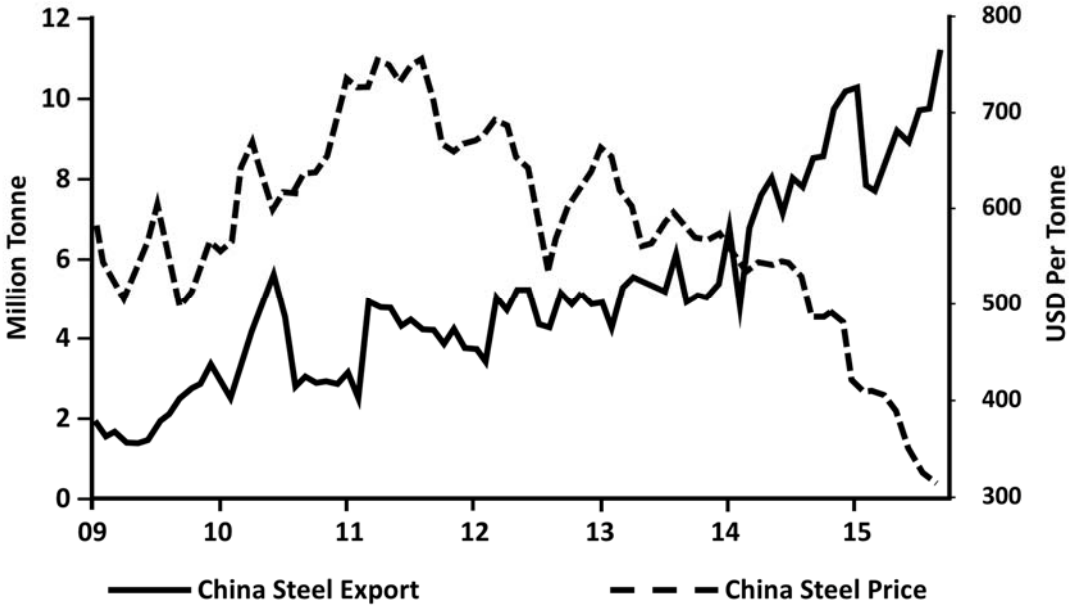
Answer **all** questions.

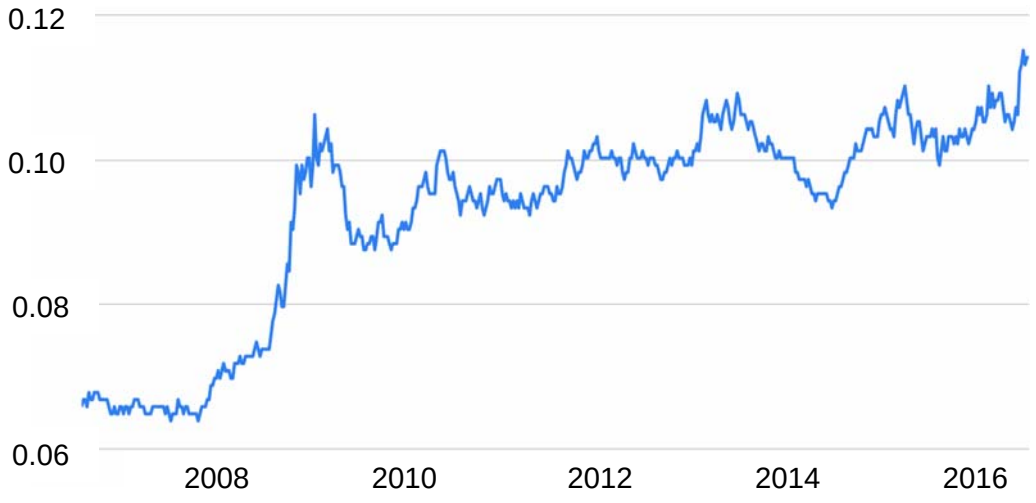
Question 1 UK and Global Steel Industry – What's going wrong?

Figure 1: China Steel Exports and Steel Price



Source: Bloomberg, ANZ Research

Figure 2: Chinese Yuan to British Pound Exchange Rate 10 years History



Source: gbp.fx-exchange.com

Extract 1: The beginning for the end for British steelmaking

Eight years on from the financial crisis, the state of the industry is anything but rosy. Losses at Tata's UK operations – the largest steel producer in the country since 2007 – doubled last year to a staggering £768m. In recent years, the company has continually slashed jobs and scaled back operations, reducing its European workforce from 25,000 to 17,000. Tata says that "trading conditions in the UK and Europe have rapidly deteriorated" recently, due to the

global oversupply of steel, a “significant” increase exports into Europe, high manufacturing costs and continued weakness in UK demand for steel.

Source: Telegraph, 2015

Extract 2: Demand for and Supply of Steel

Demand for steel worldwide has not returned to the levels seen before the financial crisis. As many countries, and particularly China, are seeing weak growth, global demand will remain sluggish - falling 1.7% in 2015 and up by just 0.7% this year. Material substitution has been one of the toughest challenges facing the steel industry. Plastic, aluminium, wood and bamboo have been replacing steel in various application areas.

