

Section 1

The basic economic problem

Learning summary

Before completing the activities in this section, review your work on these topics:

- The nature of the economic problem
- Factors of production
- Opportunity cost
- Production possibility curves



See Chapters 1–4 in the Coursebook.

Part 1 Definitions

The activity below is designed to check your knowledge and understanding of some of the key terms used in this section.

Match the following terms with an appropriate definition. For example, if you think an ‘inability of workers to change jobs and location’ defines ‘scarcity’, match 1 with c. Each term has an appropriate definition. If you find that you are left with a term and a definition which do not appear to match, you should review your other matches.

1 Scarcity	a Natural resources
2 The economic problem	b Economic resources
3 Wants	c Inability of workers to change jobs and location
4 Land	d Inability to produce everything that people want
5 Capital	e Products that have an opportunity cost
6 Labour immobility	f Products that do not have an opportunity cost
7 Factors of production	g Products people desire to have
8 Opportunity cost	h Human made resources
9 Economic goods	i An insufficient quantity to satisfy everyone’s wants
10 Free goods	j Best alternative forgone
11 Allocation of resources	k An output combination to the right of the PPC
12 Entrepreneurs	l Buyers of goods and services
13 Unattainable production point	m A payment for the use of land
14 Consumers	n People who bear the risks of a business and who organise the other factors of production
15 Rent	o What land, labour, capital and enterprise are used to produce

Part 2 Missing words

One way to become familiar with key economic words and terms is to use them. This exercise is designed to test your understanding of some economic words and terms in context.

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Complete the following sentences by filling in the missing word or words:

- 1 It is not possible to eliminate _____ as _____ grow faster than economic resources.
- 2 The economic problem means that people have to make _____.
- 3 Most land is _____ mobile, but geographically _____.
- 4 If gross investment exceeds depreciation there is _____ investment.
- 5 The payment labour receives is _____, whilst _____ is the payment entrepreneurs receive.
- 6 A country's labour force can be increased by _____ the retirement age and _____ the school leaving age.
- 7 Output is _____, whereas _____ is output per worker hour.
- 8 A key role of entrepreneurs is to bear _____ risks.
- 9 Another name for a production possibility curve is an _____ cost curve.
- 10 A production possibility curve shows the maximum output of _____ products with existing resources and _____.

Part 3 Calculations

Economists need to be able to write clearly, interpret data and undertake numerical calculations. At IGCSE/O level the calculations involve additions, subtractions, multiplications and working out averages and percentage changes. Your ability to undertake these calculations may be assessed on both the data response question on the Structured Question paper and on the Multiple Choice paper.

- 1 A firm employs 26 workers, paying each one \$75 a week. What is the firm's total wage cost?
- 2 A country produces \$900 million capital goods in a year. There is depreciation of \$620 million. What is net investment?

Part 4 Interpreting diagrams

Economists make widespread use of diagrams. A diagram can be used to illustrate economic concepts, to analyse changes in economic conditions and to assess the effects of economic policies. Indeed a diagram can be worth a hundred words! Production possibility curves can be used to show a number of economic concepts including opportunity cost.

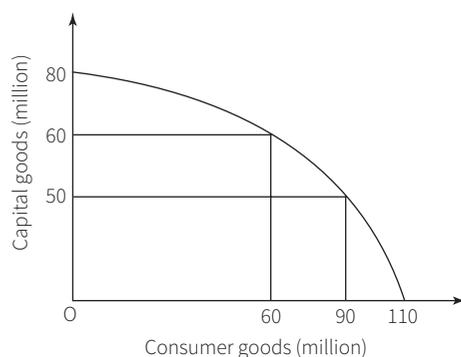


Figure 1.1: Different combinations of capital and consumer goods

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Using Figure 1.1 state:

- 1 a The opportunity cost of increasing the output of consumer goods from 60m to 90m consumer goods.
- b The opportunity cost of producing 80m capital goods.

Part 5 Drawing diagrams

It is important that you gain experience in drawing diagrams. Each diagram you draw should be clear and well labelled. You must use appropriate words on both the vertical and horizontal axes of a diagram. It is probably best to draw diagrams in pencil so that if you make a mistake, you can erase it and start again.

Draw a production possibility curve showing the effect of an increase in the quantity of resources.

