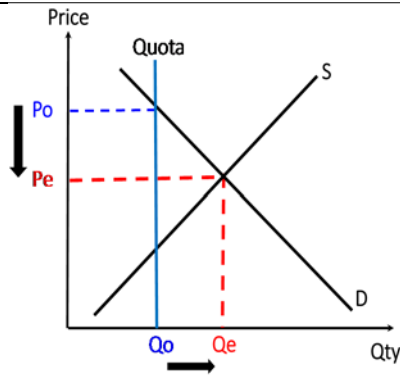


(a)	(i)	<p>Describe the trend in world sugar prices between June 2015 and June 2016.</p> <ul style="list-style-type: none"> • Overall increasing trend (1) • Sharpest increase between April 2016 to June 2016 (1) or any other anomaly 	[2]
	(ii)	<p>With the help of diagrams, explain how the surging demand for biofuel may have resulted in the trend described in (a)(i).</p> <ul style="list-style-type: none"> • Sugar cane can be used to produce either biofuel or sugar (Extract 1, para 2), biofuel and sugar are in competitive supply. (1) • Surging demand for biofuel → Demand for biofuel ↑ → Eqm price and qty of biofuel ↑ + Diagram (1) • Increased eqm qty of biofuel requires more sugar cane → Demand for sugar cane ↑ → Price of sugar cane ↑ (1) • Price of sugar cane ↑ → cost of producing sugar from sugar cane ↑ → Supply ↓ → Price of sugar ↑ (Diagram) → Leading to rising trend (1) 	[4]
(b)	(i)	<p>Describe the type of market structure operating in the UK carbonated drinks market.</p> <ul style="list-style-type: none"> • Oligopoly (1) • From Figure 2, five-firm concentration ratio is 84%. (1) 	[2]
	(ii)	<p>Explain how firms in the UK carbonated drinks market will compete.</p> <ul style="list-style-type: none"> • Interdependence → Firms will take into account actions of rival firms (1) • Explain how total revenue will fall due to price competition (1) <ul style="list-style-type: none"> ◦ Price ↓ → Rival firms will also ↓ price → Inelastic portion of the kinked demand curve → Qd ↑ by less than proportionate → TR ↓ • Thus, engage in non-price competition to increase demand and/or make demand more price inelastic. (1) • Non-price competition strategy (1) <ul style="list-style-type: none"> ◦ Advertising to create imaginary differences & develop brand loyalty ◦ R&D to create real differences, new products, higher quality products etc. 	[4]
(c)	<p>Assess the possible impacts of the removal of “production and export quotas for its sugar beet farmers” mentioned in Extract 4 on the EU and ACP countries.</p> <p><u>Impact on market for sugar beet</u></p> <ul style="list-style-type: none"> • With a quota of Q_o, eqm price and qty of sugar beet were P_o and Q_o 		[8]



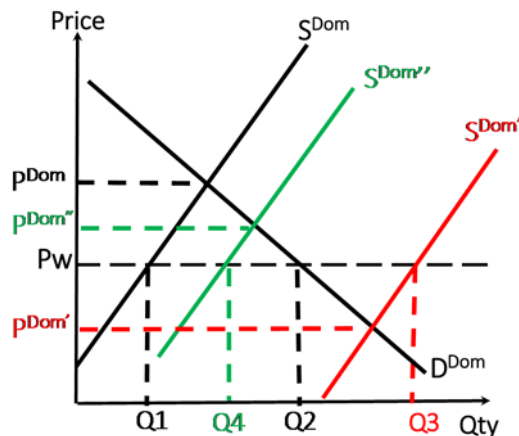
- With the removal of quotas, supply of sugar beet can be determined by market forces, eqm price of sugar beet ↓ from P_o to P_e and eqm qty ↑ from Q_o to Q_e .

Impact on market for sugar

- With a lower eqm price on sugar beet, COP for producing sugar from sugar beet ↓ → Supply of sugar in EU ↑

Macro impacts on EU

- With higher production of sugar, EU may turn from a net importer to exporter (Extract 4, para 2).

