

H1 Prelims Paper 1 2015 Suggested Answer and Marking Scheme

Question 1

(a)	With reference to Extracts 1 & 2, explain one demand and one supply factor which could accounts for a slight fall in the price of LNG.	[6]
	<p><u>Possible demand factors (select one) [2]</u></p> <p>1. Fall in income due to 'decelerating economic growth' (Extract 2): fall in demand for consumer goods and energy consumption. LNG as a derived demand, hence fall in demand for LNG. (<i>Slow rise in income can also be considered</i>)</p> <p>2. Price of related goods – non-gas substitutes (eg. coal or oil), gas substitutes (eg. 'unconventional' gas such as shale gas, coal bed methane gas) Fall in price of gas substitutes (due to increase in supply - 'unconventional gas revolution has roughly tripled the resource base' Extract 2) results in fall in demand for LNG.</p> <p><u>Analysis for PES for LNG [1]</u></p> <p>'Capacity in LNG shipping is rising' indicates supply for LNG is becoming more price elastic. Fall in price of LNG leads to a more than proportionate fall in quantity supplied.</p> <p><u>Possible supply factors (select one) [2]</u></p> <p>1. Advancement in technology: 'high performance technologies to manage production in extremely cold temperatures' (Extract 1) - cost of production to access previously inaccessible natural gas fields fall, increasing supply of natural gas</p> <p>2. Increase in number of projects: Australia 'existing projects under construction in Australia come to fruition' (Extract 1), Russia 'the Yamal project'</p> <p>3. 'Capacity in LNG shipping is rising' leading to "deep softening" of the cost of shipping LNG', therefore increase in supply of natural gas</p> <p><u>Analysis for PED for LNG [1]</u></p> <p>PED >1 Evidence: Countries 'tend to have more available competitive options, including coal and crude oil' – availability of substitutes - indicates demand for LNG is becoming more price elastic. Fall in price of LNG leads to a more than proportionate fall in quantity demanded.</p> <p>OR</p> <p>PED <1 Evidence: countries with 'heavily industrialized with limited domestic energy options' (Extract 2). Fall in price of LNG leads to a less than proportionate rise in quantity demanded.</p> <p>Alternatively, students may compare the extent of the fall in both the demand and supply factor to explain why price falls slightly.</p>	
(b)	(i) Using the data in Table 1 and Extract 4, explain how you would deduce the PED of LNG imports to Japan between 2010 and 2012.	[3]
	<ul style="list-style-type: none"> Table 1 shows that price of LNG increases (by about 60%) between 2010 and 2012. [1] Extract 4 indicates that import expenditure on LNG has increased between 2010 and 2012 (almost doubled from ¥3.5 trillion to ¥6 trillion). [1] Therefore, the above observations imply that PED of LNG imports for Japan is less than one 	

	or demand for LNG imports to Japan is price inelastic. [1]	
(ii)	Explain whether the change in the Japanese yen between 2011 and 2013 in Figure 1 can reduce Japan's worsening trade account (Extract 4).	[4]
	<p>No [2]:</p> <ul style="list-style-type: none"> Figure 1 shows a depreciation of the yen between 2011 and 2013. This increases the price of LNG imports in Japanese yen. Given PED of LNG imports is <1, the increase in price of LNG imports will result in less than proportionate fall in quantity demanded – increase in import expenditure on LNG. Assuming no change in export revenue, Japan's trade deficit will worsen. <p>Yes [2]:</p> <ul style="list-style-type: none"> Price of exports will become more price competitive in foreign currency, assume $PED_x > 1$, export revenue is likely to increase. Therefore, there is the need to consider the net effect of the increase in import expenditure relative to the increase in export revenue. 	
(c)	Compare the change in price of crude oil and LNG in Table 1 from 2010 – 2014.	[2]
	<p>Similarity [1]:</p> <ul style="list-style-type: none"> Both crude oil and LNG prices increased from 2010 to 2012 before falling thereafter till 2014. <p>Difference [1]:</p> <ul style="list-style-type: none"> LNG price increases by a larger extent/ faster from 2010 – 2012 compared to crude oil price LNG decreases by a smaller extent / at a slower rate compared to price of crude oil after 2012. 	
(d)	Explain and comment on the view that 'the US decision has a potentially huge favourable impact on Japan's economy' (Extract 4).	[5]
	<p><u>Explanation [3]</u></p> <ul style="list-style-type: none"> Japan has 'limited domestic energy options', since they are the 'backbone of the global LNG market' (Extract 2) With accessibility to an additional supply source of LNG - from the US, it will facilitate greater availability of energy and lower LNG prices. This adds to Japan's resources which could in turn increase the productive capacity of the economy, resulting in an increase in the LRAS and hence <u>potential growth</u>. With lower LNG prices (either by buying from the US or by having greater bargaining power to negotiate a lower price with other suppliers), the cost of energy production will fall, making it more attractive for firms to invest in Japan. This increases investments and hence AD in the economy, boosting national income via the multiplier effect. This results in <u>actual growth</u> and a <u>fall in cyclical unemployment</u>. <p><u>Comment [2]</u> (<i>One well-elaborated anti-thesis will do</i>)</p> <p><u>Anti-thesis 1: There are unfavourable effects on the economy</u></p> <ul style="list-style-type: none"> However, while it has favourable effects on the internal economy, Japan's huge demand for 	