Part 6 Multiple choice questions

Before answering a set of multiple choice questions, review your work on the topics covered. This preparation will build up both your understanding and confidence.

It is important to consider multiple choice questions calmly and logically. First read the question. You may want to highlight or underline key words. In some cases you may be able to think through an answer before you look at the options. For example, in question 2 below, you should consider what you understand by 'human capital'. Having decided on this, you should then look at the four options and select the one that comes closest to your understanding. This approach can also be applied to questions 7 to 10.

The other questions in this section are examples of those which you have to, right from the start, consider along with the options. For example, question 3 is an integrated question. You cannot provide an answer until you have read all the options.

In the case of both types of questions, you need to consider the options carefully. With some questions an option may stand out to you as correct. With other questions, you may have to arrive at the answer by eliminating the incorrect options.

Trust your judgement. Once you have selected an answer, move on. If you are finding a question particularly challenging, leave it and then return to it at the end. Never leave a question unanswered. If you have no idea of the answer, still attempt the question. You have a 25% chance of getting the answer correct.

When you have completed the multiple choice questions in a section, if you have time check over your answers and the explanations. It is particularly important to review the answers to any questions that you are unsure about.

- 1 What would cause an increase in the problem of scarcity?
 - A A reduction in resources
 - B A reduction in wants
 - C A rise in productivity
 - D A rise in the mobility of resources

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- 2** What is meant by investment in human capital?
- A** Encouraging immigration of people of working age
 - B** Paying bonuses to workers to encourage them to increase their output
 - C** Spending money and time on educating and training workers
 - D** Upgrading the machines labour works with
- 3** Which item is a factor of production?
- A** The food a farmer produces
 - B** The satisfaction a farmer gains from his work
 - C** The tractor a farmer drives
 - D** The wages a farmer pays his workers
- 4** Which form of air is an economic good?
- A** Air at ground level
 - B** Air from an air conditioning system
 - C** Air above an ocean
 - D** Air in a tropical rainforest
- 5** Which item used in the production of textiles by a firm would an economist classify as land?
- A** Sewing machines
 - B** The factory
 - C** Untrained workers
 - D** Water taken from a river
- 6** What might be the opportunity cost of using a bus to transport students to school?
- A** Increasing the earnings of the bus company
 - B** Paying the wages to the driver
 - C** Paying for the cost of petrol used
 - D** Transporting a group of retired people on a day out
- 7** What is meant by 'labour' in economics?
- A** Hard physical work used to produce manufactured goods
 - B** Human mental and physical effort used in producing goods and services
 - C** Natural resources used in the productive process
 - D** Risk taking and organising the factors of production
- 8** What does a production possibility curve show?
- A** The maximum combination of two types of products that can be produced with given resources
 - B** The prices of two types of products being produced
 - C** The quantity of capital and consumer goods that people would like to be produced
 - D** The relative profitability of capital and consumer goods

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- 9 Which combination of economic concepts is illustrated by a production possibility curve?
- A Cost and price
 B Demand and price
 C Economic goods and free goods
 D Opportunity cost and scarcity
- 10 What does a point outside a production possibility curve represent?
- A A currently unattainable position
 B An inefficient position
 C The maximum use of resources
 D Unused resources
- 11 Four firms can produce soap and perfume. The table below shows the maximum number of bars of soap, and bottles of perfume, that each firm can make each day if they specialise in one type of product.

	Bars of soap	Bottles of perfume
Firm W	50	10
Firm X	60	12
Firm Y	64	16
Firm Z	90	20

Which firm has the lowest opportunity cost in producing perfume?

- A Firm W
 B Firm X
 C Firm Y
 D Firm Z
- 12 Which type of factor of production are a football stadium and an owner of a football club?

	Football stadium	Owner of a football club
A	capital	entrepreneur
B	capital	labour
C	land	entrepreneur
D	land	labour

Part 7 Similarities and differences

This activity will help you build up your understanding of aspects of the topics covered in this section.

Similarities

Identify **one** way in which each of the following pairs is similar:

- Builders and teachers.
- The entrepreneur and labour.

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- 3 Forests and streams.
- 4 Wind and sunlight.
- 5 Production possibility curves and production possibility frontiers.
- 6 A production point inside a production possibility curve and a production point on the production possibility curve.
- 7 Finite resources and limited resources.
- 8 Forests and rivers.
- 9 Wages and profit.
- 10 A movement along and a shift in a production possibility curve.

