



**Economics Questions By Topic:**

**PPF & Opportunity Cost (1.1.3 &  
1.1.4)**

**A-Level Edexcel Theme 1**

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 The Foundry, 77 Fulham Palace Road, W6 8JA

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**Section A**

**Write your answers in the spaces provided.**

- 1** The 'Energy Company Obligation' is the government's term for its programme to make houses in the UK more energy efficient.

Explain an opportunity cost to the government of granting subsidies to energy suppliers to install loft insulation.

**(3)**

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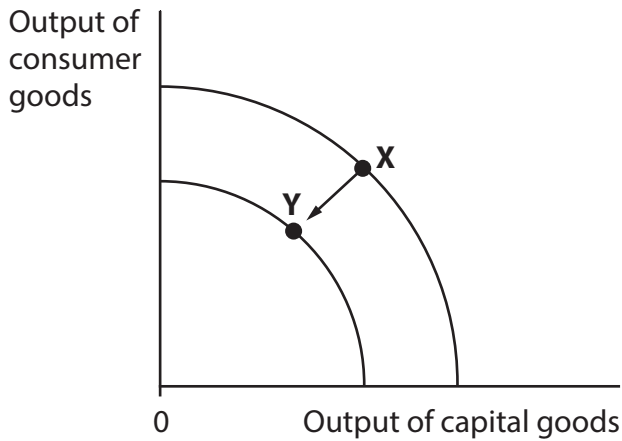
**(Total for Question 1 = 3 marks)**

2 In August 2017 Hurricane Harvey caused the closure of nearly a quarter of the oil production capacity in the United States.

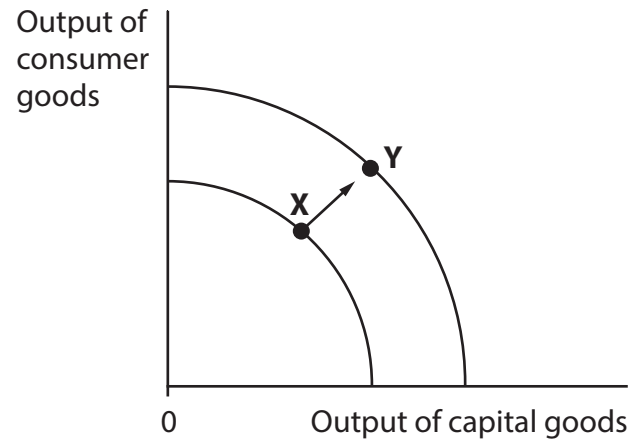
The diagrams show movements from position X to Y on production possibility frontiers. In which **one** of the diagrams does the movement from X to Y illustrate the most likely impact on the US economy of a natural disaster such as Hurricane Harvey?

(1)

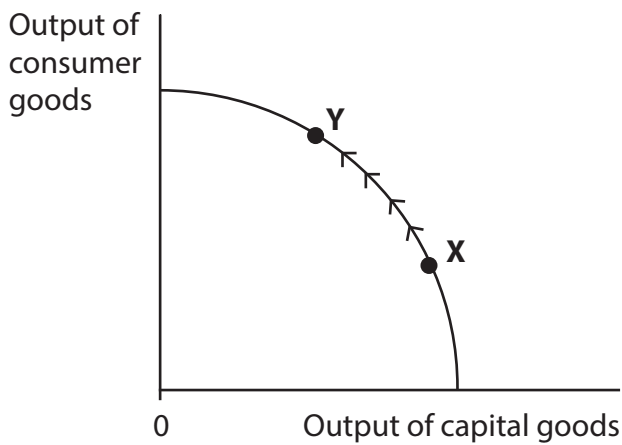
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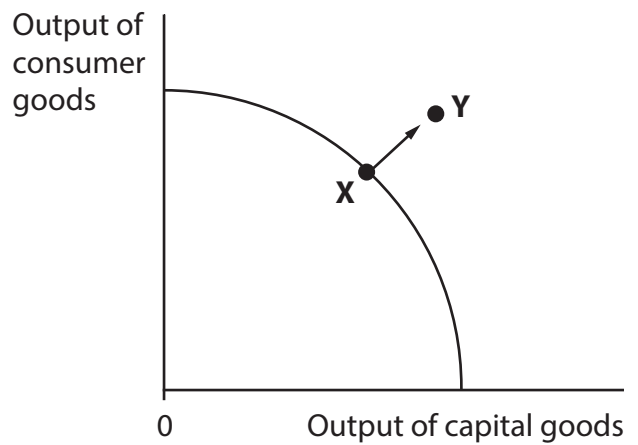
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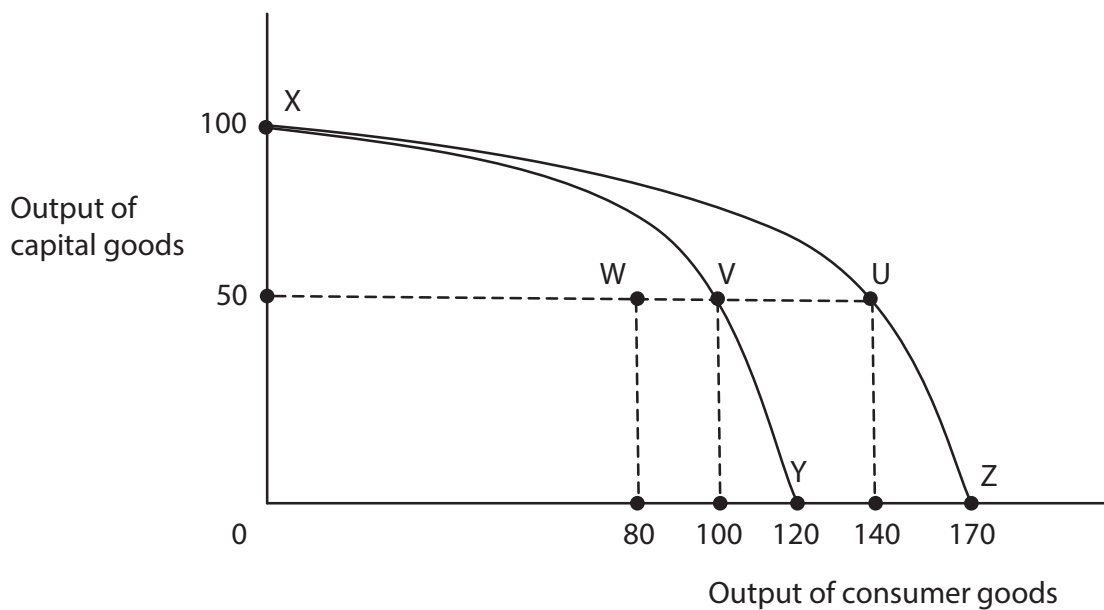


