

# **PiXL Independence:**

## **Economics (Microeconomics)**

### **Student Booklet**

**KS5**

Style of all Exam Boards; demand, supply and elasticity, revenue, costs and market structures, labour markets, market failure and government intervention.

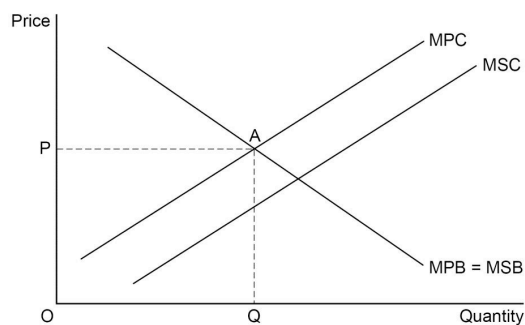
#### **Contents:**

- I. Multiple Choice Questions – 10 credits in total
- II. Knowledge Questions – 50 credits per section
- III. Short Answer Questions – 10 credits per question
- IV. Diagram Questions – 30 credits per question
- V. Short Essay Questions – 50 credits per question
- VI. Essay Questions – 100 credits per essay with an additional 20 for marking
- VII. Wider Reading – 50 credits each

## I. Multiple Choice Questions

10 credits in total for this section

1. The demand for a factor of production such as labour will be more price inelastic:
  - i) The more price inelastic the demand for the final good.
  - ii) The more price inelastic the supply of an alternative factor of production such as machinery.
  - iii) The larger the proportion of total cost attributing to the factor.
  - a. 1, 2 and 3 are all correct
  - b. 1 and 2 only are correct
  - c. 2 and 3 only are correct
  - d. 1 and 3 only are correct
  
2. Which of the following factors will not affect the demand for new housing?
  - a. A change in interest rates
  - b. Growth in incomes
  - c. Unemployment increasing
  - d. Changes to land development laws
  
3. The diagram below shows the marginal costs and benefits for good Y

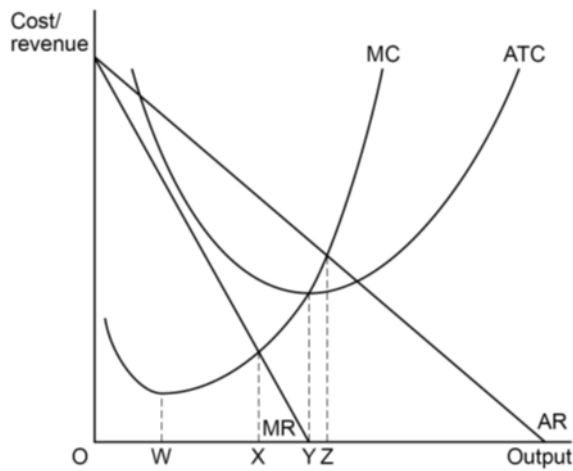


Assuming that point A is the free market equilibrium, which of the following examples would fit this diagram?

- a. Smoking cigarettes
- b. Pollution from a factory
- c. A local business offering a recycling scheme to the local community
- d. A family playing soothing classical music out loud

4. Which of the following is a characteristic of an inferior good?
- a. They always have a positive price elasticity of demand
  - b. They have a negative income elasticity of demand
  - c. They will have an income elasticity of greater than 1
  - d. They have a negative cross elasticity of demand
5. A student bought a set of text books for £80 last year that she no longer needs. A new set can be purchased on Amazon for £95 but hers would only fetch £35 second hand. The present opportunity cost of owning the text book set is
- a. £35
  - b. £15
  - c. £80
  - d. £60
6. Which of the following factors will cause the demand curve for labour to shift to the right?
- a. The demand for the product declines
  - b. The price of a substitute input falls
  - c. Labour is more productive
  - d. Wage rate declines
7. A pure public good is always:
- a. Provided by the government for all consumers free of charge
  - b. Provided free at the point of consumption because there is no opportunity cost
  - c. Available for consumption by others when consumed by an additional person
  - d. Heavily subsidised by the government in a free market
8. All other things being equal, in a monopoly:
- a. Market power always leads to an inefficient allocation of resources
  - b. Advertising leads to low barriers to entry
  - c. Economies of scale lead to a downward sloping market demand curve
  - d. High prices can lead to market failure such as reduced consumer surplus

9. The diagram below illustrates revenues and costs typical of a monopoly market structure:



A monopolist aiming to maximise its revenue would operate at an output of:

- a. OW
  - b. OX
  - c. OY
  - d. OZ
10. The law of diminishing marginal returns to a factor of production states that:
- a. As more of a product is consumed, extra satisfaction will increase
  - b. As more factors of production are employed, the additional output produced will increase
  - c. As more variable factors of production are added to a fixed factor, the additional output produced will decline
  - d. Total production will decline as more factors of production are utilised

## II. Knowledge Questions

50 credits per section

### 1. Demand, supply and elasticity

- a. Define the term 'price elasticity of demand'.
- b. Outline the difference between the concepts supply and demand.
- c. State three characteristics of a price elastic product.
- d. Draw a diagram to show excess supply.
- e. State five factors that could cause a shift in the demand curve.
- f. State five factors that could cause a shift in the supply curve.
- g. Outline the difference between a contraction and a decrease in supply.
- h. Two products have a cross elasticity of demand of -2.3. State the relationship between the two products.
- i. Outline two determinants of the price elasticity of supply.
- j. Define composite goods.
- k. Define consumer surplus.
- l. Define producer surplus.

### 2. Revenues, costs and market structures

- a. Outline the difference between the long and short run.
- b. Explain the difference between fixed and variable costs.
- c. Which of the following costs would be classed as fixed for a hair dressing salon? Rent, telephone, electricity, insurance, business cards, wages and shampoo.
- d. Outline the difference between marginal costs, average costs and total costs.
- e. Define the law of diminishing marginal returns.
- f. Explain the concepts increasing and decreasing returns to scale.
- g. The table below shows the Long-Run Average Costs for five firms (A to E).

Output (million units)	FIRM A	FIRM B	FIRM C	FIRM D	FIRM E
1	10	20	16	19	20
2	8	18	14	18	17
3	5	16	15	17	15
4	5	11	17	16	14
5	5	10	20	15	14
6	5	10	24	14	14
7	6	11	30	13	14

Note the range of output over which there are:

- (i) economies of scale; (ii) diseconomies of scale;

Note the optimum level/range of output and the minimum efficient scale of production.

- h. Explain the difference between abnormal (supernormal) and normal profit.
- i. Other than profit maximisation, state three business objectives.
- j. What is the main difference between a perfectly competitive market and a monopolistic market?
- k. Give three features of an oligopoly.

### **3. Labour markets**

- a. Define the term 'marginal revenue product'.
- b. Give three factors that influence the demand for labour.
- c. Explain what is meant by the elasticity of demand for labour.
- d. What is the difference between economic rent and transfer earnings?
- e. What factors will influence the supply of labour to an occupation?
- f. Explain what is meant by the elasticity of supply of labour.
- g. Give three features of a perfectly competitive labour market.
- h. Define trade union mark-up.
- i. Explain the term 'wage differentials.'
- j. Wages will be high when (cross out incorrect word):
  - a. Demand is high/low.
  - b. Demand is elastic/inelastic.
  - c. Supply is high/low.
  - d. Supply is inelastic/elastic.
- k. List four reasons for inequality in the earnings of males and females.
- l. What is meant by discrimination in the labour market?
- m. Explain what is meant by a monopsony labour market.

### **4. Market failure and government intervention**

- a. Define market failure.
- b. List five different types of market failure.
- c. What is meant by government failure?
- d. Suggest three reasons why government failure could occur in a market.
- e. Outline the difference between a consumption and production externality.

- f. List three ways that could address the market failure caused by negative production externalities
- g. List three ways that could address the market failure caused by negative consumption externalities
- h. What is a merit good?
- i. What are the three characteristics of a public good?
- j. Outline what is meant by marginal social costs and marginal social benefits.
- k. Give two examples of a quasi-public good.
- l. List three types of information failure.
- m. Define asymmetric information.

## 5. Basic economics

- a. Define 'ceteris paribus'.
- b. Give one example of a positive statement and one example of a normative statement.
- c. What is the basic economic problem?
- d. What are the four factors of production and their rewards?
- e. List the four economic agents.
- f. Define 'opportunity cost'.
- g. Explain what a PPF diagram shows.
- h. Using the data in the table below, construct a PPF for the goods motor bikes and machines.

MOTOR BIKES	MACHINES
80	0
60	200
40	300
20	350
0	400

- i. Use your PPF diagram to illustrate the concept 'trade-off'.
- j. Use the PPF to illustrate the concept 'the law of relative cost'.

k. For each of the following combinations, state whether they are efficient, inefficient or impossible to achieve with current resources:

- 60 motor bikes and 200 machines
- 300 motor bikes and 35 machines
- 300 motor bikes and 40 machines
- 58 motor bikes and 250 machines

l. Suggest three ways in which point 'B' could be reached on the diagram below.

m. Why is point 'A' on the diagram below inefficient?

