AQA

A-level
ECONOMICS

Paper 1 Markets and Market Failure

Monday 20 May 2019 Morning Time allowed: 2 hours

Materials
For this paper you must have:
- an AQA 12-page answer book
- a calculator.

Instructions
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front cover of your answer book.
  The **Paper Reference** is 7136/1.
- In **Section A** answer **EITHER** Context 1 **OR** Context 2.
- In **Section B**, answer **ONE** essay.

Information
- The marks for questions are shown in brackets.
- The maximum mark for this paper is 80.
- There are 40 marks for **Section A** and 40 marks for **Section B**.
- You will be marked on your ability to:
  – use good English
  – organise information clearly
  – use specialist vocabulary where appropriate.

Advice
- You are advised to spend 1 hour on **Section A** and 1 hour on **Section B**.

Section A

Answer **EITHER** Context 1 **OR** Context 2.

EITHER

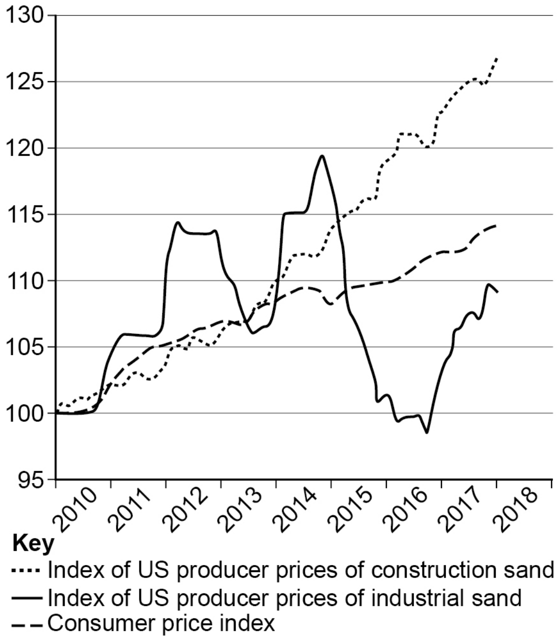
Context 1 **Total for this context: 40 marks**

The market for sand

Study **Extracts A**, **B and C**, and then answer **all** parts of Context 1 which follow.

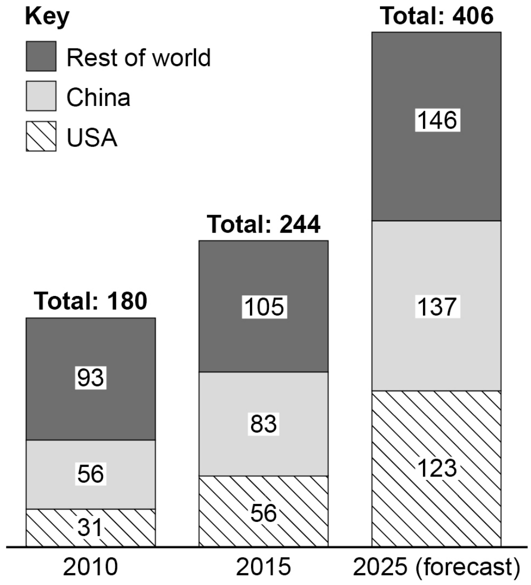
Extract A

Figure 1: Indices of US producer prices for sand, Jan 2010–Jan 2018 (Jan 2010=100)



Source: Federal Reserve Economic Data, 2018

Figure 2: Global demand for sand (millions of tons), 2010–2025



Source: The Freedonia Group/National Post, 2018

Extract B: Is the world running out of sand?

Sand is in high demand. Sand accounts for up to 85% of all mining and the global depletion of sand is rapidly exceeding its natural renewal rate. Sand is mostly used in the construction industry to make concrete and asphalt. Chinese demand has risen significantly, reflecting the country's rapid pace of construction: it built 32.3 million houses and 4.5 million kilometres of road between 2011 and 2014. Sand also has industrial uses: it is used to make glass, electronics, and to help extract oil in the fracking industry. While market demand for industrial sand has tracked overall economic growth in the USA, the demand for fracking sand has been as volatile as oil prices.

Vast quantities of sand are dumped into the sea to reclaim land: Singapore, for example, has expanded its land area by over 20% since the 1960s. Much of this sand originates from Indonesia, where sand miners have completely erased over 20 islands since 2005. The Maldives and Kiribati have used sand to shore up their islands against rising sea levels. The United Nations forecasts that, by 2030, there will be over 40 ‘megacities’, home to more than

10 million inhabitants (up from 31 in 2016), which means more housing and infrastructure will need to be built. Also, sea levels will continue to rise and so sand will only become more sought after. But why is there a shortage when sand seems so abundant? Desert sand is too smooth, and so cannot be used for most commercial purposes. Australian sand was shipped to a faraway desert to build Dubai's Burj Khalifa tower, made possible by cheaper transportation. Most countries have rules in place about where, and how much, sand can be mined. However, surging demand has sparked a lucrative illegal trade in many rapidly developing countries which is damaging the environment, causing pollution and harming local biodiversity.