D



(Total for Question 2 = 1 mark)

3 The diagram refers to production possibility frontiers for a country that produces capital goods and consumer goods.



Originally, the economy has a production possibility frontier shown by the line **XY**, operating at point **V**. The production possibility frontier then moves to **XZ**, operating at point **U**.

(a) Calculate the **original** and the **new** opportunity cost of producing 50 capital goods. You are advised to show your working.

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(b) Which **one** of the following was the most likely cause of the movement in the production possibility frontier from **XY** to **XZ**?

(1)

- A** A reduction in unemployment in consumer goods industries
- B** A rise in the cost of producing consumer goods
- C** An increase in demand for consumer goods
- D** A technological improvement in the production of consumer goods

(c) Explain **one** characteristic of the economy at position **W**.

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**(Total for Question 3 = 5 marks)**

4 The production possibility frontier for an economy is shown in the table below.

Capital goods output (million units)	Consumer goods output (million units)	Opportunity cost
0	42	–
10	40	
20	36	
30	30	
40	22	
50	12	
60	0	

(a) Explain, using marginal analysis from the table above, the concept of opportunity cost. (You may use the last column in answering the question.)

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(b) Which **one** of the following is the most likely effect of an economy producing more capital goods?

(1)

- A** Reduced specialisation of labour
- B** A shift in the production possibility frontier
- C** A reduction in marginal utility
- D** A shift in demand for consumer goods

(Total for Question 4 = 4 marks)



**5** Which **one** of the following is most likely to cause an outward shift in a country's production possibility frontier?

(1)

- A** A decrease in unemployed resources
- B** An increase in demand for consumer goods
- C** An increase in unemployment benefits
- D** An increase in immigration

**Answer**

**Explanation**

(3)

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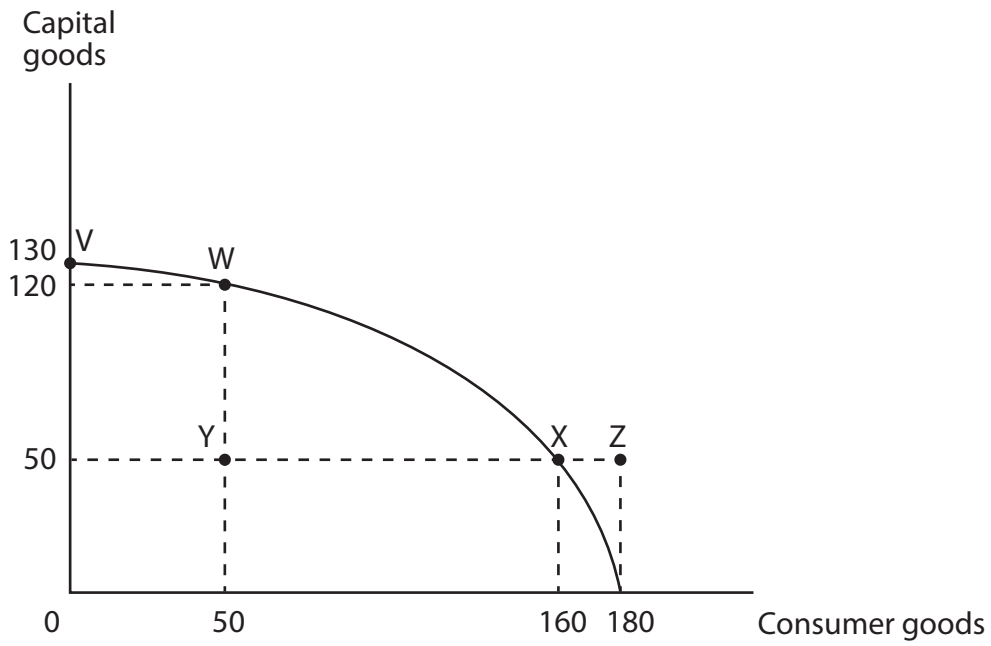
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**(Total for Question 5 = 4 marks)**

6



The diagram shows a production possibility frontier for an economy. Which of the following is true?