		<p>LNG is unlikely to reduce her <u>existing trade deficit</u>. In fact, this could counter the increase in AD, limiting the extent of economic growth.</p> <p><u>Anti-thesis 2: There are other factors besides the US decision which contribute to the favourable impact on the economy</u></p> <ul style="list-style-type: none"> Given the direct relationship between the fall in crude oil prices and LNG price (Table 1 and Extract 3), it is likely that the US decision may not have as huge an impact compared to the fall in crude oil price, especially after the LNG contracts have expired. 	
(d)	(i)	Explain the negative externality that arises with the use of oil and coal for fuel.	[2]
		<ul style="list-style-type: none"> The use of oil and coal for fuel generates costs to third parties who are not part of the production process and these costs are not considered by the price mechanism The excessive emission of carbon, particulates, sulphur oxide and nitrogen oxide can harm the health of people in the surrounding areas. They incur medical expenses and may affect labour productivity with their absence at work. 	
	(ii)	Discuss the effectiveness of US and European government policies to respond to the negative externalities from the use of coal.	[8]
		<p>Introduction:</p> <ul style="list-style-type: none"> Efficient allocation of resources refers to the use of the price mechanism to allocate resources in a way which maximizes society's welfare – to produce goods most desired by consumers in the exact quantities using the most efficient production methods. Given the negative externalities created with the use of oil and coal for fuel as described in (ei), governments need to intervene to ensure the market failure problem is corrected. <p>Thesis: Government policies to counter extensive carbon emissions help achieve efficient allocation of resources</p> <p>US policies: A form of regulation: Stringent emission standards enforced by the North American Emission Control Area (ECA) was 'strict' and 'rigorous' in limiting emissions in the US coastal areas. (Extract 5)</p> <p>EU policies: Use of subsidies to promote the use of renewable resources - theoretically this should help encourage consumption of renewable resources (and hence reduce the negative externality from using coal and oil for fuel). Use diagram analysis for subsidies.</p> <p>Anti-thesis 1: Government policies do not help achieve efficient allocation of resources</p> <p>EU: The subsidies on renewable resources have been unsuccessful at encouraging consumption of renewable energy as the subsidy is limited/ insufficient such that the price of renewable energy is still higher than that of coal i.e. cleaner fuels are less price competitive compared to use of coal.</p> <p>Lack of other reliable renewable energy alternatives: Wind power only works 30% of the time, solar power generated only 15% of the time.</p> <p>Government failure: Current regulation for polluting the environment via the use of coal is not acting as a deterrent – penalty is far too low such that the use of coal becomes more attractive despite subsidies on gas.</p>	

	<p>Anti-thesis 2: Other policies (not directly addressing the market failure problem) are responsible for helping to correct market failure.</p> <p>US: It is the 'shale gas revolution' which helps to make gas cheaper, 'more affordable' hence 'lower(ing) cost and (providing) economic savings' – this encourages the consumption of LNG fuel and implicitly reduces the use of oil and coal for fuel.</p> <p>Synthesis/ Conclusion: The effectiveness of government intervention depends on the types of policies used as well as the degree of implementation by the respective governments:</p> <ul style="list-style-type: none"> US policies are more effective due to the ability of the government to implement the regulation strictly and to accurately set the appropriate emission standard which helps to internalize the externality. EU needs to re-examine their regulation to reduce pollution and set a higher penalty to ensure the policy deters the use of power from coal and induces the switch to renewable resources. They are also encouraged to increase the subsidies for renewable resources. <table border="1" data-bbox="260 815 1353 1279"> <tr> <td>L3</td><td>For an answer which provides a balanced discussion that explains and evaluates both US and European policies using economic analysis. A clear judgment is provided for both US and European policies with some attempt to justify the stand.</td><td>6 - 8</td></tr> <tr> <td>L2</td><td>For an answer which skews towards either analyzing how existing policies can help respond to the negative externalities or how policies are ineffective in address the problem. Answers could also analyse either US or European policies, but not both.</td><td>4 - 5</td></tr> <tr> <td>L1</td><td>For an answer which strays from the question and /or possesses major conceptual errors.</td><td>1 - 3</td></tr> </table>	L3	For an answer which provides a balanced discussion that explains and evaluates both US and European policies using economic analysis. A clear judgment is provided for both US and European policies with some attempt to justify the stand.	6 - 8	L2	For an answer which skews towards either analyzing how existing policies can help respond to the negative externalities or how policies are ineffective in address the problem. Answers could also analyse either US or European policies, but not both.	4 - 5	L1	For an answer which strays from the question and /or possesses major conceptual errors.	1 - 3	
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Question 2

