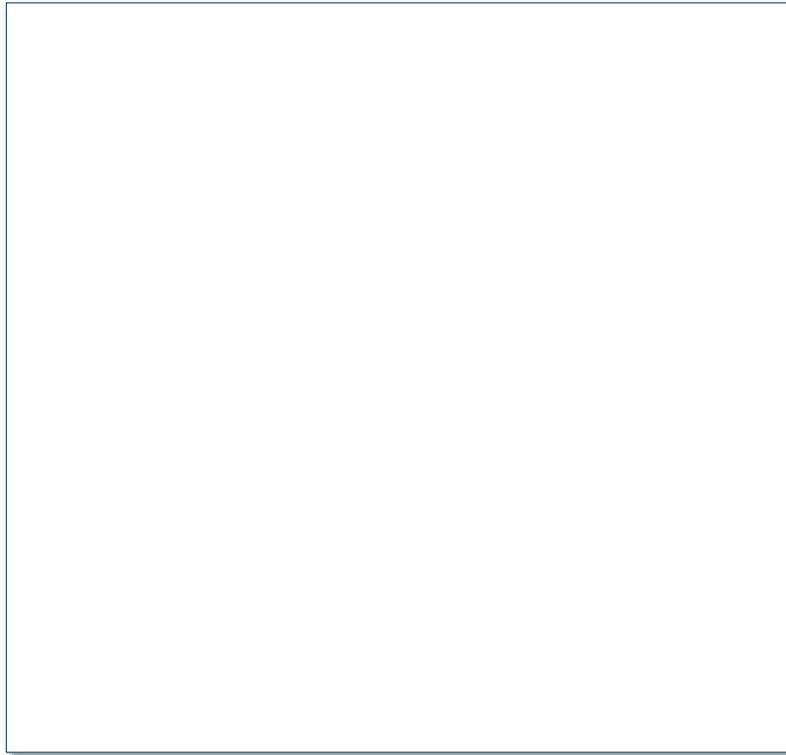


4.1 Externalities

9. Using diagrams, show and/or explain:

[12 marks]

- i. That marginal private costs and marginal social costs differ if there is a negative externality of production.



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4.1 Externalities

iv. The welfare loss associated with a negative externality of production.

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10. Identify two different examples of a negative externality of production and outline the different methods that could be used to correct it. **[10 marks]**

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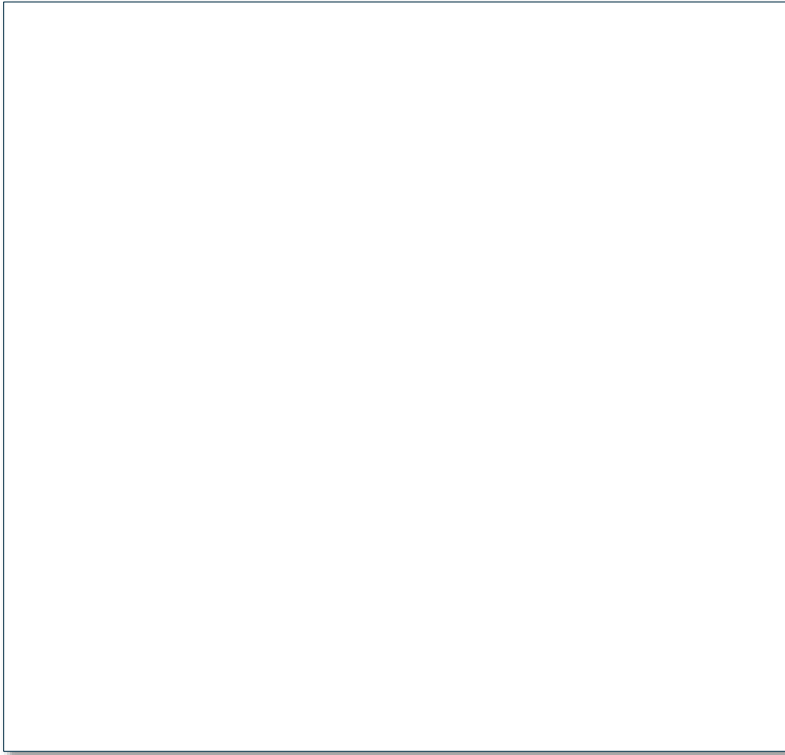