(1)

- A The opportunity cost of producing 50 consumer goods is 50 capital goods
- B There are unemployed resources at V
- C The opportunity cost of producing 180 consumer goods is 20 capital goods
- D Future economic growth is likely to be higher at W than X

Answer

**Explanation**

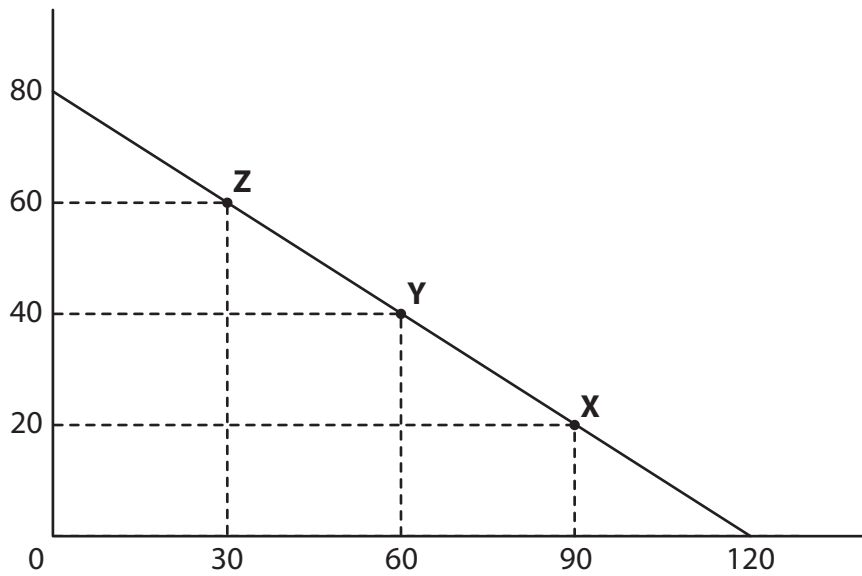
(3)

Area with horizontal dotted lines for writing the explanation.

**(Total for Question 6 = 4 marks)**

7

**Output of  
capital goods**



**Output of  
consumer goods**

The diagram shows a production possibility frontier for an economy which is currently operating at point **X**. Which **one** of the following is true?

(1)

- A** The opportunity cost of producing 90 units of consumer goods is 20 capital goods
- B** Moving to point **Y** will decrease the rate of economic growth compared to point **X**
- C** The opportunity cost of increasing the output of capital goods is constant
- D** Moving to point **Z** will increase current living standards

**Answer**

**Explanation**

(3)

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**(Total for Question 7 = 4 marks)**

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8 Opportunity cost arises because

(1)

- A the price mechanism may lead to a misallocation of resources
- B resources are scarce
- C the supply of goods and services is infinite
- D supply may exceed demand

Answer

Explanation

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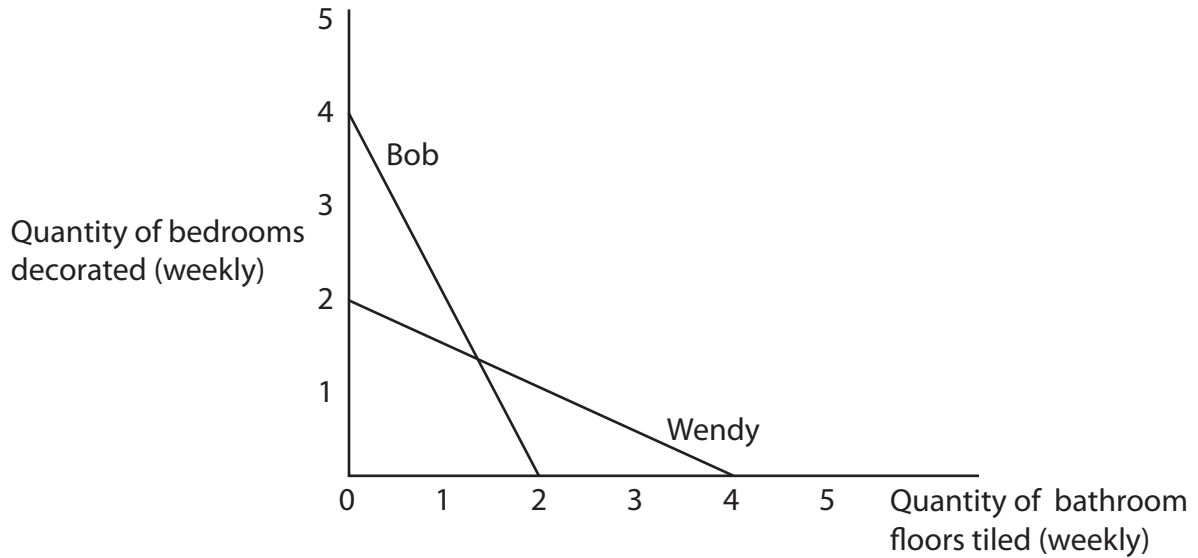
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**(Total for Question 8 = 4 marks)**



The diagram shows the weekly production possibilities of two builders, Bob and Wendy. They **each allocate half** their working time to decorating bedrooms and the **other half** to tiling bathroom floors.