(a) (i)	<p>Use the concept of opportunity cost to explain the theoretical relationship between interest rates and level of savings</p> <p>State the theoretical relationship: Direct/positive (1m)</p> <p>Explain relationship using O.C. concept:</p> <ul style="list-style-type: none"> O.C. is cost measured in terms of the next best alternative forgone. Interest rates affect choices made by households between saving and consumption. <ul style="list-style-type: none"> When interest rates fall, O.C. of consumption, measured in terms of interest returns forgone, falls – thus making saving less attractive (or consumption more attractive) (1m). Therefore, rational households spend more and save less (1m). (and vice versa for the case of rise in interest rates) 	[3]
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	<p>OR</p> <ul style="list-style-type: none"> ○ When interest rates fall, O.C. of saving, measured in terms of enjoyment of goods and services, rises. (1m) ○ Therefore, rational households spend more and save less (1m). (and vice versa for the case of rise in interest rates) 	
(a) (ii)	<p>Comment on whether the relationship is shown in Figure 1 from 2009.</p> <p>Compare the trends in savings rate and interest rate, and state if relationship is shown:</p> <ul style="list-style-type: none"> • Relationship is not shown. <ul style="list-style-type: none"> ○ Graph shows a clear divergence of saving and interest rate. Interest rate fell and remained very low at close to zero, while saving rate rose sharply and remained relatively high. (1m) • Financial crisis: households are pessimistic about the economic outlook and they will tend to save more (paradox of thrift). (1m) <p>[FYI: Test is on the psychological impact on S and C or so-called pessimism or loss of confidence to spend in bad times]</p>	[2]
(b)	<p>Using the data provided in Extract 1, explain whether the call by IMF for a reassessment of the UK austerity policy is justified.</p> <p>Justified (1m for evidence and 2m for explanation):</p> <ul style="list-style-type: none"> • (Extract 6 para 2) Austerity measures are believed to ‘<i>derail growth due to larger multiplier ($k > 2$) during recession and when interest rates are near zero</i>’ and have “<i>knock-on effects...more powerful than was previously thought</i>”. (1m) <p><i>Any 2 of the below for the 2m explanation</i></p> <ul style="list-style-type: none"> • Dampening effect of Austerity policy: Fall in G + Fall in C (due to rise in income tax reducing disposable income) + Fall in I (due to rise in corporate tax reducing after-tax profits) result in fall in AD and hence real national income. (1m) • $K > 2$ means that the fall in real NI is more than twice the fall in $G + C + I$. (i.e. large reverse multiplier effect) (1m) • Knock-on effects *: <ul style="list-style-type: none"> - Austerity policy result in ‘knock on effects’ of a <u>further</u> fall in C and I due to a fall in business confidence. This <u>reinforces</u> the dampening effect of austerity measures. (1m) <p>[FYI: *The knock on effects refer to the positive impact on PRIVATE sector consumption and Investment “sparked off” by public sector pump-priming measures initiated by the government to brighten up economic outlook and restore confidence in the economy. Unlike pump-priming, the knock-on effects in this context have a negative impact on private C + I because of fiscal austerity. In other words, fiscal austerity dampens or causes “loss of confidence” in private sector spending.]</p>	[4]