**4.1 Externalities**

11. In the case of polluting emissions, use diagrams to show and/or explain how a negative externality of production can be corrected by a government using each of the following methods to correct for market failure:

**[15 marks]**

i. Indirect taxes



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4.1 Externalities

ii. Tradeable permits

4.1 Externalities

iii. Regulation/legislation

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4.1 Externalities

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4.1 Externalities

13. Explain the meaning of 'internalizing an externality'?

[4 marks]

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14. Explain why economists prefer market-based solutions to correct for negative externalities of production.

[8 marks]

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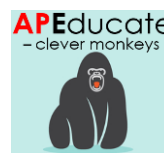
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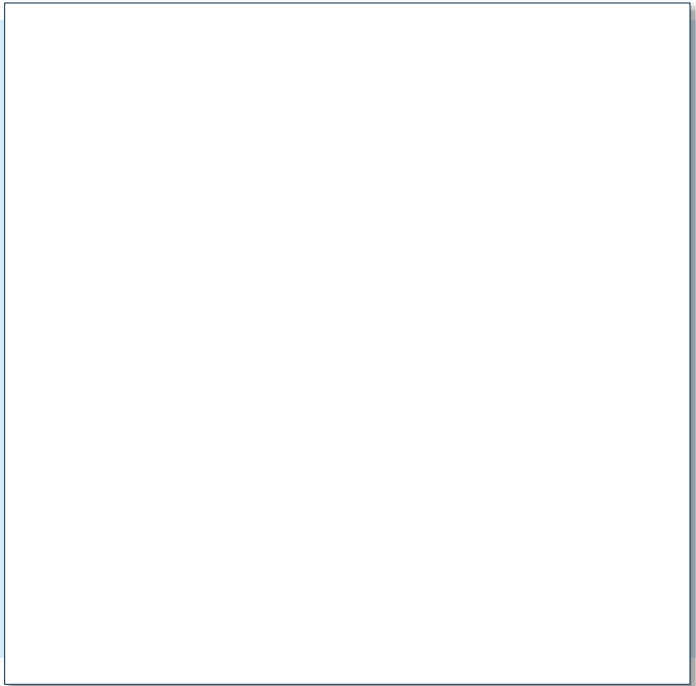
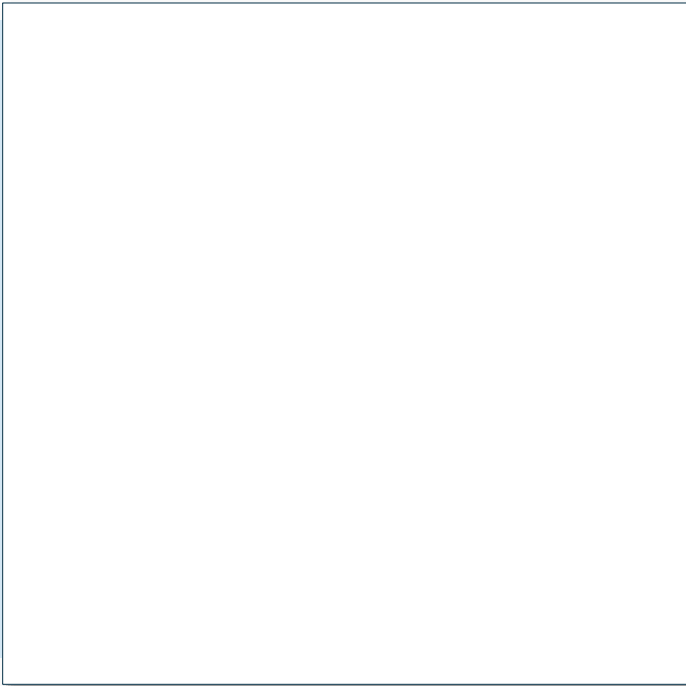
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### 4.1 Externalities