From this information it can be deduced that

(1)

- A the opportunity cost of decorating a bedroom is the same for both builders
- B Wendy can decorate more bedrooms and tile more bathroom floors than Bob in a week
- C the opportunity cost of tiling a bathroom floor is lower for Bob than for Wendy
- D Wendy and Bob could increase their combined total weekly output through specialisation

Answer

Explanation

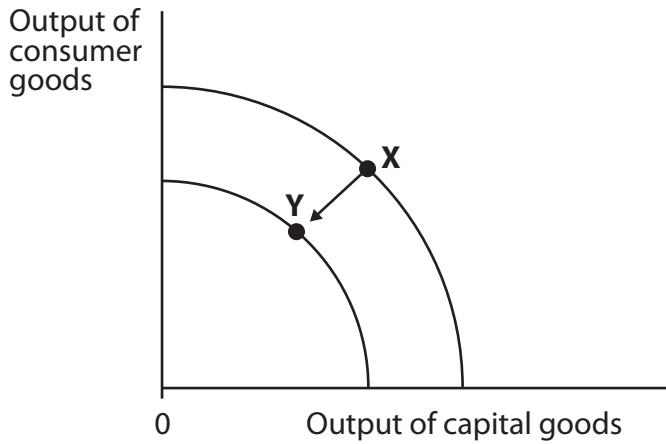
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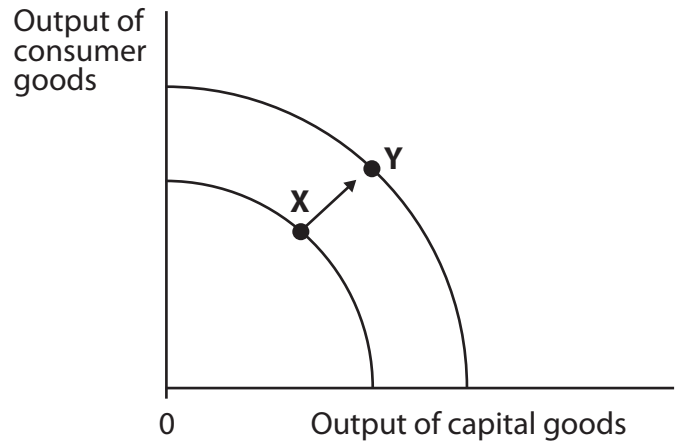
**(Total for Question 9 = 4 marks)**



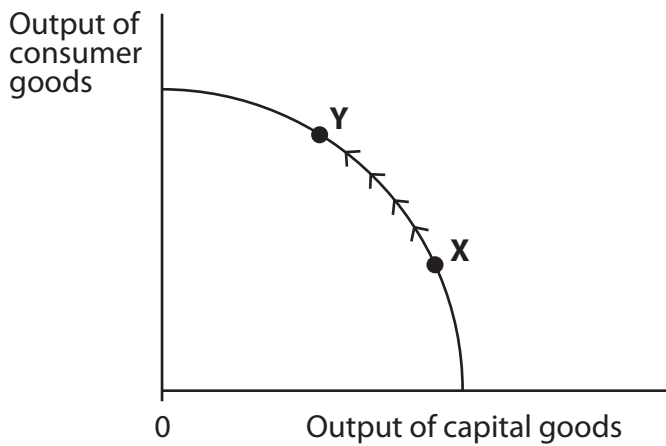
**Option A**



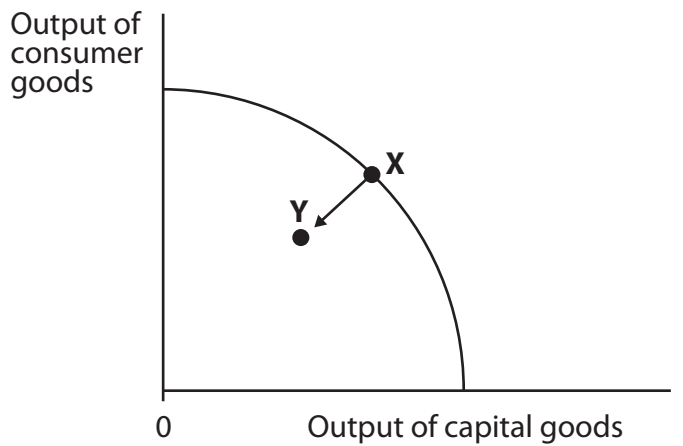
**Option B**



**Option C**



**Option D**



The diagrams show movements from position X to Y on production possibility frontiers. In which of the above diagrams does the movement from X to Y illustrate economic growth?

(1)

Answer

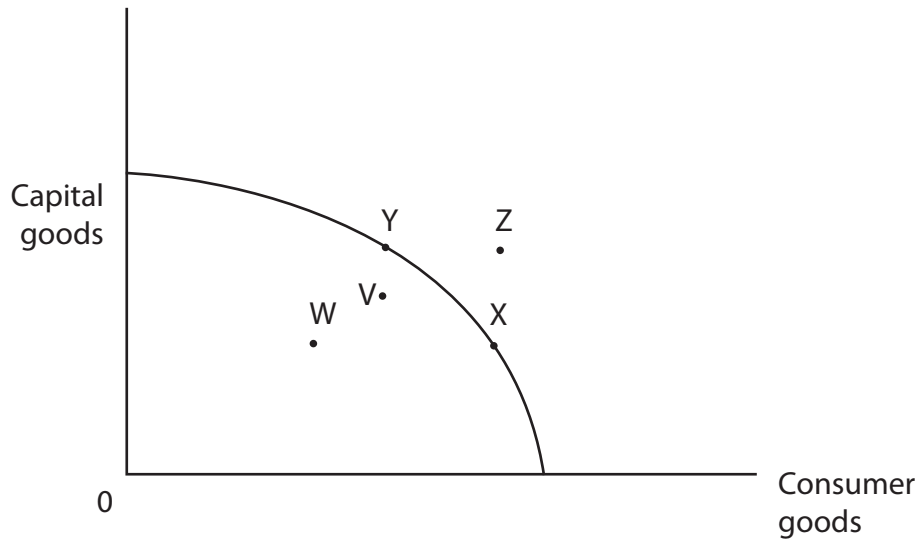
Explanation

(3)

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**(Total for Question 10 = 4 marks)**

11



The diagram shows a production possibility frontier for an economy. Which of the following changes shows a reduction in unemployed resources?