Source: News reports, February 2018

Extract C: The need for international action

There are currently no international conventions to regulate sand extraction, trade and use. Critics argue that the international community needs to treat sand like a resource on a par with clean air, biodiversity and other natural endowments that nations seek to manage for the future.

In the developed world, concerns have led to restrictions on where sand can be mined. In the USA, for example, mining it offshore or near large residential areas is restricted. Regulations are also in place in many developing countries. Indonesia, Malaysia and Cambodia have all placed restrictions on exports, although the rules are not always enforced. There is a particular problem of ineffective enforcement in India, with organised criminal networks ignoring rules and conducting unregulated sand mining.

Substitutes for sand do exist. Mud can be used for land reclamation, straw and wood for building houses, and crushed rock for making concrete. In some rich countries a shift towards these alternative production processes is already under way as sand prices rise. In the UK, sand demand is 25% less than in 2007, and 28% of building materials used in the UK in 2014 had been recycled. Rising prices will eventually also force builders in developing countries to explore alternatives to sand. But without better law enforcement, high sand prices also make illegal mining more profitable.

Source: News reports, February 2018

0 1 Using the data in **Extract A** (Figure 1), calculate the percentage change in the price of construction sand between January 2014 and January 2018. Give your answer correct to **one** decimal place.

[2 marks]

0 2 Explain how the data in **Extract A** (Figures 1 and 2) show that expansion in the global sand market is leading to prices of construction sand rising in real terms.

[4 marks]

0 3 **Extract B** (line 18) states that the global trade in sand has been 'made possible by cheaper transportation'.

With the help of a diagram, explain how cheaper transportation **and** a construction boom in East Asia have led to growth in the market for sand.

[9 marks]

0 4 **Extract C** (lines 14–15) states that 'Rising prices will eventually also force builders in developing countries to explore alternatives to sand.'

Use the extracts and your knowledge of economics to assess the view that the increasing scarcity of sand is a problem best solved by market forces, rather than through government intervention.

[25 marks]

Do **NOT** answer Context 2 if you have answered Context 1.

OR

Context 2 **Total for this context: 40 marks**

The British railway system

Study **Extracts D**, **E and F** and then answer **all** parts of Context 2 which follow.

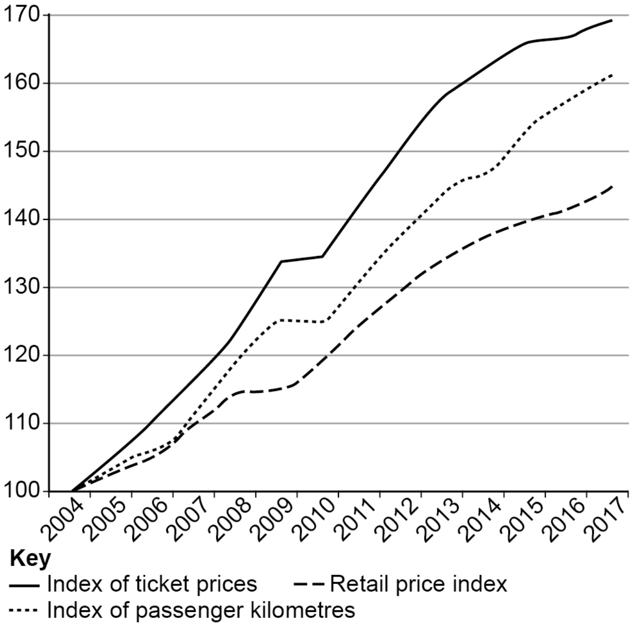
Extract D

Figure 3: UK (excluding Northern Ireland) rail industry income, 2010–2016

£ millions	**2010–11**	**2015–16**
Passenger income	7 588	9 160
Government funding	6 182	6 697
Network Rail income	2 565	2 300
Other income	793	833
Total	**17 128**	**18 990**

Passenger income as % of total	44%	48%

Figure 4: Indices of UK rail ticket prices and passenger kilometres, 2004–2017 (2004=100)



Source: Office of Rail and Road, Feb 2017

Extract E: Privatisation of British Rail

'More competition, greater efficiency and a wider choice of services', proclaimed the 1992 Government white paper that advocated the privatisation of British Rail. Two decades on, passenger journeys have more than doubled from 735 million in 1994–5, to 1.7bn in 2016–17. But how much of this is due to the benefits of privatisation, rather than factors such as increasing urban congestion and a rising population? The UK's trains and tracks are more intensively used than in any other European market except the Netherlands. Investment is up, at around four times (in real terms) the £1.6bn a year it averaged in the late 1980s. The data on service quality are mixed. The UK performs well in terms of punctuality and reliability, but many journeys are uncomfortable. At peak hours 23% of London commuters have to stand.