15. Evaluate, using diagrams, the use of policy responses, including market-based policies (taxation and tradeable permits) and government regulations, to the problem of negative externalities of production. **[20 marks]**



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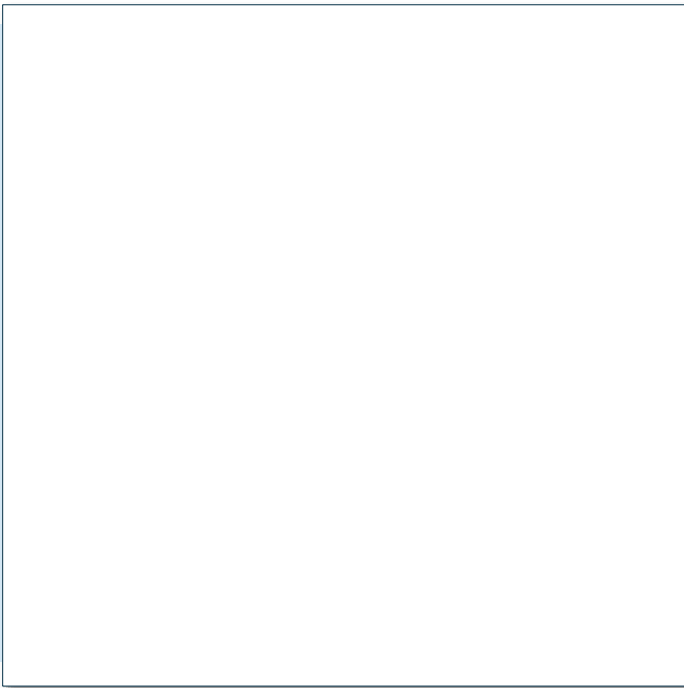
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### 4.1 Externalities



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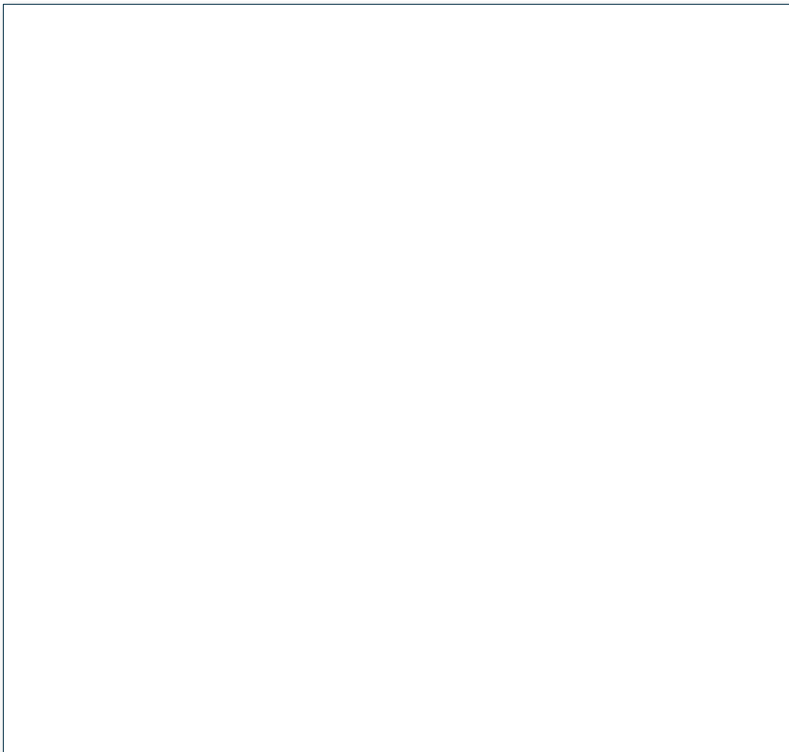


4.1 Externalities

16. Using diagrams, show and/or explain:

**[12 marks]**

- i. That marginal private costs and marginal social costs differ if there is a negative externality of consumption.