Global steel prices have fallen sharply. Meanwhile, China's own economic slowdown has led its producers to look for export markets as their home demand stalls. China is producing so much steel that some Chinese companies are selling their steel abroad at a loss, because there isn’t enough demand in China. UK imports of Chinese steel have increased dramatically. In 2014 the UK imported 687,000 tonnes of steel from China, up from 303,000 tonnes in 2013. UK companies cannot compete with these prices and jobs are being lost as a result.

The world faces a huge oversupply of steel – any increase in China’s steel exports will be undesirable.

Source: BBC News

Extract 3: Importance of Steel in the UK

Steel itself is vital for just about everything we use. Whether it is buildings, clothes, chemical, cars, lamps or drink cans – all depend on it at some point. The aerospace industry in the UK is heavily dependent on steel for survival, and this is one of the key growth contributors to the UK economy. For the last one-and-a-half decade, the automobile sector, which holds a 23-25% market share in global steel consumption, has been toying with the idea of increasing aluminium use to lighten weights, boost fuel efficiency and cut down emissions. However, these alternatives are still not the most preferred material for most automotive firms like Volkswagen, Toyota, etc. The steel industry in the UK has seen significant automation and computerisation and is not as labour-intensive as it used to be. This has caused significant improvement in the methods of production which eased the woes that many producers used to face.

Source: Channel News Asia, 18 October 2013

Extract 4: The total cost of EU’s Environmental Regulations in Steel Production

Nearly 9,500 people died early in a single year as a result of long-term exposure to air pollution in London, according to a new research. Winds from the south and east have brought the dust to the UK, along with industrial pollution from Europe. And because those weather conditions are stable and not changing, those particles are not being dispersed.

However, the environment regulations in the UK may do more harm than good. The steel industry has also complained that EU environmental regulation is making it uncompetitive. With the current impact of competitively priced imports, driven largely by Chinese exports

which have exploded to around 110 million tonnes this year, environmental legislation facing EU steelmakers is seen by many as a further burden for the industry.

In response, the member states called for greater consideration of exemptions from the EU's cap-and-trade carbon market (a form of incentive-based policy that focuses on capping the total amount of externality and allocating permits to polluters, which are then free to trade among themselves) for threatened energy-guzzling industries such as steel.

Source: Wall Street Journal, 2015

Extract 5: EU states call for action against China steel dumping

Europe's steel industry has lost a fifth of its workforce since 2009 and demand remains 25 per cent below levels before the 2007-2008 financial crisis. European steel industry executives have accused China of using its massive overcapacity at steel mills to dump products on the European market, selling them beneath the cost of production.

The debate hinges on the terms of China's agreement of accession to the World Trade Organisation in 2001. Beijing interprets this accord to mean that it will automatically become a market economy at the end of 2016. Market Economy Status is the term for a country where the market sets the price for goods domestically. This is obviously not the case in China where the state determines prices and has kept them artificially low for goods such as steel. It has subsidised the overproduction of steel which it is dumping on European markets, driving producers out of business. This has piled pressure onto both the US and EU to declare whether they agree with China's interpretations of the rules. The decision is significant as it is very difficult to impose retaliatory tariffs against a market economy, whose price structures are supposed to be set fairly.

The strongest resistance against China's market economy status in Europe comes from traditional manufacturing industries, such as steel, garments and bicycles. China produced about half the world's 1.67bn tonnes of steel output last year and is on track to export a record of more than 100m tonnes this year.

Source: Financial Times, 2015

Suggested Answers

(a)	**(i)**	Describe the trend in the British pounds against the Chinese yuan from 2008 to 2016. General trend: British pound has depreciated/weakened against the Chinese yuan. [1] Refinement: The largest depreciation occurred from 2008 to 2009. [1]	[2]
	(ii)	Explain one possible reason for the trend above. Global economic crisis in 2008 → fall in FDIs into UK due to poor economic outlook → fall in DD for GBP → depreciation of GBP [1] – identify any possible DD or SS factor from own knowledge [1] – elaboration	[2]
(b)	**(i)**	Using relevant information from the case study, identify one demand and one supply factor and explain how each of them had impacted the global steel market. Fall in demand [1]: - From Extract 2, "global demand remaining sluggish (especially China)" → fall in DD for steel as a FOP for many goods. Huge increase in supply [1]: - Also from Extract 2, "China is producing so much steel that some Chinese companies are selling their steel abroad at a loss" → "The world faces a huge oversupply of steel" → increase in SS of steel globally - From Figure 1, China's export of steel increased by more than 5 times from 2009 to 2015 → increase in global SS Diagram [1] + brief price adjustment [2] Link to impact on Pe and Qe – 1	[6]
	(ii)	Analyse how the changes in the price of steel will affect consumers' expenditure on automotive products. - Price of steel fell - From Extract 3, steel is an important FOP in many industries such as aerospace and automotive. → COP of automotive output falls → SS increases [1] - PED of automotive < 1 as there is a lack of substitutes to automotive as a means of transportation → high degree of necessity [1]	[4]