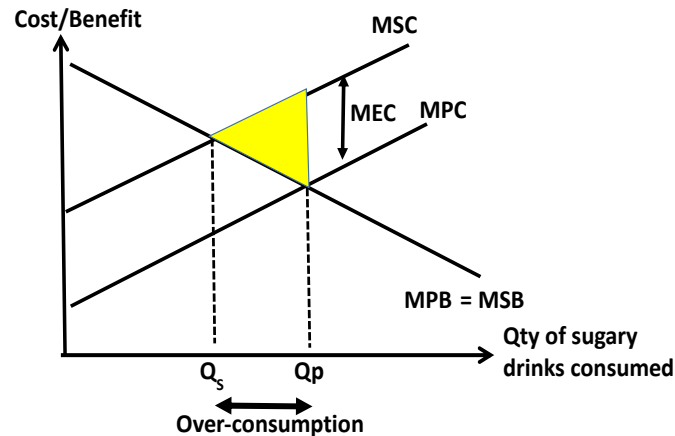


- Before the quota was lifted, domestic price of sugar P^{Dom} was above the world price P_w . EU was a net importer and imported $Q_2 - Q_1$ amount of sugar.
- With the removal of quota on sugar beet, supply of sugar by EU ↑ from S^{Dom} to $S^{Dom'}$, new domestic price $P^{Dom'}$ is lower than P_w . EU becomes a net exporter and exports $Q_3 - Q_2$ amount to the world market.
- However, if supply of sugar by EU only ↑ from S^{Dom} to $S^{Dom''}$, the new domestic price $P^{Dom''}$ is still higher than P_w . EU remains as a net importer but imports a smaller amount of $Q_2 - Q_4$.
- With a ↑ in export revenue / ↓ in import expenditure, $AD \uparrow \rightarrow RNY \uparrow$, unemployment ↓
- Sugar from sugar beet and sugar from sugar cane are perfect substitute. As supply of sugar from sugar beet ↑ and could be sold at a lower price, sugar from sugar cane loses its competitiveness in the EU market. Demand for sugar from sugar cane ↓
- About one third of EU's sugar is produced from imported sugar cane and imports from other sources (Extract 4, para 2). Although unemployment in EU falls, sugar cane importers and refiners in the EU may go out of business and be unemployed.

	<p><u>Macro impacts on ACP countries</u></p> <ul style="list-style-type: none"> Exports of sugar cane by ACP countries to EU ↓ as sugar cane is more expensive than sugar beet (Extract 4, para 4). In addition, as price of sugar beet ↓ due to higher production by EU, coupled with the lifting of export quota on sugar beet, sugar producers in other parts of the world may also substitute sugar cane with the cheaper sugar beet → ↑ competition from sugar beet by EU → Exports of sugar cane to other countries also ↓ Export revenue of ACP countries ↓ → AD ↓ → RNY ↓ → Sugar cane farmers become unemployed. <p><u>Evaluation</u></p> <ul style="list-style-type: none"> Actual impacts on EU and ACP countries depend on the magnitude of the ↓ in price of sugar beet after the quotas are removed. Impacts on EU are largely positive as RNY and employment ↑, although sugar cane exporters and refiners in EU are likely to be the losers of the policy. Impacts on the ACP countries are clearly negative as they are the high cost producers who are uncompetitive. Extent of impact depends on actions taken by the govt. <table border="1" data-bbox="277 943 1331 1525"> <thead> <tr> <th>Level</th><th>Knowledge, Application, Understanding & Analysis</th><th>Marks</th></tr> </thead> <tbody> <tr> <td rowspan="2">L2</td><td>A well-developed answer that analyses the micro impacts on the sugar beet and sugar markets and the macro impacts on both EU and ACP, supported with usage of analytical tools and evidence from extracts.</td><td>4-6</td></tr> <tr> <td>An answer that only analyses the macro impacts on EU and ACP.</td><td>Max 4</td></tr> <tr> <td>L1</td><td>An underdeveloped answer that focuses on the micro impacts without sufficient explanation on the macro impacts. Or One sided answer that analyses only the impacts on EU or ACP countries.</td><td>1-3</td></tr> <tr> <td>E</td><td>Application of relevant economic concepts to make judgment on the overall impacts to EU and ACP countries.</td><td>1-2</td></tr> </tbody> </table>	Level	Knowledge, Application, Understanding & Analysis	Marks	L2	A well-developed answer that analyses the micro impacts on the sugar beet and sugar markets and the macro impacts on both EU and ACP, supported with usage of analytical tools and evidence from extracts.	4-6	An answer that only analyses the macro impacts on EU and ACP.	Max 4	L1	An underdeveloped answer that focuses on the micro impacts without sufficient explanation on the macro impacts. Or One sided answer that analyses only the impacts on EU or ACP countries.	1-3	E	Application of relevant economic concepts to make judgment on the overall impacts to EU and ACP countries.	1-2	
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(d)	<p>Extract 2 mentioned about the increasing worry on the global rise in obesity-related ailments.</p> <p>Discuss if the tax on sugary drinks will necessarily lead to “a better health outcome”.</p> <ul style="list-style-type: none"> “A better health outcome” refers to a fall in the incidence of obesity-related ailments such as diabetes and cardiovascular disease <p><u>Explain that sugary drink is a demerit good.</u></p> <ul style="list-style-type: none"> Sugary drinks → deemed to be socially undesirable by the govt (Extract 2, para 1) → demerit good 	[10]														