Instead of pushing British Rail into the private sector as a natural monopoly, the Government split it up and sold it in no less than 100 pieces between 1995 and 1997. Privatisation was supposed to unleash efficiencies that would justify the returns private operators demand for their services. However, a recent study shows that the cost of running the UK's railways is 40% higher than in the rest of Europe. "The train you catch is owned by a bank, leased to a private company, which has a franchise from the Department for Transport to run it on track owned by

Network Rail, all regulated by another office, and paid for by taxpayers or passengers," says Prof John Stittle.

Since 1996, government subsidies have almost doubled in real terms. Ticket prices are now 25% higher in real terms than in 1995 and 30% higher than in France, Sweden and Switzerland.

Source: News reports, February 2018

Extract F: A return to Government ownership?

In May 2018, the Government allowed Virgin and Stagecoach to end their East Coast mainline franchise three years early, after claims they had lost more than £100 million. This has led to accusations that private companies can just walk away whenever profits dry up. When their predecessor, National Express, gave up the East Coast line franchise in 2009, it was renationalised. During the following five years under state control, it increased ticket sales, returned about £1bn to the taxpayer and improved customer satisfaction. Encouraged by this success, the Labour Party has proposed rail renationalisation of the entire UK network. Recent polls suggest almost 75% of the UK population agree, although opponents contend that most of the British public really don't care about who runs the trains; what they care about is reliability, comfort and price.

Part of the appeal of rail renationalisation comes from the low up-front costs: by taking over operations as franchises expire, the Government would avoid having to spend billions in buying out private companies. The Labour Party's plan involves reversing the splitting up of the service so that customers receive a simplified ticketing system with improved efficiency, although this may impact on dynamic efficiency and innovation.

Opponents of nationalisation argue that the train operating companies are efficient and not making excessive profits. "Profits are about 3.4% across the industry", says Mark Smith, a former government regulator. "So if you eliminated all profits overnight you would get a one-off 3.4% cut in fares, which isn't going to set the world on fire."

Source: News reports, May 2018

0 5 Using the data in **Extract D** (Figure 3), calculate the amount of government funding per £ of passenger income in the UK rail industry for the year 2015–16. Give your answer correct to the nearest penny.

[2 marks]

0 6 Explain how the data in **Extract D** (Figure 4) show that in the UK, between 2004 and 2017, changes in the demand for rail travel contributed to changes in the price of rail travel.

[4 marks]

0 7 **Extract E** (lines 10–11) describes the British railway sector as a 'natural monopoly', which was split up into 'no less than 100 pieces' when it was privatised.

With the help of a diagram, explain why breaking up a natural monopoly in rail may affect long-run average costs.

[9 marks]

0 8 **Extract F** (lines 9–10) suggests that 'the British public really don't care about who runs the trains; what they care about is reliability, comfort and price.'

Use the extracts and your knowledge of economics to evaluate the case for renationalising railways in the UK.

[25 marks]

Section B

Answer **one** essay from this section.

Each essay carries 40 marks.

EITHER

Essay 1

For a long time, supermarkets and other commercial firms have understood the benefits of behavioural economic concepts such as choice architecture and framing. The public sector has been slow off the mark, but at last governments are now taking advantage of the opportunities provided by nudging.

0 9 Explain how rules of thumb and irrationality can affect consumers' demand for goods and services.

[15 marks]

1 0 Using examples to illustrate your answer, assess the usefulness of behavioural economic theory compared to traditional economic policies in helping governments to correct market failures

[25 marks]

OR

Essay 2

Several loss-making retailers including Homebase, House of Fraser and Poundworld have had to decide whether to shut down operations or carry on while making losses. In contrast, the music-streaming firm Spotify was valued at $27 billion in 2018, despite never having made a profit in any year since it was founded. Spotify has been more focused on expanding market share.

1 1 Explain the factors a profit-maximising firm will take into account when deciding whether to shut down or to carry on operating, both in the short run and in the long run.

[15 marks]

1 2 Discuss the validity of the traditional economic assumption that the main objective of firms is to maximise profits.

[25 marks]

OR

Essay 3

‘Each time the Government imposes a minimum price or wage, the result is almost always excess supply. What matters is the extent to which this is a problem.’

1 3 Explain how the impact of a minimum price for a good or service is affected by its price elasticity of demand and its price elasticity of supply.

[15 marks]

1 4 Discuss the view that a national minimum wage is beneficial for an economy.

[25 marks]

END OF QUESTIONS

There are no questions printed on this page