ADDITIONAL MATERIALS
In addition to this examination paper, you will need:
• a calculator;
• a WJEC pink 16-page answer booklet.

INSTRUCTIONS TO CANDIDATES
Answer all questions.
Use black ink or black ball-point pen.

INFORMATION FOR CANDIDATES
The number of marks is given in brackets at the end of each question.
You are reminded of the necessity for good English and orderly presentation in your answers.
As of 5 October 2015, the law now requires shops in England to charge 5p for plastic bags. This was an attempt by the Government to reduce the use of plastic bags and the litter and environmental damage they can cause.

The largely automated processes of industrial manufacturing these days mean that the price elasticity of supply for plastic bags is almost perfectly elastic and the cost of producing a single unit is negligible. As a result, supermarkets used to be content to give them away for free with customers’ purchases which resulted in over-use.

Wales had already introduced the charge on plastic bags four years earlier in 2011. According to data from the Welsh Government:

- Carrier bag use between 2011 and 2014 declined by 71%.
- Money raised from the charge has been estimated at between £17m and £22m to be used for good causes.

Similar results were achieved in Ireland in 2002 when a €0.15 (11p) charge on bags led to a 90% reduction in consumption. One journalist wrote: “it’s a great example of people responding to incentives, even if the incentives are tiny. Prices have only increased a relatively small amount – from nothing to 5p – and yet the decrease in demand has been incredible”.

The main problem is the amount of litter that plastic bags can cause. It is reported that the average American family takes home almost 1 500 plastic shopping bags a year with very little obvious difference between income deciles. And yet these plastic bags can take 1 000 years to degrade. The Department for Environment, Food and Rural Affairs (Defra) describes the bags as “an iconic symbol of waste”. They also cause ecological harm. As a study used by the Government explains, “when seabirds, sea mammals or fish ingest plastic particles, blocking of the gut is likely to harm or even kill”.

Consumer groups have also complained that the flat 5p charge will hit the poorest hardest as a percentage of their weekly income. Whilst others have criticised the environmental claims and have argued that plastic bags are simply not a very large component of total rubbish. It is estimated that plastic bags account for less than 1% of all items of litter.

In terms of their general environmental impact, plastic bags might actually be the best option for the environment. Studies have shown that paper bags, which are not subject to the English bag charge, create greater landfill waste than plastic bags. Likewise, reusable cotton bags – often known as ‘Bags for Life’ – would need to be used 131 times compared with a regular plastic bag before they are better in terms of limiting global warming. Such studies have concluded that the use of tradeable pollution permits is the single most effective policy available to governments trying to reduce environmental damage.
(a) Using mathematical examples, explain why “the flat 5p charge will hit the poorest hardest as a percentage of their weekly income.” (lines 34-35) [4]

(b) With reference to lines 5-7, draw a supply curve for the production of plastic bags and explain the curve that you have drawn. [4]

(c) Consider whether the price elasticity of demand for plastic bags is likely to be elastic or inelastic. [6]

(d) Using a welfare loss diagram and with reference to the data, explain how the consumption of plastic bags can lead to market failure. [8]

(e) Using the data, discuss the extent to which the 5p charge on plastic bags should be considered an example of government failure. [10]

(f) To what extent are tradeable pollution permits effective at reducing the environmental damage within a country? [8]
2. HAS BRAZIL'S BUBBLE BURST?

Background

Between 2002 and 2008 Brazil grew quickly, expanding at 4% a year. Domestic consumption and the boom in exports of iron, oil and sugar were the main drivers of growth. Millions of people were lifted out of poverty and income inequality was greatly reduced.

But by 2015 Brazil was showing signs of economic trouble as annual growth slowed and many commentators began to predict a recession in 2016.

The outlook for 2016:

Consumption

The prospects for private consumption, which accounted for around 50% of GDP growth over the past ten years, are unfavourable. With annual inflation above 7%, shoppers' purchasing power is being eroded. Inflation has been caused by energy prices going up by 30% and the Brazilian currency (the real) losing 10% of its value against the dollar leading to rising import prices.

Investment

The World Bank attempts to measure how 'business friendly' a country is and in its recent 2015 report Brazil ranked 116 out of 189 countries surveyed. Masses of regulations and complicated tax laws mean that companies waste hundreds of hours filling out forms and dealing with bureaucratic processes. In addition, strong employment legislation makes it difficult for bosses to dismiss unproductive workers. Companies looking for a base in South America seem to prefer to invest in Chile which is more business-friendly.

There has also been a lack of infrastructure spending down the decades. Brazil ranks a lowly 107th in the world for infrastructure quality; the poor quality of roads, railways and telecoms all acting as deterrents to entrepreneurs.

Exports

In the past, exports have normally made a major contribution to Brazil's economic success. In 2015, the total value of Brazilian exports was $230.6bn which made up 13.1% of the country's total GDP. China and the USA are Brazil's largest trading partners, buying two-thirds of all Brazilian exports. However, even though the real has depreciated, slow growth in China and the USA has meant that exports are underperforming.
Government spending and fiscal policy

Brazil’s public sector debt is the highest of the emerging economies (at 66% of GDP) and it spent 311.4 billion reals (6% of GDP) on debt payments alone in 2014. It seems that its fiscal policy options are limited.

Brazil’s finance minister, Joaquim Levy, has tried to balance the budget as much as possible. For example, he has increased taxes on petrol and he is also lowering the generous state pension but in doing so he runs the risk of undoing all of the good work that had been done in tackling poverty.

Monetary policy

The Governor of the Central Bank of Brazil, Alexandre Tombini, has his own choices to make too. Firstly, he could choose to keep interest rates high despite the weak economy. This would support the real and help to reduce inflation but both households and firms will be hurt as a result. Alternatively Mr Tombini could cut interest rates – despite rising inflation – to encourage growth.

(a) Using an AD/AS diagram, explain why inflation in Brazil is so high. [6]

(b) Using the data in lines 26 to 28, calculate:

(i) Brazil’s GDP in 2015 [1]

(ii) the value of Brazilian exports bought by China and the USA. [1]

(c) To what extent can the use of supply-side policies increase the level of investment in Brazil? [10]

(d) Discuss whether the policies of increased taxes on petrol and lowering state pensions are likely to be beneficial for the Brazilian economy. [10]

(e) Discuss whether Alexandre Tombini should “keep interest rates high”. (line 40) [12]

END OF PAPER