(1)

- A W to V.
- B X to Z.
- C Y to X.
- D An outward shift of the whole production possibility frontier.

Answer

Explanation

(3)

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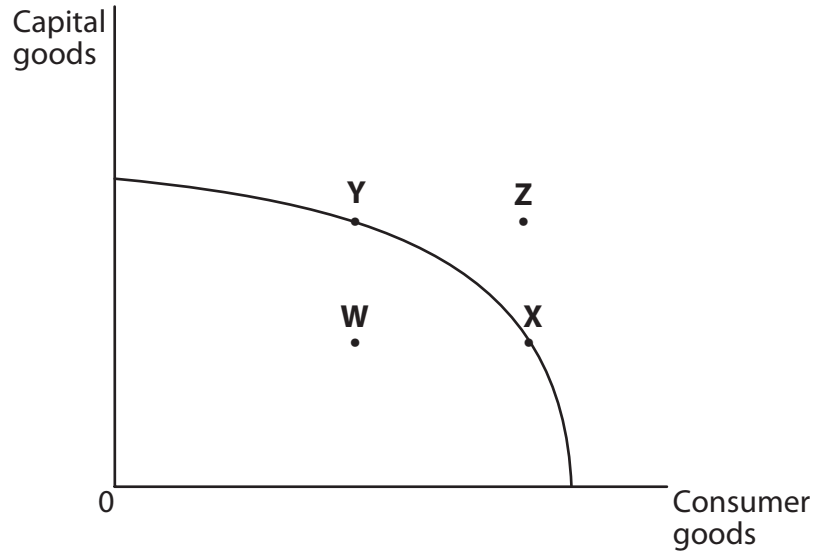
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(Total for Question 11= 4 marks)

12



The diagram shows a production possibility frontier for an economy. Which of the following is true?

(1)

- A** There is full employment of resources at W.
- B** Economic growth is likely to be higher at X than Y.
- C** Z is currently unattainable.
- D** There is a constant rate of opportunity cost between X and Y.

Answer

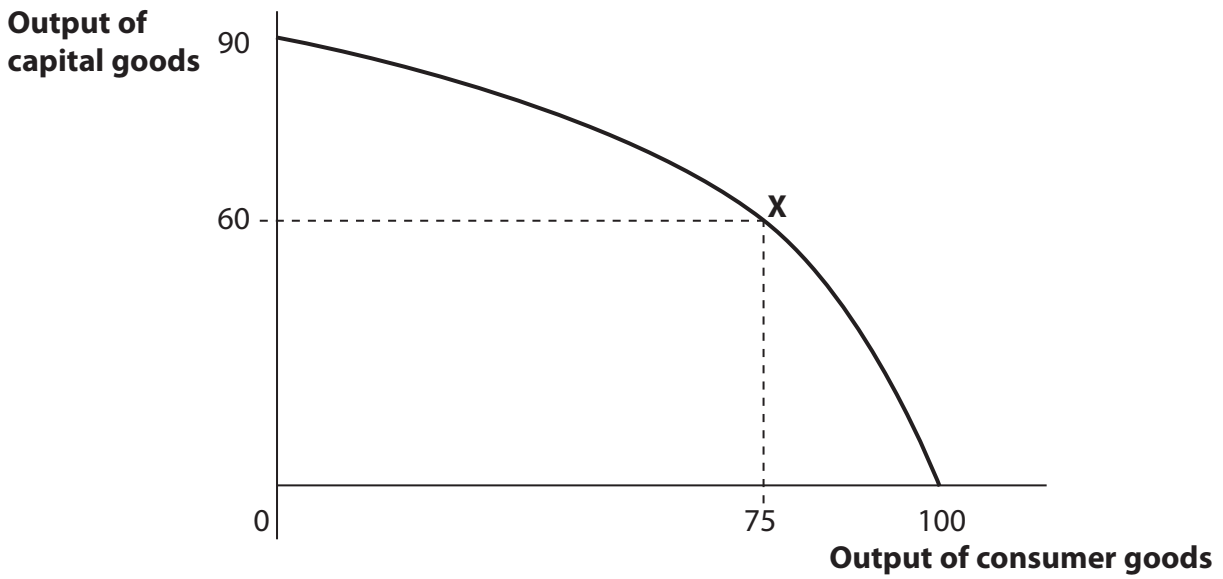
Explanation

(3)

A series of horizontal dotted lines for writing an explanation.

**(Total for Question 12 = 4 marks)**

13



The diagram shows a production possibility frontier for an economy operating at point X. The opportunity cost of producing 75 units of consumer goods is:

(1)

- A 25 units of consumer goods
- B 30 units of capital goods
- C 60 units of capital goods
- D 75 units of consumer goods.

Answer

Explanation

(3)

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(Total for Question 13 = 4 marks)

14 A production possibility frontier can be used to illustrate the concept of:

(1)

- A External cost
- B Producer surplus
- C Opportunity cost
- D Equilibrium price.

Answer

Explanation

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**(Total for Question 14 = 4 marks)**

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Agricultural goods output (million units)	Manufactured goods output (million units)	
0	90	
10	88	
20	84	
30	78	
40	70	
50	60	
60	48	
70	34	
80	18	
90	0	

A country has two economic sectors, agriculture and manufacturing. Its production possibilities are shown in the table. (You may use the last column in answering the question.)