		- Diagram/explanation on how SS increase with a inelastic demand affects consumer expenditure P x Q + explanation [1] - Conclude that TE falls [1] Max 2m if student did not use PED concept to explain impact on consumers' expenditure.	
(c)	**(i)**	Explain how negative externalities in steel production can create divergence between private and social costs. - Negative externalities are the external costs borne by 3rd parties not involved in the economic transaction. - In steel production, the MEC incurred by 3rd parties (e.g. households who live near steel factories, or workers who work near the steel factories) include the "long term exposure to air pollution" as mentioned in Extract 4. [1] - Due to the presence of MEC, there is a divergence between private and social costs in steel production as the producers do not take into account the MEC incurred by 3rd parties, but society will take into account the MEC where MSC = MPC + MEC. [1]	[2]
	(ii)	With reference to Extract 4, comment on how the "cap and trade market" policy may solve the issue brought about by steel production. The "cap and trade market" is a form of tradable permit which involves creating a type of property right embodied in a permit or certificate that firms and individuals can trade freely so that they may continue to carry out their production/consumption which generates negative externalities. The government first decides how much of a pollution may be emitted yearly based on the **socially optimal level of steel production**, then divide this quantity up into a number of tradable emission entitlements and allocates or auctions them to individual firms. This gives each firm a quota of greenhouse gases that it can emit in a year. Once the quota is allocated, the market forces take over. Those polluters that can reduce their emissions relatively cheaply may find it profitable to do so as they can sell their emissions permits to other firms. Those that find it expensive to cut emissions may find it attractive to buy additional permits from other firms. <u>Comments</u> However, it may be difficult for the government to estimate the amount of permits to issue in the first place. The problem is compounded because the government has to estimate the socially optimum level of pollution accurately in order to issue the right amount of permits. If polluting firms find it cheaper to buy such permits from other under-polluting firms than to reduce pollution in their production process, they will continue to be as polluting as before instead of finding less polluting means of steel production. This means that tradable permits can thus	[6]

		dampen the incentive to reduce overall pollution levels even at socially optimal output level. There will be a lack of incentive to reduce pollution levels below the allocated 'quota' for each firm as they may see it as a form of 'sunk cost'[1] or a waste not to 'use up' the quota. Hence, they may continue to pollute even if they actually have means to lower pollution levels. **Even though there may be limitation to the "cap and trade" policy, it is still considered an effective measure to curb the pollution problems in the UK.** Explain how the policy works [3] Limitations [2] Conclusion [1]	
(d)		Do you think governments should adopt protectionist measures in circumstances such as those described in Extract 5? Justify your answer. **<u>Introduction</u>** Define protectionism, identify and briefly explain the type of protectionist measure, give a brief preview of essay. *Protectionism is a policy of sheltering domestic industries from foreign competition in domestic markets by setting up trade barriers on imports.* *The protectionist measure in Extract 5 is a tariff that EU proposed to impose against China, which may soon gain the "market economy status" which will result in higher COP for the EU. There are arguments for and against EU's decision to impose the retaliatory tariff against China.* **<u>Body</u>** Thesis: Governments should adopt protectionist measures: 1. To prevent dumping. From Extract 2, "China is producing so much steel that some Chinese companies are selling their steel abroad at a loss" → this can be seen as an evidence that China is indeed "dumping" steel into the EU market to get rid of the oversupply in their domestic market. A tariff imposed will help to raise prices of EU imports from China, protecting EU firms and jobs. → EU's BOP may improve, and unemployment may be reduced. 2. Any other reasons for protectionism (as question did not specify that candidate <u>must</u> use EU context, but only specified "governments" in general). Anti-Thesis: Governments should not adopt protectionist measures: 1. If China gains the "market economy status" as mentioned in Extract 5, traditional manufacturing may suffer to a large extent due to higher prices determined in a "market economy" as the Chinese government is currently assumed to be providing support to Chinese firms to sell their exports (such as steel) at a cheaper rate in the international market. With a dual effect of an increased	[8]

[1] Sunk costs are past expenditures that are unrecoverable.

prices due to the "market economy status" and a tariff imposed, traditional manufacturing industries such as "garments and bicycles" in the EU are going to experience significant increase in COP. → worsens EU firms' export competitiveness → X-M falls → AD falls → negative growth, unemployment.

2. With protectionist measures in place, UK firms step up on steel production and pollution problem might worsen → non-material SOL worsens

3. Worsening trading relations → China might retaliate, raise trade barriers against EU exports.

Synthesis:
Make a stand. Justify with reasons.

Level	Knowledge, Application, Understanding and Analysis
L3 (5 – 6)	For a thorough and well-balanced answer that shows an understanding of the fundamental case for and against trade protectionism. Makes good reference to case material.
L2 (3 – 4)	For a balanced but undeveloped answer that has some analysis on the reasons for and against trade protectionism.
L1 (1 – 2)	For an answer that is largely descriptive and lacks a clear structure. Simple listing of reasons for and against protection. Or listing of other policies. No real world examples to substantiate points.
E2 (2)	Judgement is based on economic analysis and adequately substantiated.
E1 (1)	For an unexplained assessment, or one that is not supported by economic analysis.

[Total: 30]