Explain the negative externality in consumption of sugary drink and its relation to obesity-related ailments

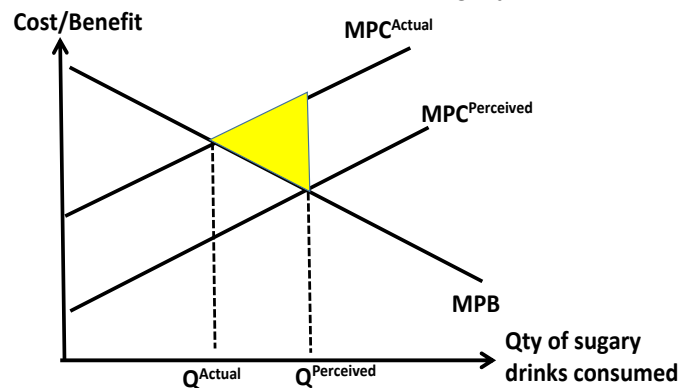
- Explain the negative externality in consumption of sugary drinks



- Explain the MPB, MPC and MEC in the context of sugary drink (Extract 2, para 1)
- Explain that given MEC, MSC is greater than MPC \rightarrow Q_p is greater than $Q_s \rightarrow$ Overconsumption and DWL \rightarrow Market has failed
- Overconsumption of sugary drinks \rightarrow \uparrow obesity-related ailments.

Explain the imperfect information in the consumption of sugary drink and its relation to obesity related ailments

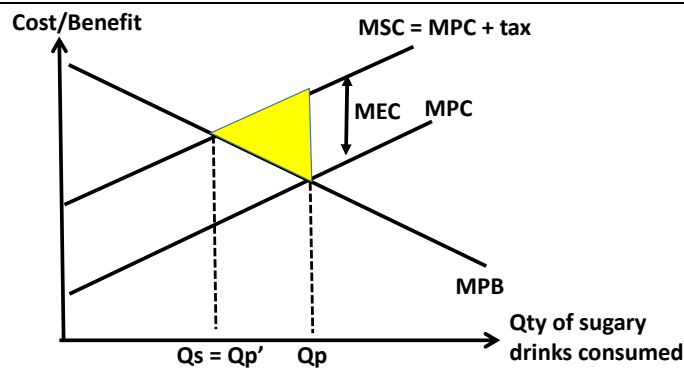
- Explain the MPC and MPB in the context of sugary drink



- Explain the imperfect info and the divergence between $MPC^{Perceived}$ and MPC^{Actual} .
- Explain that $MPC^{Perceived}$ is higher than MPC^{Actual} , Q^P is greater than $Q^A \rightarrow$ Overconsumption and DWL \rightarrow Market has failed
- Overconsumption of sugary drinks \rightarrow \uparrow obesity-related ailments.