## 6. Behavioural economics

a. Match the following terms with the correct description:

1. NUDGE	A. This happens when choices are presented in a way that encourages a certain response.
2. SHOVE	B. Ways of influencing decisions in a particular direction. The individual still has the freedom of choice.
3. RESTRICTED CHOICE	C. This occurs when it is a law requirement to make a certain decision.
4. MANDATED CHOICE	D. People can only select from a limited range of options.
5. FRAMING	E. Incentives such as tax and subsidies to encourage choices.

b. What is meant by altruistic behaviour?

c. Give two reasons why information might be imperfect.

d. Define 'marginal utility'.



e. The table below shows the total utility and marginal utility of Cherry Cola to an individual:

Quantity consumed	Total utility	Marginal utility
0	0	
		15
1	15	
		(b)
2	34	
		9
3	(a)	
		7
4	50	
		0
5	50	

i) Calculate values for a) and b)

ii) How many units would need to be consumed to reach the point of satiation?

f. What is meant by 'rational behaviour'?

g. List three constraints of rational behaviour.

### III. Short Answer Questions

*10 credits per question*

#### 1. Demand, supply and elasticity

- a. Explain, with examples, the difference between complementary and substitute goods.
- b. Explain, with examples, why increases in disposable income may not lead to increases in prices.
- c. Analyse two reasons why the demand curve slopes downwards from left to right.
- d. Explain some of the ways that an increase in the demand for grain could spill over into other markets.
- e. Explain two reasons why the demand curve could slope upwards.
- f. Analyse what would happen in the coffee market *and* the farmers' revenues after a poor harvest of coffee beans. Mention the following in your answer: excess, contraction, extension, revenue, elasticity.
- g. Explain how minimum and maximum prices work and why they are important. Use diagrams to illustrate your answer.
- h. Explain, with the use of a diagram, the difference between derived demand and joint demand.
- i. Using the concepts of demand, supply and elasticity, explain why the price of oil is volatile.
- j. Explain why revenue will increase if the price is increased for an essential commodity.
- k. Explain the supply and demand conditions that affect the housing market.
- l. Explain how the signalling, rationing and incentive function of prices play an important role in the allocation of scarce resources.

#### 2. Revenues, costs and market structures

- a. Explain three different types of economies of scale.
- b. Compare the difference between allocative and productive efficiency.
- c. Explain why profit maximisation is such an important objective to a firm.
- d. Explain why supernormal profit is competed away in the long run for a firm operating in a perfectly competitive goods market.
- e. Explain the benefits to consumers of mergers.
- f. Explain the difference between vertical and horizontal integration and explain the advantages and disadvantages from each type.
- g. Explain the concept 'shut down point'.

- h. Briefly explain three features of a contestable market.
- i. Compare the features of a natural monopoly with a pure monopoly.
- j. Explain two benefits of a monopoly.
- k. Explain how decreasing returns to scale can help to justify demergers.
- l. Explain two benefits of a demerger.

### **3. Labour markets**

- a. Explain three factors that would affect the elasticity of demand for labour.
- b. Analyse two factors that would affect the elasticity of supply of labour.
- c. Explain the shape of the MRP curve.
- d. Using the concepts of monetary and non-monetary benefits, explain why vocational jobs such as teaching assistants tend to have low wages.
- e. Explain three factors that affect the strength of a trade union.
- f. Explain why employment might increase in a monopsony market when there is a trade union.
- g. Explain why marginal product might fall as more workers are employed by a firm.
- h. Carefully explain the difference between the marginal cost of labour and the average cost of labour.
- i. Explain why the marginal cost of labour slopes upwards for a firm operating in an imperfectly competitive labour market.

### **4. Market failure and government intervention**

- a. Explain why demerit goods are often overconsumed if left to the free market.
- b. Explain why public goods are unlikely to be provided if left to the free market.
- c. Analyse two ways in which the government could increase the consumption of merit goods.
- d. Explain why market failure can occur when there is a monopoly.
- e. Explain the concept allocative efficiency.
- f. Explain why immobility such as geographical and occupational can lead to market failure.
- g. Explain two policies that the government could use to reduce market failure created by monopolies.

### **5. Behavioural economics**

- a. Describe two examples of how behavioural economics has been used by government policy.

- b. Explain the difference between bounded rationality and bounded self-control.
- c. Describe three causes of bias that could prevent a consumer from making rational choices.
- d. Explain how asymmetric information can lead to market failure.
- e. Explain the hypothesis 'diminishing marginal utility'.