It can be deduced that

(1)

- A there is a constant opportunity cost as output changes
- B the opportunity cost of producing manufactured goods decreases, the greater the output of manufactured goods
- C the opportunity cost of producing agricultural goods increases, the greater the output of agricultural goods
- D it is possible to achieve 60 million units of agricultural goods and 60 million units of manufactured goods simultaneously, given the existing technology and full employment of resources in the economy.

Answer

Explanation

(3)

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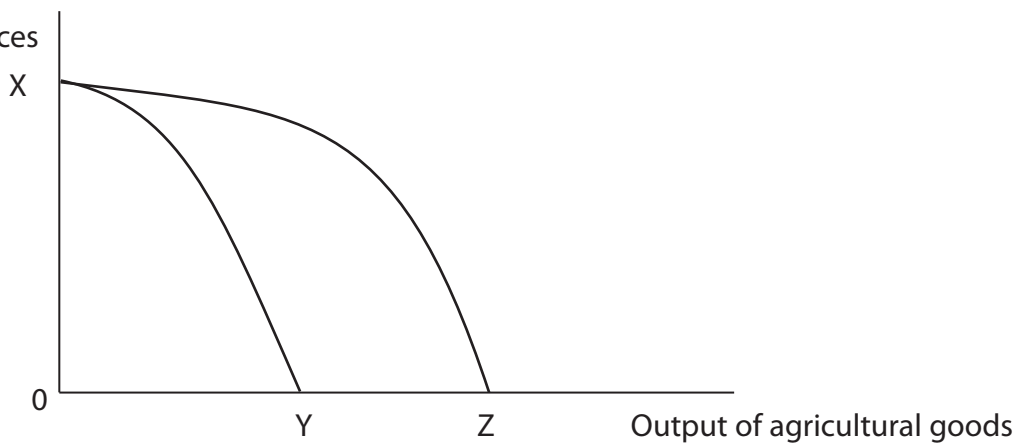
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(Total for Question 15 = 4 marks)



**16** Output of tourist services



The diagram refers to a small Caribbean island producing agricultural goods and tourist services. Initially the economy has production possibilities shown by XY. The production possibility line then moves to XZ. This change is most likely to have been caused by:

(1)

- A** An increase in the demand for agricultural goods
- B** A rise in the cost of producing agricultural goods in terms of tourist services
- C** A decrease in the demand for agricultural goods
- D** Technological improvements in the agricultural industry

Answer

Explanation

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**(Total for Question 16 = 4 marks)**

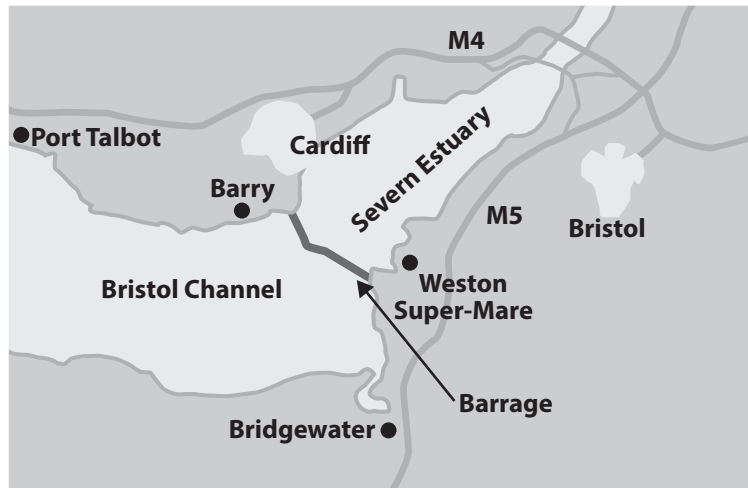
**END OF SECTION A**

## Section B

Read all figures before answering. Write your answers in the spaces provided.

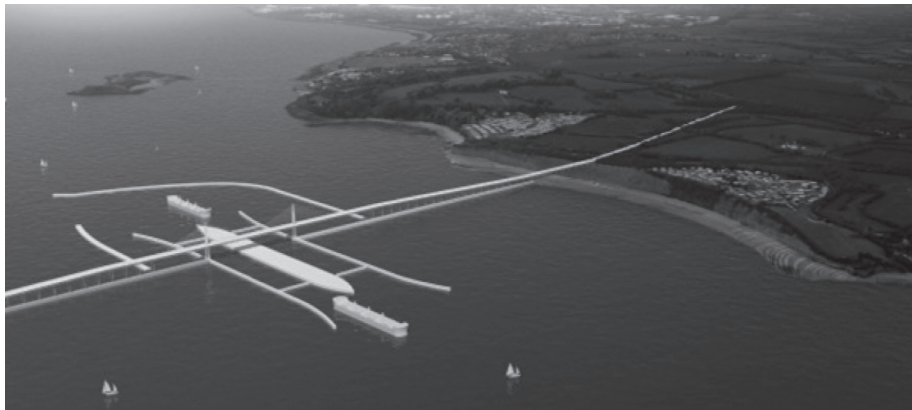
### 17 Proposals for a tidal barrage in the Severn Estuary

Figure 1 The proposed tidal barrage between Cardiff and Weston-Super-Mare



(Source: © Crown copyright 2002)