	<p>Not justified (1m): <i>Any of the below points (and other reasonable contextualised arguments)</i></p> <ul style="list-style-type: none">• (Extract 6, para 3) “Fiscal multipliers are weaker in open economies such as Britain” due to higher MPM. Thus, the extent of the fall in NI due to austerity will not be as significant (as explained above).• (Extract 6, para 2) “need for budget deficits to be reduced”, but “tax cuts and a slower pace of spending cuts” (Extract 6, para 4) will slow down the reduction in budget deficits, and possibly lead to an even larger debt, which the UK will have more problems clearing in the future.							
(c)	<p>Using AD/AS analysis, explain the statement in Extract 6, ‘austerity is still having a dampening effect on the economy, and is making it harder for the Finance Minister to hit his deficit reduction targets’.</p> <p>Use AD/AS to analyse ‘dampening effect on the economy’:</p> <ul style="list-style-type: none">• A reduction in government spending• Higher income taxes reduces disposable income and hence purchasing power to reduce consumption spending• Higher corporate taxes reduces after-tax profits to reduce investment spending• Thus, AD falls. (1m)• This causes national income to contract and leads to rise in cyclical unemployment. (1m) <p>Explain ‘harder... to hit... deficit reduction targets’</p> <ul style="list-style-type: none">• When income falls, lesser income taxes are collected. (1m)• higher unemployment benefits pay-outs due to rise in cyclical unemployment. (1m)• Thus, government budget deficit increases.	[4]						
(d)	<p>Based on Extract 7, explain how austerity measures have adversely impacted the standard of living in some countries.</p>	[3]						
	<p>Note: Any 1 of the below can be linked to non-material standard of living with relevant evidence</p> <ul style="list-style-type: none">○ Contractionary effects on the economy – fall in national income and/or rise in cyclical unemployment○ Specific workings of austerity measures – reduction in government spending and/or increase in income taxes <p>Suggested answer:</p> <table><tr><th>Evidence (1m)</th><th>Explanation linking from austerity and linking to non-material standard of living (2m)</th></tr><tr><td>“Mass of data reveals that more than 10,000 additional suicides and up to a million extra cases of depression have been recorded” Or “And in some of the worst-hit countries, both suicide and crime rates are up.”</td><td>Fall in consumer income or becoming unemployed causes stress over making ends meet, thereby leading to depression/suicide, or engagement in crime – all of which are disamenities that lower non-material standard of living (i.e. quality of life).</td></tr><tr><td>In the US, more than five million people have lost access to health care. In Greece, there's a 200% increase in HIV cases.</td><td>Cuts in healthcare spending by the government leads to deterioration of health and contraction of diseases, which are</td></tr></table>	Evidence (1m)	Explanation linking from austerity and linking to non-material standard of living (2m)	“Mass of data reveals that more than 10,000 additional suicides and up to a million extra cases of depression have been recorded” Or “And in some of the worst-hit countries, both suicide and crime rates are up.”	Fall in consumer income or becoming unemployed causes stress over making ends meet, thereby leading to depression/suicide, or engagement in crime – all of which are disamenities that lower non-material standard of living (i.e. quality of life).	In the US, more than five million people have lost access to health care. In Greece, there's a 200% increase in HIV cases.	Cuts in healthcare spending by the government leads to deterioration of health and contraction of diseases, which are	
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		<p>disamenities that lower non-material standard of living (i.e. quality of life).</p> <p>Note: Students may also explain loss of access to healthcare as reduced quantity and/or quality of service consumed, thereby linking it to lowering of material standard of living (which is quantity and quality of goods and services available for consumption).</p>							
(e)	Extract 9 mentions the impact of rising cost of living on Singapore. Comment on the view that Singapore's economic growth will suffer due to inflation caused by rising cost of living.		[6]						
(Thesis) Yes: Singapore's economic growth will suffer due to inflation									
<table><tr><th>Case evidence</th><th>Analysis</th></tr><tr><td>(Ext 9 last para) "wage pressures could build up...Singapore could lose some of its competitive edge to fast-developing neighbors in Southeast Asia, if costs continue to rise"</td><td><p>Step 1) Higher prices of goods and services result in workers demanding higher wages to sustain rising cost of living</p><p>Step 2) Contribute to rising cost of production, which reduces SRAS when firms cut back on production</p><p>Step 3) <u>Interpretation 1:</u> Consumers respond to the high prices of goods and services by reducing consumption of goods and services (movement along the AD).</p><p><u>OR</u> <u>Interpretation 2:</u> Higher price of exports reduces quantity demanded for exports. Assuming $PED_x > 1$, X falls. AD falls.</p><p>Step 4) Thus, real national income falls (i.e. actual growth falls)</p></td></tr><tr><td>(Ext 9 para 2) "recent push up in housing, schooling and transport costs could discourage expats from moving or staying in the city long-term"</td><td>Expats add to Singapore's quantity of labour, as well as bring about transfer of knowledge and expertise, thereby adding to Singapore's quality of labour. Thus, expats staying away would cause a slower increase in LRAS, thereby adversely affecting potential growth.</td></tr></table>		Case evidence	Analysis	(Ext 9 last para) "wage pressures could build up...Singapore could lose some of its competitive edge to fast-developing neighbors in Southeast Asia, if costs continue to rise"	<p>Step 1) Higher prices of goods and services result in workers demanding higher wages to sustain rising cost of living</p> <p>Step 2) Contribute to rising cost of production, which reduces SRAS when firms cut back on production</p> <p>Step 3) <u>Interpretation 1:</u> Consumers respond to the high prices of goods and services by reducing consumption of goods and services (movement along the AD).</p> <p><u>OR</u> <u>Interpretation 2:</u> Higher price of exports reduces quantity demanded for exports. Assuming $PED_x > 1$, X falls. AD falls.</p> <p>Step 4) Thus, real national income falls (i.e. actual growth falls)</p>	(Ext 9 para 2) "recent push up in housing, schooling and transport costs could discourage expats from moving or staying in the city long-term"	Expats add to Singapore's quantity of labour, as well as bring about transfer of knowledge and expertise, thereby adding to Singapore's quality of labour. Thus, expats staying away would cause a slower increase in LRAS, thereby adversely affecting potential growth.		
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(Ext 9 para 2) "recent push up in housing, schooling and transport costs could discourage expats from moving or staying in the city long-term"	Expats add to Singapore's quantity of labour, as well as bring about transfer of knowledge and expertise, thereby adding to Singapore's quality of labour. Thus, expats staying away would cause a slower increase in LRAS, thereby adversely affecting potential growth.								
(Anti-thesis) No: Singapore's economic growth may not suffer									
Possible arguments and analysis:									