## IV. Diagrams

*30 credits per question*

Remember to include relevant axis labels, labelling of curves, 0, arrows, original and new equilibriums.

### 1. Demand, supply and elasticity

- a. Draw a diagram to illustrate the effect on the market for milk after an increase in the demand for butter for baking.
- b. UK productivity is now increasing. Draw a supply and demand diagram to show the effect of this on the market for cars.
- c. Draw a diagram to illustrate the change to producer revenues following a good harvest for wheat. Consider elasticities when drawing your curves.
- d. Draw a supply and demand diagram showing the imposition of an indirect tax for a good with perfect inelasticity of demand. Label on the burden for the producer and consumer.

### 2. Revenues, costs and market structures

- a. Construct a diagram to show a perfectly competitive firm making supernormal profit in the short run.
- b. Construct a diagram to show the following outputs that a monopoly may choose:
  - i. Profit maximisation
  - ii. Sales maximisation
  - iii. Revenue maximisation
- c. Construct an envelope diagram to illustrate the concept economies and diseconomies of scale.
- d. Construct a diagram to illustrate how a monopolist would operate using second degree price discrimination.
- e. Construct a diagram to show the welfare effects of a monopoly. Indicate the changes to producer and consumer surplus and identify the deadweight welfare loss.

### 3. Labour markets

- a. Draw a fully labelled diagram to show how wages and employment are determined in a perfectly competitive labour market – hint, you will need two diagrams.
- b. Construct a monopsony diagram and label the employment level and wage rate.
- c. Construct a monopsony diagram to show the effect of a trade union. Label the new employment rate and the trade union mark-up.
- d. Draw a diagram to show an individual's supply of labour. Remember you are plotting hours worked against wage rates. Include a target income.

### 4. Market failure and government intervention

- a. Construct a diagram for each of the externalities listed below. You must label lines and axis. Show welfare loss, free market equilibrium and the social optimum position.
  - i. Positive consumption externality
  - ii. Negative production externality
  - iii. Positive production externality
  - iv. Negative consumption externality
- b. Construct a diagram to show how minimum prices can be used to reduce consumption of a product – e.g. alcohol.
- c. Construct a diagram to show the welfare loss associated with the over-consumption of demerit goods.
- d. Construct a diagram to show how subsidies on the production of healthy food can lead to increased consumption and a more optimum allocation of resources.

## V. Short Essay Questions

*50 credits per question*

### 1. Demand, supply and elasticity

- a. Explain, with the aid of a diagram, two reasons why the sales of electric cars are starting to increase. (10 marks)
- b. With the help of an appropriate diagram and the information in the Extracts, explain why the quantity of newspapers sold by most newspaper companies has fallen. (10 marks)
- c. With the help of a diagram, explain why subsidies are often necessary to protect the income of farmers. (15 marks)
- d. Explain four features of a price inelastic product. (15 marks)
- e. Using a diagram, explain the effect on the price of train tickets after generous government subsidies. (10 marks)

### 2. Revenues, costs and market structures

- a. Using a diagram, explain why a perfectly competitive firm will make abnormal profit in the short run but normal profit only in the long run. (10 marks)
- b. Explain, with the aid of a diagram, why a firm operating in an oligopolistic market is likely to keep prices constant. (10 marks)
- c. Explain why a monopolist may make higher profits when using third degree price discrimination. Use a diagram to help with your answer. (10 marks)
- d. Use a diagram to show how a subsidy from the government may be necessary to encourage a natural monopoly to operate at the point of allocative efficiency. (15 marks)
- e. Explain why the law of increasing and diminishing returns is only a short-run theory. Use a diagram to help with your answer. (15 marks)
- f. Explain two factors that could influence the monopoly power of firms in the transport industry. (10 marks)

### **3. Labour markets**

- a. Construct a diagram to show why a firm operating within a perfectly competitive labour market will pay a wage equal to MRP. Carefully explain the diagram. (10 marks)
- b. With the use of a monopsony diagram, explain why firms in an imperfectly competitive market are likely to pay workers relatively low wages. (10 marks)
- c. Use a suitable labour market diagram to assess the impact of an increase in the National Minimum Wage. (15 marks)
- d. Using economic theory relating to labour markets, analyse why sports personalities are paid more than teachers. Add diagrams to illustrate your answer. (15 marks)

### **4. Market failure and government intervention**

- a. With the help of a diagram, analyse how subsidising railways can help reduce the market failure associated with car usage. (15 marks)
- b. Using a diagram to help you, explain how pollution tax can help to reduce market failure associated with the burning of fossil fuels. (10 marks)
- c. With the use of a diagram explain why merit goods such as education would be underprovided if left to the free market. (10 marks)
- d. Using a diagram to help you, show how monopolies can lead to an inefficient allocation of resources. (10 marks)



## VI. 25 Mark Essay Questions

*100 credits per essay with an additional 20 credits for marking your own*

1. Discuss whether higher house prices over time are mainly caused by excess demand or scarce supply.  

**(25 marks)**
  
2. First time buyers are struggling to access the housing market and many young adults are struggling to rent or buy their own home. Discuss ways in which the government can deal with market failure in housing.  