Figure 2 The proposed Severn Barrage



### Extract 1 Benefits and costs of the tidal barrage

Plans for an 11 mile tidal power barrage across the Severn Estuary have been proposed by private consortium Corlan Hafren. The scheme would generate around 5% of the UK's electricity needs and be funded by overseas investors. No UK government subsidy would be involved in funding the huge £34 billion cost of the scheme. However, consumers will be expected to pay higher prices for the electricity generated from this renewable energy source (to cover increased production costs) compared to non-renewable energy supplies such as gas and coal. 5

The Severn Estuary has the world's second largest tidal range of almost 14 metres. Harnessing this energy would make a significant contribution to the government's target of generating 20% of the nation's energy from renewable sources by 2020. A tidal barrage, once complete, is carbon neutral. It would help diversify the UK's energy supply and operate for at least 120 years. This compares favourably with the lifespan of nuclear power plants (35 years) and wind turbines (25 years). These forms of renewable energy receive substantial government subsidies and planning restrictions are relaxed to promote their development. 10 15

More than 30 000 local jobs would be created from the scheme. This includes constructing road and rail links on top of the barrage to improve the transport infrastructure in the region. A factory to build the 200 giant turbines required for the tidal barrage and a deep water dock facility is also planned in Port Talbot.

The tidal barrage would also help reduce flooding along the river Severn floodplain. In 2007 severe flooding in the area led to £3.2 billion of damage. 20

However, the tidal barrage will have a significant impact on wildlife and their habitats. The Royal Society for the Protection of Birds believes that the barrage would destroy huge areas of estuary marsh and mudflats used by 70 000 birds. It would also block the migration routes of fish including wild salmon. Corlan Hafren intends to reduce the negative effects by building turbines which rotate at slow speed to minimise damage to sea life. 25

(Source for Figure 2 and Extract 1: Adapted from 'UK Government considering new multi-billion plan for barrage across Severn Estuary, Western Mail, 7th December 2011)



A large rectangular area with rounded corners, containing numerous horizontal dotted lines for writing.

Ruled writing area with horizontal dotted lines.

(Total for Question 17 = 10 marks)

## 18 UK Higher Education tuition fees

**Figure 1: Estimated repayment of tuition fees by graduate workers**

Gross annual income	Monthly repayment
Under £21 000	0
£25 000	£ 30
£30 000	£ 68
£40 000	£143
£50 000	£218
£60 000	£293

(Source: Browne report: Review of Higher Education Funding and Student Finance, 2010  
© Crown Copyright)

**Figure 2: UK University applications 2005-2011**

Year	Number of student applications to higher education	Percentage change over previous year
2005	522 155	-----
2006	506 304	-3.0*
2007	534 495	5.6
2008	588 689	10.1
2009	639 860	8.7
2010	697 351	9.0
2011	729 376 (forecast)	4.6

\*Note: between 2005 and 2006 tuition fees increased from £1 175 to £3 000 per annum

(Source: UCAS Analysis and Research - [http://wwwucas.com/about\\_us/stat\\_services/stats\\_online/data\\_tables/datasummary](http://wwwucas.com/about_us/stat_services/stats_online/data_tables/datasummary))

### **Extract 1 University tuition fees increase up to a maximum of £9,000 a year**

Universities minister David Willetts announced an increase in tuition fees from £3,290 to a maximum of £9,000 a year in England by 2012. Three quarters of English universities intend to set the maximum tuition fees of £9,000, and 95% plan to charge more than £7,000. This will help to balance out an 80% cut in government funding to university undergraduate courses.

5

Increasing the contribution made by graduates strengthens the link between what the student gains from education and what they pay back. It encourages universities to compete for students who will now directly fund the courses. Universities may be forced to improve teaching standards and become more efficient. Students should still gain financially: the return on a degree has been estimated at an additional £160,000 over a working lifetime compared to a non-graduate with A Levels. However, graduate unemployment reached a 17 year high at 8.9% in 2010.

10

Many students will take out student loans to pay their fees and living expenses. These loans will only be repaid once graduates' income rises above £21,000 a year, at a rate of 9% of their income above this level. For students from low-income families, there are grants of up to £3,250 per year, and bursaries from universities will also be available.

15

A world class university education system is vital for attracting investment and increasing labour productivity, ensuring long term wealth and prosperity. It also generates earnings from large numbers of overseas students.

20

(Source: Adapted from 'University tuition fee limit rises to £9 000'; by Hazel Barker, Sky News online, 3rd November 2010 © 2011 BskyB and Jeevan Vasagar, Guardian, 22<sup>nd</sup> November 2010 © Guardian News & Media Ltd 2010)

### **Extract 2 Higher university fees are unfair to students from low-income families**

Research conducted in 2010 by the University of Leicester indicated that students from low-income families are more likely to be put off from applying to higher education than better-off students. The research involving 730 A Level students found that an increase in tuition fees from £3,290 to £7,000 would reduce the number of applications from low-income households by 14% compared to a reduction of 9% for better-off households.

5

The research also revealed a differing impact on the types of institutions and courses. Applications to the most prestigious universities would not be affected but the new universities would suffer a significant fall in applications. Furthermore, applications for Medicine and Law would hardly be affected but there would be a big fall in numbers applying for Arts and Humanities courses. The tuition fees increase could lead to a reduction in the number of universities and range of courses on offer. There are fears that some 36 000 university places could be lost in 2012.

10

However, most A Level students still intend to apply to university, suggesting a genuine appreciation of the benefits from a higher education degree.