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4.1 Externalities

ii. How the equilibrium market quantity differs from the optimal quantity that maximizes social welfare.

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iii. The allocation of resources achieved in a competitive free market when there is a negative externality of consumption.

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iv. The welfare loss associated with a negative externality of consumption.

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**4.1 Externalities**

17. Identify two different examples of a negative externality of consumption and outline the different methods that could be used to correct it. **[6 marks]**

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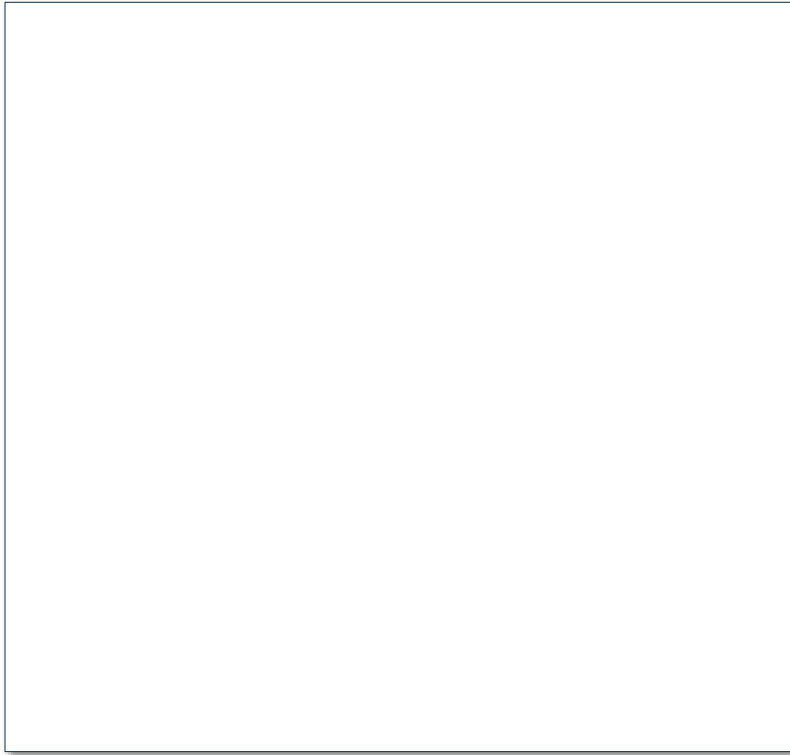
[Horizontal lines for student response]



4.1 Externalities

18. In the case of polluting emissions, use diagrams to show and/or explain how a negative externality of consumption can be corrected by a government using each of the following methods to correct for market failure: **[15 marks]**