Differences

Identify **one** way in which each of the following pairs is different:

- 1 Capital goods and consumer goods.
- 2 Economic goods and free goods.
- 3 Capital and land.
- 4 Geographical immobility and occupational immobility.
- 5 Opportunity cost and financial cost.
- 6 An increase in the quantity of an economy's factors of production and an increase in the quality of an economy's factors of production.
- 7 Consumers and producers.
- 8 Sunshine and a solar panel.
- 9 A production point on a production possibility curve and a production point to the right of a production possibility curve.
- 10 Capital and labour.

Part 8 Data response questions

The use of data puts economics in a real world context. In answering data-based questions, you should first read through the questions so that you know what you are looking for. Then read through the data. You may wish to highlight or underline key words. Having read through the data, return to the questions. Again you may find it useful to highlight or underline key words in the questions. For example, in the case of question 1c below, you may wish to highlight the words 'opportunity cost'.

To answer the questions, you will need to draw both on the information in the extract, and on your knowledge and understanding of economics.

In deciding how much time to devote to each answer, take into account the number of marks allocated. You should spend twice as long on a question with 4 marks than one with 2 marks. The degree of difficulty of the questions tends to build as the questions progress.

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Study the source material for each question carefully and then answer Questions 1 and 2.

Source material: A new Indian car

On 11th January 2008, Tata Motors, part of India's Tata group, launched a new model, the Nano. On this day it became the cheapest car available, selling for half the price of the next cheapest car. For the price of \$1000 a brand new Nano could be bought or, for example, a second-hand 1993 Land Rover.

The Nano is now produced in Sanand in Gujarat, in a factory which has the capacity to produce 250 000 cars a year. Tata Motors employs 2200 workers, including car designers, to make the Nano at the factory. With cars becoming more sophisticated, and the manufacturing process becoming more complex, the production process at the Sanand factory, and other car factories in India, is becoming more automated. Robots are now undertaking a number of functions that before were undertaken by humans.

The car was intended initially for the home market. It was hoped that millions could be sold in India. The firm also planned to export the car to Latin America, South-East Asia and Africa.

Although selling the car at such a low price made car ownership more affordable for more people, there were still many millions of people who would like a car, but did not have the income to buy one.

The sales of the Nano have not yet met the hoped-for level. In 2014, only 19 000 Nanos were sold. A year later sales rose, but only to 24 200. The cost of producing the Nano was higher in 2016 than its selling price which was then \$1500. The disappointing sales and loss being made, led some people to suggest that Tata Motors should devote fewer of its resources to Nano cars and more to other cars. Others point out that Tata Motors could produce more types of other cars and save costs by closing a number of its factories, as most are working with spare capacity.

1 Referring to the source material in your responses, answer all parts of Question 1.

a Identify an example of the factor of production labour used in producing the Nano. **[1]**



TIP

This is a straightforward question. You just have to select the relevant example and in this case, there is only one example. Do not waste time explaining why the example you have picked is an example of labour. The question only requires identification and not an explanation.

b Calculate the average number of Nano cars produced per worker in 2015. **[2]**



TIP

For this question you would be credited full marks by just giving the correct answer. It is, however, useful to show your workings. This is because 1 mark may be gained even if a careless mistake has been made, if the right calculation has been undertaken.

c Explain what was a possible opportunity cost of buying a new Nano car in 2008. **[2]**



TIP

The reference to 2008 should help you identify the relevant paragraph in the extract. As the command word is 'explain', it is not sufficient just to state what was the opportunity cost. You need to bring out the meaning of opportunity cost in your explanation.

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- d Explain **two** examples of the economic problem. [4]

**TIP**

Always pay attention to the number of examples, causes, reasons etc. that you have to explain. To avoid you writing about too many, or too few, the number of examples (causes, reasons and so on) is given in bold. Think first about what the economic problem is, and then find and explain two examples.

- e Analyse **one** reason why the number of car workers may have recently declined in India. [4]

**TIP**

Note that only one reason has to be analysed. Analysis involves making links between points. Make sure you use relevant economic terms in your answer.