	Case evidence	Analysis													
	(Ext 9 para 2) “low taxes, good air quality and less crime lure workers to Singapore from across the world”	Low taxes (both corporate and personal income tax) are likely to have an expansionary effect on the economy by encouraging consumption and investment spending, to boost real national income and hence actual growth.													
	(Ext 9 last para) “Despite the high expense of living in Singapore, some expats are willing to pay a premium for the quality of life offered by this island state”	Hence, there would not be an adverse impact on potential growth. Moreover, in the long-run, Singapore’s growing population and education/training can also add to both the quantity and quality of workers in the economy, resulting in potential growth.													
	-	<ul style="list-style-type: none">Continued pursuit of productivity growth can help lower cost of production.National Wage Council ensures that rise in wage will be in line with rise in productivity.Given appreciation of S\$ and high import content in our exports, a fall in import prices in S\$ terms will ensure export price competitiveness.X may not fall given the quality and branding of our exports.													
Justified Conclusion It is likely in the short run that the negative effect of inflation may persist, but in the long run, Singapore will be able to enjoy favourable actual and potential growth.															
Mark Scheme															
	<table><tr><th>Band</th><th>Band Descriptors</th><th>Marks</th></tr><tr><td>L3</td><td>Answer will provide in-depth and accurate analysis that considers both impact on actual and potential growth, using relevant data. Evaluative comments & judgment is evident–reaches a conclusion based on the analysis offered.</td><td>5-6</td></tr><tr><td>L2</td><td>Accurate analysis of impact on either actual growth or potential growth, using some data. OR Superficial analysis of both actual and potential growth, without much use of data.</td><td>3-4</td></tr><tr><td>L1</td><td>Superficial explanation with little or no reference to the data. OR Use of data only without any analysis.</td><td>1-2</td></tr></table>	Band	Band Descriptors	Marks	L3	Answer will provide in-depth and accurate analysis that considers both impact on actual and potential growth, using relevant data. Evaluative comments & judgment is evident–reaches a conclusion based on the analysis offered.	5-6	L2	Accurate analysis of impact on either actual growth or potential growth, using some data. OR Superficial analysis of both actual and potential growth, without much use of data.	3-4	L1	Superficial explanation with little or no reference to the data. OR Use of data only without any analysis.	1-2		
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(f)	Assess to what extent has living standards in UK been eroded by the austerity measures and rising cost of living.		[8]												
	Define material SOL: Quantity and quality of resources available for consumption. Define non-material SOL: Quality of life, in general.														

Suggested answer:	
Case evidence	Economic analysis linking trigger event(s) to SOL
<p>(Ext 8 para 1) "Rising childcare, food and energy costs, coupled with stagnating wages and cuts to benefits and tax credits, have widened the poverty gap."</p> <p>(Ext 8 para 2) "Everyone is hit by the higher cost of living, but those with low incomes could feel the squeeze more. The report said that inflation between 2008 and 2013 was 20%, while energy prices rose by 60% and food prices were up by 30%. This had a disproportionate impact on poorer households."</p>	<ul style="list-style-type: none"> • Inflation coupled with austerity measures meant that real disposable income falls. • Thus, material SOL worsens in general. • OR in general, austerity measures reduces real national income. Thus, assuming constant population growth, there will be falling real GDP per capita, a basic indicator of material SOL. • Inflation mainly due to rising prices of necessities, which have demand that is price inelastic. • Total expenditure on these necessities thus rises. • Since the low income group spends a larger proportion of their income on food (20% as opposed to the 10% for high income group, from Figure 3) especially, they face a disproportionately larger impact of the rising cost of living. • Thus, income inequality rises, lowering material standard of living in the UK.
<p>(Ext 8 para 1) "For the first time since the 1930s, benefits for pensioners are being cut in real terms by not being linked to inflation."</p> <p>(Ext 8 para 2) "pensioners had been hit hardest with 4.2% increases in their costs compared with the 2.4% rise as indicated by the CPI"</p>	<ul style="list-style-type: none"> • Possibly cuts to pension benefits, coupled with inflation, leads to fall in real value of pension. Thus, material SOL worsens. • Similar to the low income group, the pensioners suffer a disproportionately larger impact of rising cost of living.
<p>(Ext 8 last para) "The government has already taken action to help families with the cost of living, including: increasing the tax-free personal allowance to £10,000; freezing council tax for five years; and freezing fuel duty."</p>	<ul style="list-style-type: none"> • These measures increase purchasing power to mitigate the worsening of material SOL (explained above).
<p>(Ext 8 para 2) "mortgage interest payments dropped by 40% since January 2008, those with relatively high incomes benefited from it"</p>	<ul style="list-style-type: none"> • Real interest rate (on mortgages) = nominal interest rate – inflation rate. Hence, with inflation, real value of debt falls, thus freeing up money for homeowners on mortgage to spend on other goods and services. Thus, material SOL improves. • This benefits the high income group, because they spend a larger proportion of their income on MIPs (7% as opposed to the 3% for low income group, from Figure 3). The high income group are more likely to be the property owners.

	<ul style="list-style-type: none"> As such, income inequality rises, especially since the properties owned are likely to experience an increase in value amidst inflation.
No evidence for intangibles given for the UK	<ul style="list-style-type: none"> But if austerity measures in the UK are as aggressive as in the US and Greece, non-material SOL would have worsened (as explained in part (d)).

Justified Conclusion

- Average UK living standards have fallen "dramatically" since the recession, and both austerity and inflation will worsen material and likely, non-material SOL.
- However, the impact differs for different income groups. Thus, government mitigation measures should be more targeted at the low income and pensioners. However, given the UK government's budget deficit, there may be limited scope for mitigation.