**(25 marks)**
  
3. The UK government has committed to many large infrastructure projects over the last decade including Crossrail which cost £18bn and HS2 which could cost upwards of £50bn. Assess the impact of increased spending on infrastructure on the UK economy.  

**(25 marks)**
  
4. Discuss the view that monopolies should always be regulated in the UK.  

**(25 marks)**
  
5. Evaluate the view that trade unions are beneficial and that laws to reduce their power should not be considered.  

**(25 marks)**
  
6. Assess the view that the government should not intervene in markets to try to correct market failure.  

**(25 marks)**
  
7. Discuss whether indirect tax on sugary food and drink is the best way to deal with the increasing level of childhood obesity in the UK.  

**(25 marks)**

8. Discuss whether the decision to privatise the railways was in the UK's best interest. **(25 marks)**

9. Price discrimination is often used by the transport industry in the UK. Students for example, enjoy cheaper rail fares via the use of a student card. Discuss whether price discrimination is desirable. **(25 marks)**

10. Firms will always strive to maximise profits and this can be at the expense of consumer surplus. Discuss this viewpoint. **(25 marks)**

11. Supermarkets have been forced by the government to charge for plastic bags. The government have also erected signs on motorways to encourage people to not throw litter and to take it home.

Assess the view that nudges are better than shoves for dealing with the problem of littering. **(25 marks)**

## VII. Wider Reading

*50 credits per article with a 10-point summary*

1. Is the living wage high enough?

<https://www.bbc.co.uk/news/business-45242008>

2. Example of merger:

<https://www.bbc.co.uk/news/business-45244759>

3. Why is the price of chocolate rising? (demand and supply)

<http://www.thisismoney.co.uk/money/bills/article-3359619/Price-chocolate-soar-coming-years-thanks-production-shortages-growing-taste-cocoa-globe.html>

4. Analysis of UK housing market

<https://www.telegraph.co.uk/property/house-prices/the-state-of-the-uk-housing-market-in-five-charts/>

5. Sugar tax – how it will work

<https://www.bbc.co.uk/news/health-35824071>

6. Privatisation of royal mail

<https://www.bbc.co.uk/news/business-23253370>

7. Wages will not rise until employers have to compete for talent

<https://www.theguardian.com/money/economics-blog/2014/sep/17/wages-rise-employers-compete-pay-labour>

8. Why is the price of petrol so high?

<https://www.bbc.co.uk/news/business-15462923>

9. Wage discrimination at the BBC

<https://www.bbc.co.uk/news/entertainment-arts-40633241>

10. Merit goods: Who should pay for education?

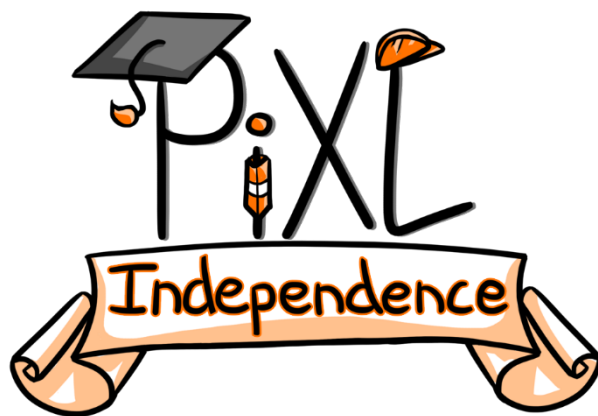
<https://www.theguardian.com/education/2015/apr/15/who-should-pay-for-university-education>

11. Price capping in the energy market

<https://www.independent.co.uk/news/uk/home-news/energy-price-cap-parliament-charge-british-gas-centrica-edf-npower-eon-scottish-sse-a8228206.html>

12. Plastic bag charge

<https://www.gov.uk/government/publications/single-use-plastic-carrier-bags-why-were-introducing-the-charge/carrier-bags-why-theres-a-5p-charge>



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