15

(Source: © University of Leicester 20 September 2010)





## 19 The National Health Service

### Extract 1 NHS funding

The National Health Service (NHS) is the largest employer in Europe with more than 1.3 million staff. It treats over 1 million patients every 36 hours. Between 1997 and 2008 government spending on the NHS increased in real terms from £58.5 billion to £115 billion and accounted for 8.3 per cent of GDP. Spending is planned to increase further to £127 billion by 2011. This reflects growing demand and cost pressures on the health care budget, following an ageing population, advances in medical care and rising staff costs. Staff wages now account for 40 per cent of the NHS budget.

5

However, the huge increases in NHS funding are set to come to an end after 2011 as government spending must be reduced following the impact of the recession. The government has identified ways to increase NHS efficiency by driving down the prices for goods and services it buys, reducing staff sickness, cutting its investment in computer software, improving the use of its buildings and lowering its energy consumption.

10

Some progress has already been made as the average length of inpatient stay in hospital has fallen from 8.8 days to 6.3 days between 1997 and 2008.

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Source: adapted from: [www.kingsFund.org.uk](http://www.kingsFund.org.uk)

### Extract 2 The growth in NHS management

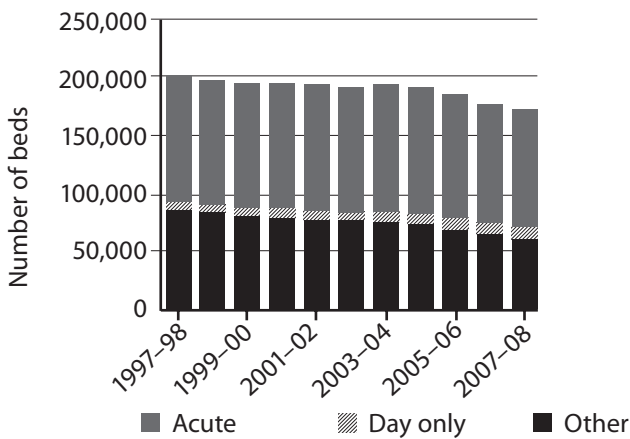
The number of NHS managers in England rose by nearly 12 per cent in 2009 – more than five times the rate at which qualified nurses were recruited, leading to concerns that cash is being diverted from direct patient care.

Dr Keith Brent, Chairman of the British Medical Association's Consultants Committee, said that "many of the additional managerial staff have been employed to help the NHS deal with the increasing bureaucracy and fragmentation that have accompanied greater competition, with little or no evidence of benefit to patients."

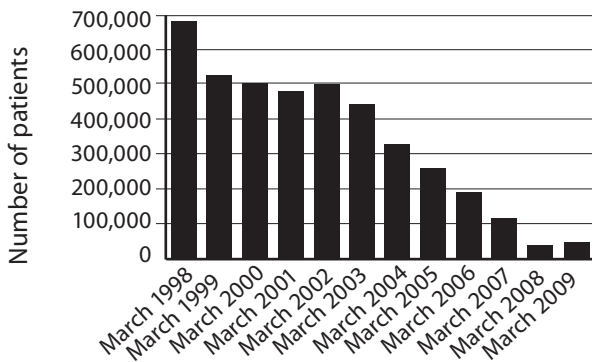
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Source: adapted from 'NHS management increasing five times faster than number of nurses', Randeep Ramesh, *The Guardian*, 25th March 2010.

**Figure 1 NHS hospital beds 1997–2008**

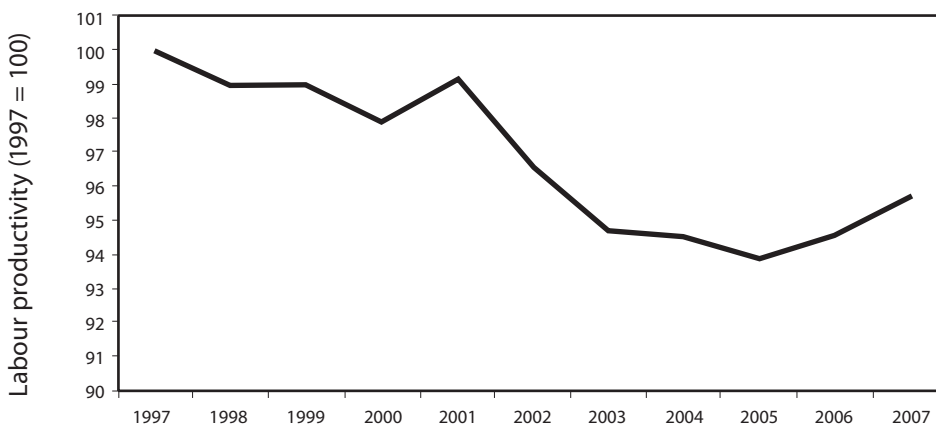


**Figure 2 NHS: number of patients waiting for over 13 weeks for inpatient admission 1998–2009**



Source: Figures 1 and 2: [www.statistics.gov.uk/hub/health-social-care/health-care-system/hospitals-and-health-care-facilities/index.html](http://www.statistics.gov.uk/hub/health-social-care/health-care-system/hospitals-and-health-care-facilities/index.html)

**Figure 3 Productivity in the NHS 1997–2007**



Source: [www.statistics.gov.uk/articles/nojournal/TotalPublicServiceFinalv5.pdf](http://www.statistics.gov.uk/articles/nojournal/TotalPublicServiceFinalv5.pdf)

(a) Using examples, explain the significance of opportunity cost to the increase in government spending on the NHS referred to in Extract 1.

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(b) Examine the possible impact on the production possibility frontier for the economy of the increase in government spending on the NHS referred to in Extract 1. Illustrate your answer with an appropriate diagram.

(10)

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(Total for Question 19 = 14 marks)

**END OF SECTION B**