i. Indirect taxes



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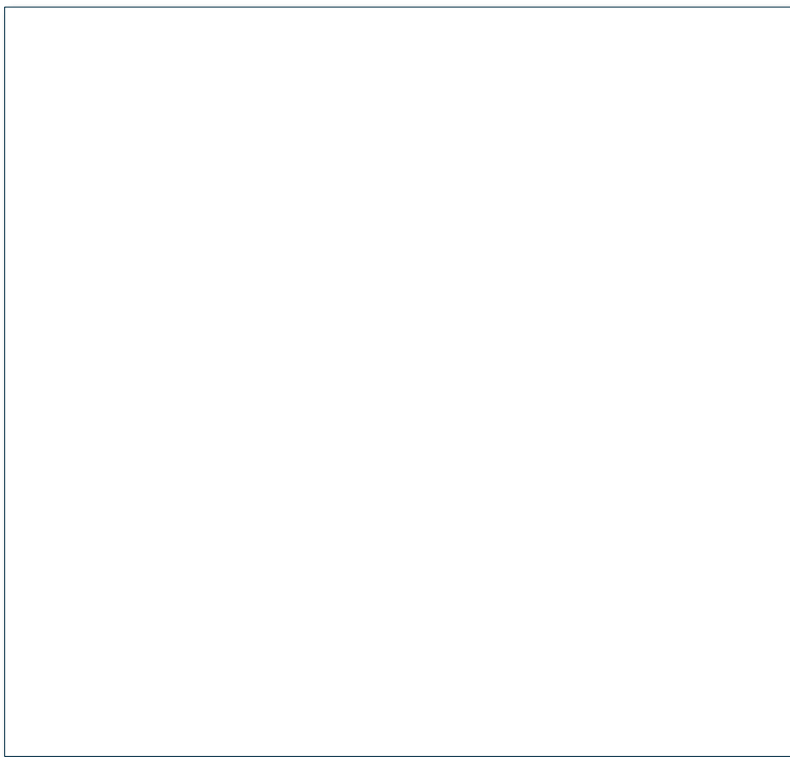
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4.1 Externalities