- f Analyse, using a production possibility curve, Tata's output of cars in 2015. [5]

**TIP**

Draw a clear and accurately labelled diagram. Take into account whether the source material suggests that Tata Motors is currently using all of its resources or not. Make sure the diagram clearly supports your analysis.

- g Discuss whether a car is a capital or a consumer good. [6]

**TIP**

This is an evaluative question. In this case, you need to consider both why it could be a capital good and why it could be a consumer good. In doing this, you need to bring out the nature of a capital good and the nature of a consumer good. There are certain key words and phrases that indicate that you are considering both sides. These include 'however' and 'on the other hand'. Towards the end of your answer, remember to consider the key factors that determine whether a particular car is a capital or a consumer good.

- h Discuss whether the quality of workers used in producing Tata cars is likely to increase in the future. [6]

**TIP**

Draw on both the source material and your knowledge, and understanding, of the factors that influence the quality of the labour force. Consider both why the quality of car workers producing Tata cars may decline and why it may increase. Be careful to avoid making the same point in reverse. For example, stating that the quality will decline if educational standards fall is not adding anything if you have just written that it will increase if educational standards rise. All you have done is to identify educational standards as an influencing factor. If you want to mention educational standards both falling and rising you would need to establish in both cases why this might occur.

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Source material: A German travel company considers its future

Some families take more than one foreign holiday a year. Not all families, however, are able to go on holiday whether at home or abroad. Most of those who take holidays would like to have more holiday breaks.

A German travel company in 2017 decided to stop selling holidays in Italy and instead to offer holidays in a new destination. This is the Maldives, a group of coral islands in the Indian Ocean, famous for their long hours of sunshine and sandy beaches. Tourism is a fast growing industry. The average price of a holiday for a family of four for a week was \$2162 in 2017. Most tourists fly to the capital island Male. Many then sail to one of the coral islands that make up the Maldives and stay in relatively luxurious hotels or villas.

Tourists visit the Maldives from a range of countries. Table 1.1 shows the percentage share of the top five countries from which tourists came to the Maldives in 2016 and the share of world population of those countries.

Table 1.1: The main sources of Maldives' tourists and those countries' share of world population in 2016

Country	Percentage of tourists to the Maldives	Percentage of world population
China	30.0	18.5
Germany	8.5	1.1
UK	7.5	0.9
Italy	5.4	0.8
India	4.2	17.9

The Maldivian economy is heavily dependent on tourism and fishing. More than a third of workers are employed in these two industries. There is a greater range of jobs in the tourism industry including, for example, hotel chef and tourist guide.

2 Referring to the source material in your responses, answer all parts of Question 2.

- a** Identify an example of a free good. **[1]**



TIP

Remember that for this question, your answer only needs to be brief – one word in this case is sufficient.

- b** Calculate the average daily price of a family holiday in the Maldives in 2017. **[2]**



TIP

Calculations may come out as whole numbers. If they do not and you are not given further instructions, calculate to two decimal places.

- c** Explain what evidence there is of scarcity. **[2]**



TIP

Provide the relevant example from the source material and explain why this is an example of scarcity.

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- d Explain, using examples, **two** factors of production involved in providing holidays in the Maldives. [4]



TIP

A straightforward question. Identify an example of two different types of factors of production from the source material and explain what type of factor each is.

- e Analyse the relevance of opportunity cost for a travel firm in deciding how to use its resources. [4]



TIP

You can give a general answer here as well as drawing on the source material.

- f Analyse, using Table 1.1, the relationship between population size and the number of visitors to the Maldives. [5]



TIP

First explain the expected relationship, then examine the extent to which the data supports this relationship and finally provide any possible explanation of any exceptions.

- g Discuss whether hotels or hotel chefs are more mobile. [6]



TIP

Consider the two types of mobility.

- h Discuss whether or not the Maldives will be able to increase its output of both tourism and fish in the future. [6]



TIP

The key here is to use production possibility curves.

Part 9 Four-part questions

This type of question has a stem which introduces and links the question parts. Each structured question is divided into four different parts. Part (a) is worth 2 marks and is a question which can be answered briefly. Part (b) carries 4 marks and involves straightforward analysis. Part (c) is worth 6 marks and requires more in-depth analysis. The last part, part (d), carries the most marks, 8, and involves the highest order skill, evaluation.