Mark Scheme

Band	Band Descriptors	Marks
L3	Answers will provide sound analysis using UK data of both tangible and intangible indicators, considering extent of impact, together with a justified stand.	6-8
L2	Answers will provide some attempt to elaborate on tangible or intangible aspects of standard of living with some reference to UK data. (i.e. lacks scope) OR Answer covers both tangible and intangible indicators though analysis is either mainly theoretical (without much reference to UK data) or mainly evidence (without analysis). (i.e. lacks contextualization or depth)	4-5
L1	Superficial explanation or descriptive answers.	1-3

Question 3

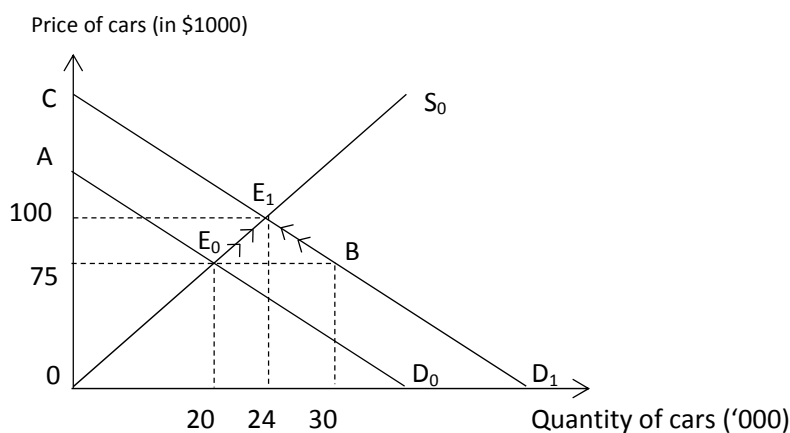
Self-interested consumers and producers are only concerned with their own benefits and costs.

(a) Explain how the pursuit of self-interest addresses the central problem of economics. [10]

Suggested Outline:

CPE	Pursuit of self-interest
- Unlimited wants, limited resources	- Consumers base decisions on PMB
- Need to make choices (below):	- Producers base decisions on PMC
What to produce?	For what there is higher demand/PMB for
How much to produce?	Where PMB=PMC
How to produce?	Producers aim to minimise cost of production -> link to firms' profits

<p>Introduction</p> <ul style="list-style-type: none"> • Define self-interest: According to Adam Smith, consumers and producers are self-interested and rational individuals, who serve to maximise their own interests (consumer surplus and producer surplus or profits respectively). • Define central problem of economics: Consumers have unlimited wants, which cannot be met by limited resources (land, labour, capital and entrepreneurship), thereby giving rise to scarcity. • Outline essay approach: This essay aims to explain how the pursuit of self-interest addresses the central problem of economics. 	<p>For who has highest willingness and ability to pay -> link to firms' profits</p>
<p>Body Paragraph 1: Elaborate on the central problem of economics</p> <ul style="list-style-type: none"> • Unlimited wants refer to the desire for ever higher levels of consumption of goods and services. <i>To exemplify.</i> • Scarcity results in the society having to make choices on what and how much to produce, how to produce and for whom to produce. • Assuming a free market, the marginalist principle behind consumers' and producers' demand and supply decisions, through their effect on price, is able to address the questions of "what and how much to produce?", and "for whom to produce?" • The question of "how to produce?" is answered based on the assumption that producers are profit-maximising. 	
<p>Body Paragraph 2: What and how much to produce? For whom to produce?</p> <ul style="list-style-type: none"> • Private marginal benefit is the benefit to the consumer of an additional unit of good consumed. OR Demand refers to the various quantities which consumers are willing and able to buy of a good at various prices, ceteris paribus. • Hence, PMB/ DD represents consumers' tastes and preferences for a good/service. • Private marginal cost is the cost to the producer of an additional unit of good produced. OR Supply refers to the various quantities which producers are willing and able to sell of a good at various prices, ceteris paribus. <p><u>What to produce?</u></p> <ul style="list-style-type: none"> • Goods and services with higher demand/PMB fetch higher prices, which thus signal to /incentivises producers to produce them, given the possibly higher profits (since profits = total revenue – total cost). • Thus, resources are channeled to producing goods and services in accordance to what society wants. <p><u>How much to produce?</u></p>	
<p><u>Use price mechanism</u></p> <ul style="list-style-type: none"> • Initially, consumers have to pay a price of \$75,000 for each car. At this unit price, the total quantity of cars demanded is 20,000. Car makers respond to this by channeling resources towards the production of 20,000 cars. 	



- When consumers have a stronger preference and/or a greater willingness and ability to purchase cars, demand for cars increase from D_0 to D_1 .
- **At the same price \$75,000, there is a **shortage** of 10,000 cars at point B. This shortage puts upward pressure on car prices.**
- Producers respond to this by channeling more resources towards the production of 4,000 more cars (E_0 to E_1), since producers now stand to receive a price of higher than \$75,000 for each car.
- Yet as the price increases, some consumers may realise that they are unwilling or unable to pay the higher price, hence total quantity of cars demanded falls by 6,000 (B to E_1).
- **The market thus reaches a new equilibrium where quantity demanded equals quantity supplied at a higher price \$100,000.**
- **Therefore, the pursuit of self-interest encourages the use of resources in line with consumers' preferences.**

Body Paragraph 3: How to produce?

- To maximize profits, the producers in deciding how to produce, will strive to produce using the most efficient methods, i.e. **least-cost production techniques** to achieve the maximum output by fully utilizing the limited resources efficiently.