ii. Advertising



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iii. Regulation/legislation

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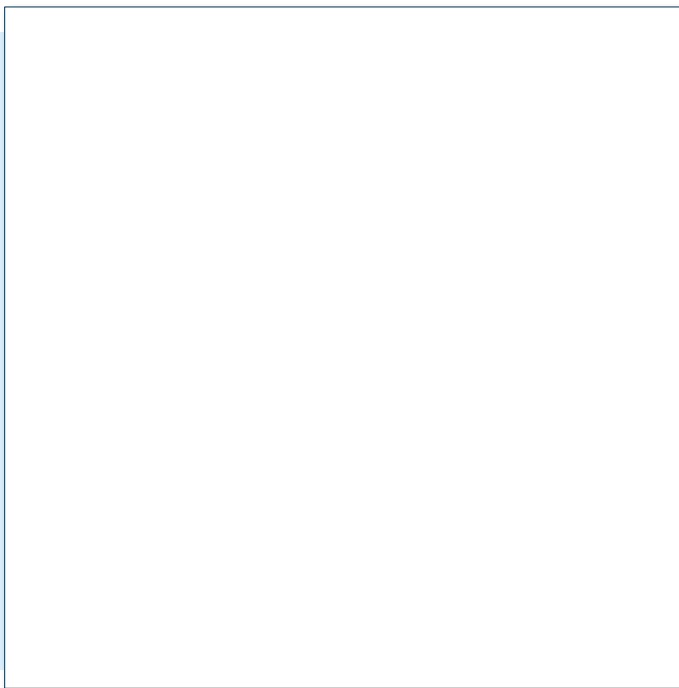
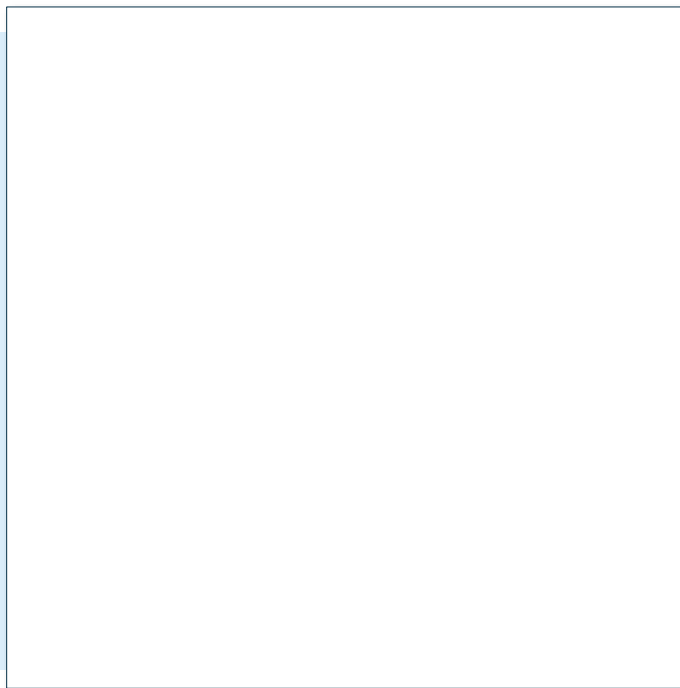
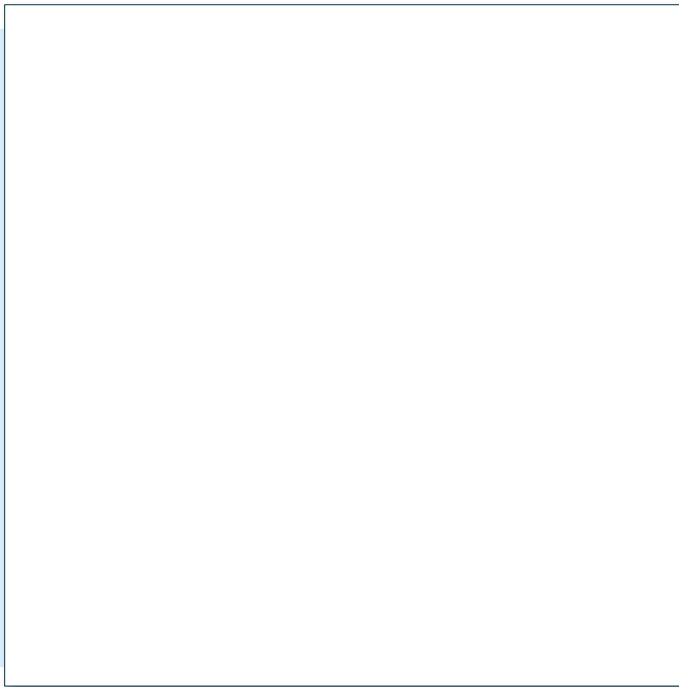
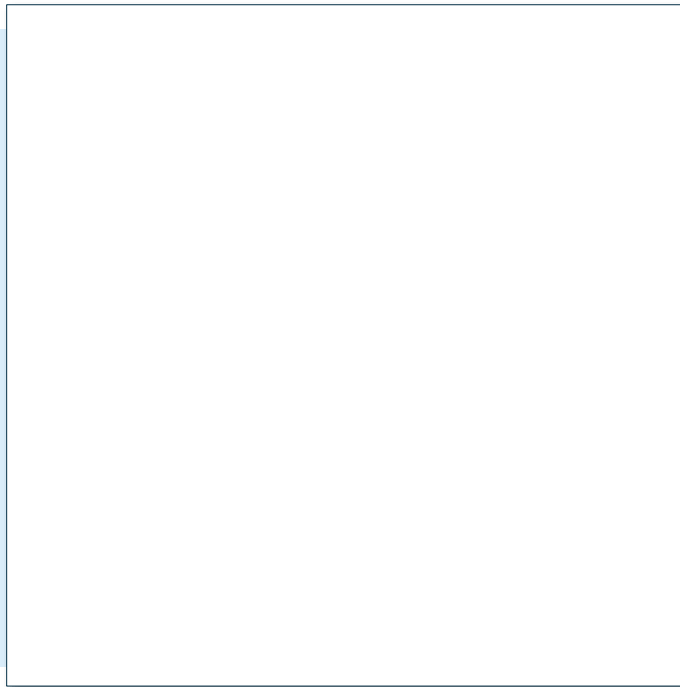




4.1 Externalities

26. Using diagrams, explain how the under provision of a merit good can be corrected.

[6 marks]





4.1 Externalities

27. Evaluate, using diagrams, the use of policy responses, including market-based policies (taxation and tradeable permits) and government regulations, to the problem of positive externalities of production.

**[20 marks]**