Thesis: An indirect tax will lead to better health outcome

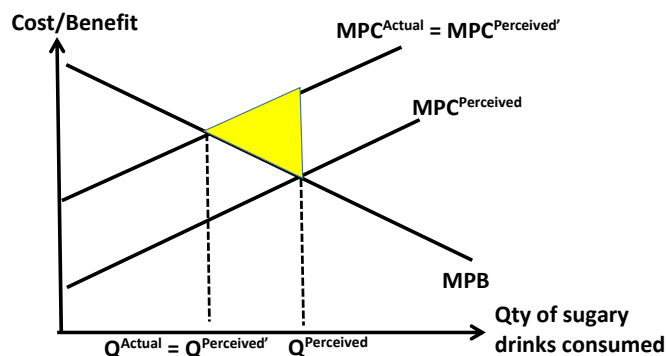
- An indirect tax can be imposed to correct the negative externality in consumption.



- When a tax equal to MEC is imposed, MPC will rise by the MEC amount and coincide with MSC → New Q_p , Q_p' coincides with Q_s → Consumption at Q_s , DWL is eliminated.
- Consumption of sugary drink now at the socially optimal level → Leads to better health outcome.
- Provide evidence from Ext 4 to illustrate how tax has resulted in higher prices and consumers subsequently bought fewer sugary drinks.

Anti-Thesis: An indirect tax will not lead to better health outcome

- Government may undertax due to
 - Government failure → govt doesn't know the extent of MEC
 - Demand for sugary drinks could be price inelastic → amount of tax required is high
- Due to undertax, overconsumption of sugary drink is not solved (Explain with diagram) → Will not lead to better health outcome.
- An indirect tax could not solve the root cause for imperfect information → Measures to provide information on the true cost of consuming sugary drinks, such as education, health campaign etc is needed to solve the imperfect information.



- With the measures, $MPC^{Perceived}$ coincides with MPC^{Actual} → New $Q^{Perceived}$ coincides with Q^{Actual} → Consumption at Q^{Actual} → DWL is eliminated.
- Consumption of sugary drink now at the optimal level → Leads to better health outcome.

Evaluation: Ceteris paribus assumptions may not hold, other reasons also affect health outcome

- Reasons other than consumption of sugary drink will also affect health outcome (Extract 2, para 3) → Other health policies e.g. healthy lifestyle campaigns etc may also affect health outcome → Hard to isolate the effect of tax.
- Other sugary drinks such as fruit juice and sweetened milk are not subjected to

the sugar tax (Extract 2, para 4) → consumers may substitute sugary soft drink with these other drinks → consumption of sugar remains unchanged → May not lead to better health outcome

?

Level	Knowledge, Application, Understanding & Analysis	Marks
L3	A well-developed, balanced answer on the effects of a tax to tackle both sources of market failure with explicit link to health outcome. Well supported with usage of analytical tools and evidence.	7-8
L2	An underdeveloped analysis on the effects of a tax to both sources of market failure, without sufficient references to case materials. Or A balanced analysis that only analyses the effects of a tax in solving negative externality in consumption or imperfect information Or One-sided answer that analyses only the effectiveness or limitation of a tax An answer that analyses the effects of a tax without explaining the source of market failure.	4-6 Max 4
L1	For a descriptive answer that makes little reference to economic theory, or makes reference to economic theory but with little application to the context. Answer is likely to be one-sided.	1-3
E	Application of relevant economic concepts to make judgment about the effectiveness of a tax and recognises that there are other factors affecting the health outcome.	1-2

[Total: 30 marks]