Conclusion

In summary, pursuit of self-interest allows interaction between consumers and producers in a market to achieve an outcome where scarce resources are used efficiently (assuming no market failure).

For whom to produce?

Mark Scheme

L3 (7-10)	<p>High L3: <u>Excellent</u> analysis of how decisions based on PMB and PMC (OR DD/SS) answers the 3 questions of choice in the central problem of economics, with <u>accurate</u> graphical analysis.</p> <p>Low L3: <u>Clear and reasoned</u> analysis of how decisions based on PMB and PMC (OR DD/SS) answers the 3 questions of choice in the central problem of economics, with graphical analysis. <u>Minor errors</u>.</p>
L2 (5-6)	Underdeveloped explanation of how decisions based on PMB and PMC (OR DD/SS) answers the 3 questions of choice in the central problem of economics. (i.e. lacks depth)

	OR Lopsided answer with explanation of either pursuit of self-interest or central problem of economics only. (i.e. lacks breadth)
L1 (1-4)	Answer is mostly irrelevant and contains only a few valid points made incidentally. Major conception errors.

(b) Discuss the view that the use of subsidies is better than direct provision to correct the problem arising from positive consumption externalities, even as consumers and producers pursue self-interest. [15]

Suggested Outline:

<ul style="list-style-type: none"> Briefly elaborate on how positive externalities results in market failure (with reference to diagram) 	
<u>Thesis:</u> Subsidies is the better policy for market failure due to positive externalities <ul style="list-style-type: none"> Explain how subsidy works (with reference to diagram) 	<u>Anti-thesis:</u> Direct provision is the better policy for market failure due to positive externalities <ul style="list-style-type: none"> Explain how direct provision works
<u>Compare advantages of subsidies and direct provision</u> <ul style="list-style-type: none"> Subsidies is market-based whereas government takes over the role of the free market with direct provision 	
<u>Compare limitations of subsidies and direct provision</u> <ul style="list-style-type: none"> Lack of information on EMB at Qs for optimal subsidy rate, and lack of information on Qs for direct provision Both over-subsidy and over-provision strain government budget Subsidies may breed complacency and inefficiency in private firms, whereas direct provision if carried out by the government may breed inefficiency since government is not profit-maximising 	

Mark Scheme

L3 (8-11)	High L3: Excellent analysis of both policies and their limitations, with appropriate and even novel exemplification and graphical analysis. Low L3: Clear and reasoned analysis of both policies and their limitations, with appropriate exemplification and reference to graph. Minor errors.
L2 (5-7)	Underdeveloped explanation of both policies work and their limitations of the policies. (i.e. lacks depth) Weak exemplification. OR Lopsided answer with explanation of either both policies only or 1 policy and its limitations only. (i.e. lacks breadth) Weak exemplification.
L1 (1-4)	Answer is mostly irrelevant and contains only a few valid points made incidentally. Major conception errors.
E2 (3-4)	Justified conclusion with clear comparisons between the 2 policies.
E1 (1-2)	Unjustified conclusion.

Question 4

(a) Explain how international trade can lead to improved standards of living in a country.

[10]

Introduction

Define Standard of Living

Standard of living refers to the quality of life that is enjoyed by the people. For the purpose of this essay, material welfare refers to the quantity and quality of goods that are consumed.

1. Inter-Industry Trade can help increase the quantity of goods consumed.

According to the Theory of Comparative Advantage, between 2 countries, countries should produce, between 2 goods, the good that they have a comparatively lower opportunity cost in.

PRODUCTION BEFORE Specialisation and Total World Output

	Computer	Textile
USA	40	10
Vietnam	5	10
Total world output	45	20

Referring to Table 1 above:

- Due to different factor endowment and by devoting half of their resources among the production of computer and textile, USA is able to produce 40 units of computers and 10 units of textile while Vietnam is able to produce 5 units of computers and 10 units of textile.

Opportunity Cost Ratios: Area of Comparative Advantage

Table 2: **Opportunity Cost Ratios**

	1 Unit of Computer	1 Unit of Textile
USA	$10/40 \text{ 1C} = 0.25\text{T}$	$40/10 \text{ 1T} = 4\text{C}$
Vietnam	$10/5 \text{ 1C} = 2\text{T}$	$5/10 \text{ 1T} = 0.5\text{C}$

Referring to Table 2 above:

- For USA, she can produce 4 units of computers for 1 unit of textile. This means that to produce each unit of computer, she has to give up 0.25 unit of textile. Thus the opportunity cost of 1 unit of computer in USA is 0.25 unit of textile; and the opportunity cost of 1 unit of textile in USA is 4 units of computers.
- By the same argument, the opportunity cost of producing 1 unit computer in Vietnam is 2 units of textile; and the opportunity cost of producing 1 unit of textile is 0.5 unit of computer.
- Thus, we see that USA has a comparative advantage in computer production since it needs to give up lesser textile than Vietnam for producing computers whereas Vietnam has a comparative advantage in textile production since it gives up lesser computers than USA for producing textile.

PRODUCTION AFTER Specialisation and Total World Output

	Computer	Textile
USA	80	0
Vietnam	0	20
Total world output	80	20

If TOT is 1C: 1T,

CONSUMPTION after Trading at 1C:1T

	Computer	Textile
USA	70	10

Vietnam	10	10
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- By specialisation and trading based on a suitable term of trade within their opportunity cost ratios, countries will gain as they are able to enjoy a bundle of goods beyond their production possibility curve.

Intra-Industry

With intra-industry trade (trade across similar industries), this will increase the variety of goods available to consumers. For instance, Europe exported 2.6 million motor vehicles in 2002, and imported 2.2 million of them. Through importing, the general European community gets to enjoy different varieties and models of cars.

Trade as Engine of Growth

- Through trade, it can help grow the economy as the increase in their exports in areas of their comparative advantage will in fact aid in increasing their AD and national income and employment.
- Free trade provides greater access to global markets for domestic producers, as the establishment of FTAs means producers in each country face a much larger market. This thus increases demand for their exports – thus increasing export revenue (X) and hence AD. With more real output, more factors of production are hired, leading to higher employment levels as producers hire more FOPs to address unexpected shortfall in goods. With increased income, more goods and services can be consumed.
- Insert AD/AS diagram

Level		Descriptors
L3	7-10	<ul style="list-style-type: none"> Inter-industry trade: CA theory explained analytically with most of the following key elements (table is optional): <ul style="list-style-type: none"> Different factor endowments lead to different opportunity costs for production Specialisation of production of the product with the lower opp cost will lead to increased world production Exchange via terms of trade which is within the respective opportunity costs will benefit everyone – consume outside PPC SOL was defined clearly Trade as an engine of growth or intra-industry trade leading to greater variety of goods for consumption with examples
L2	5-6	<ul style="list-style-type: none"> Inter-industry trade: CA theory explained descriptively SOL was defined clearly Trade as an engine of growth or intra-industry trade leading to greater variety of goods for consumption
L1	1-4	<ul style="list-style-type: none"> SOL undefined CA theory sketchily explained or not explained

(b) One cost of globalisation is structural unemployment. Discuss the extent to which it is of most concern for different governments. [15]

Define Globalisation: Globalisation refers to the increasing integration or inter-connectedness of national economies through trade of goods and services, foreign direct investment, capital flows, spread of technology and labour migration.

Thesis: Structural Unemployment occurs due to dynamic CA and Technology flows.

Due to the increasing movement of factor inputs like capital, skilled labour and even natural resources, comparative advantage is more dynamic than ever. Nations can gain and lose comparative advantages in a matter of months. As such whenever a nation loses its comparative advantage, the workers in the particular industry will lose their jobs. Structural unemployment is caused by a mismatch of skills, whereby there are jobs in the market but the workers do not have the skills to do those jobs. An example would be the widespread structural unemployment in the city of Detroit after they lost their comparative advantage in car manufacturing to Japanese firms.

Another reason for structural unemployment is the use of technology by developing nations to replace labour intensive industries. With globalization, countries do not have to develop their own technologies and can leverage on existing technology elsewhere in the world to speed up their development. For example, the Chinese modernized their Economy in mere decades while the developed nations took hundreds of years to modernize. This process is good but inevitably displaces a lot of workers and may lead to structural unemployment if they cannot adapt quickly enough.

Anti-thesis 1

There are other costs which may be higher in degree of damage than structural unemployment depending on the state and nature of the economy.

1. Contagion/externally induced cyclical unemployment
2. Brain Drain
3. Imported inflation
4. Any other logical cost

Anti-thesis 2

There are policies which can solve or prevent/mitigate the numbers of structurally unemployed.

1. Having a broad based education ensures that workers are adaptable and can pick up skills very quickly.
2. Subsidies for retraining programmes
3. Protectionism for sunset industries to delay the onset of massive structural unemployment
4. Any other logical policy

Possible Conclusion

There are many costs that arise from globalization and structural unemployment is unlikely to be the main cost. This is because policies to solve structural unemployment can be domestically controlled and are less dependent on external factors, even for small and open economies.

Level		Descriptors
L3	9-11	<ul style="list-style-type: none"> • Structural unemployment analytically explained with clear economic links to globalisation – especially dynamic CA leading to structural unemployment by 1) Being out competed by a country who discovered its CA 2) Off-shoring 3) Outsourcing • Other costs of unemployment well explained • Policies to mitigate structural unemployment caused by globalisation explained • Good attempts at exemplification <p>Note: It is not compulsory for policies to be present for the candidate to hit high L3. An approach of using consequences to gauge the severity of the costs in various contexts is also acceptable.</p>
L2	6-8	<ul style="list-style-type: none"> • Structural unemployment descriptively explained • Some attempt to link globalisation to structural unemployment • Either other costs or policies explained • Some attempt at exemplification
L1	1-5	<ul style="list-style-type: none"> • Structural unemployment not explained • No attempt to link globalisation with structural unemployment • Other costs/policies not mentioned at all • No attempt at exemplification • Sketchy/off track answer
E2	3-4	<ul style="list-style-type: none"> • Justified evaluation using various contexts/examples e.g. state of economy and nature of economy
E1	1-2	<ul style="list-style-type: none"> • Unjustified or generic evaluation