Suggested Answer for H1 Prelim EQ3

Malaysia will begin imposing its tourism tax on hotels from Aug 1 this year, starting from RM2.50 (S$0.80) per room each night, according to details published on the Royal Malaysian Customs Department's website. Concurrently, recovery from the Global Financial Crisis has seen a rise in business activities and increasing income levels.

(a) Explain how scarce resources are allocated in the free market. [10]

(b) Discuss how the above factors may affect the total consumer expenditure on different types of hotels in Malaysia. [15]

Question Dissection

Explain a process: Identify the start & end point

Resource allocation → End point

a) *Explain how* **scarce** resources are allocated in the **free market**. [10]

Define scarcity and establish the link between scarcity & resource allocation.

Define free market. Price mechanism → start point

Schematic Plan

Introduction

- Explain scarcity and how it necessitates choices regarding resource allocation.
- Explain the 3 categories of choices each society have to make.

↓

Body

- Illustrate how resources are allocated among competing needs via the price mechanism, using DD-SS models.
- Explain how the price mechanism determines the distribution of goods or services produced.

↓

Conclusion (summary)

Suggested Answer	*Comments*
The central problem of economics is scarcity, which refers to the situation where limited resources are insufficient to meet society's unlimited wants and needs. Due to scarcity, it is inevitable that choices have to be made and every choice involves sacrifice. In economics, the value of the next best alternative that had to be forgone to satisfy a particular want is termed opportunity cost. All societies face the same fundamental economic problem of scarcity and require a method of allocating scarce resources. There are three main categories of choice, arising from the problem of scarcity, to be made in any society: 'what and how much', 'how' and 'for whom' to produce. How these decisions are made depends on the economic system of the society. The free market refers to an economic system where all economic decisions are taken by individual households and firms, and with no government intervention.	*Define scarcity and explain how scarcity necessitates choices regarding resource allocation*
In a free market, resources are allocated via the price mechanism. Any change in demand or supply in one market affects the product and factor prices within that market and also other related markets. Producers and consumers respond to these price changes by channeling resources from declining markets to expanding ones. Thus, scarce resources are automatically allocated among competing uses.	*A summary followed by a detailed illustration of how the price mechanism allocates scarce resources among competing needs*
Suppose, in Figure 1(a), the demand in the market for hotel accommodation increases from D_1 to D_2, resulting in a shortage of $Q_1 - Q_5$ at the original price level P_1. The shortage creates an upward pressure on price, which signals to producers a need for resources to be employed into the hotel market. The higher price raises the profitability of providing hotel accommodation, thus providing the incentive for firms to produce more, thus increasing quantity supplied.	*Trigger – an □ in DD for hotel* *Explain the price mechanism adjustment process – shortage → upward pressure on price → □ Qs.*

Figure 1(a): Market for hotel accommodation

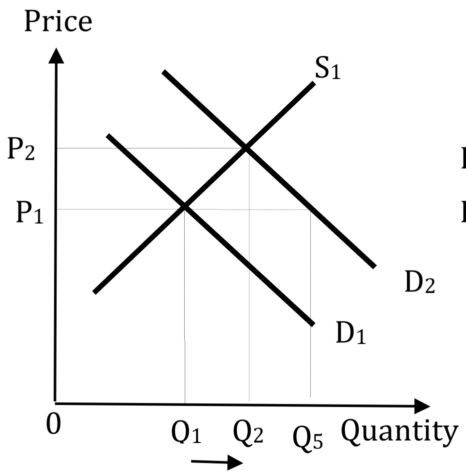
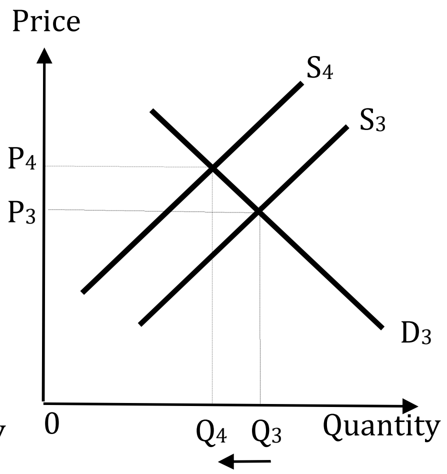


Figure 1(b): Declining market



To raise output, firms in the hotel market employ more resources, which increases the demand and prices of relevant factors of production. Rising factor prices however, results in higher production costs for firms in other markets. For instance, the higher demand for buildings is likely to increase the rental costs for office buildings, causing firms in other markets to experience a higher cost of production and therefore a fall in supply. In Figure 1 (b), the decrease in supply in the declining market is illustrated by a leftward shift of the supply curve from S_3 to S_4. The equilibrium price in the declining markets rises from P_3 to P_4 while the equilibrium quantity falls from Q_3 to Q_4.	*Explain how resources may be diverted away from declining markets* *Show that resources are diverted towards hotel market*
At the same time, the upward pressure on prices in the hotel market will cause consumers who are unwilling to pay more to drop out of the market, thus decreasing quantity demanded. Price will continue to increase until P_2 where the shortage is eliminated.	*Continuation of the price mechanism adjustment process – upward pressure on price → □ Qd*
Overall, the increase in demand for hotel accommodation causes equilibrium price to rise from P_1 to P_2 and the equilibrium quantity to rise from Q_1 to Q_2. The fall in the equilibrium quantity from Q_3 to Q_4 in the declining market and the rise in the equilibrium quantity from Q_1 to Q_2 in the hotel market shows how the price mechanism can adjust to <u>allocate</u> resources away from the declining market towards the production of hotel accommodation which is in higher demand. The rise in price allows hotel accommodation, which is in shortage, to be <u>rationed</u> to consumers who are able and willing to pay at the higher price P_2. In conclusion, in a free market, resources are allocated among competing needs via the price mechanism.	*Explain how the price mechanism determine the distribution of service produced*

<u>Mark Scheme</u>

	Knowledge, Application / Understanding and Analysis	
L3	Answers that explain scarcity and the rationale for resource allocation. Answers analyse thoroughly how the price mechanism influences the allocation of scarce resources to produce desired goods and services which are distributed to consumers who are able and willing to pay. Answers in this level are characterised by well-structured paragraphs AND a logical flow of arguments.	7 – 10
L2	Answers may have good knowledge of price mechanism, i.e. may illustrate the working of the price mechanism or the DD/SS framework using an example WITHOUT making reference to resource allocation. OR Answers may explain how the price mechanism influences the allocation of scarce resources to produce desired goods and services BUT lack rigour.	4 – 6
L1	Answers may have some knowledge of the price mechanism but with significant conceptual errors or are very descriptive.	1 – 3

Suggested Answer for H1 Prelim EQ3

Question Dissection

To investigate and present the different aspects

Tourism tax & economic recovery

TCE = PXQ
Analyse impact on P & Q, hence TCE

b) *Discuss how* the **above factors** may affect the total consumer expenditure on **different types** of hotels in Malaysia. [15]

context

How might hotels differ?
Identify the factors that may cause the impact on TCE to differ

Schematic Plan

Introduction

- Define total consumer expenditure (TCE).
- State approach or provide an overview of the answer.

Body (1) – Impact of tourism tax

- Explain how tourism tax may affect SS of hotels → PED analysis is relevant in determining outcome on TCE
- Illustrate & explain with examples
  - PED<1: m.t.p ↑ in P compared to ↓ in Q → TCE ↑
  - PED>1: m.t.p ↓ in Q compared to ↑ in P → TCE ↓

Body (2) – Impact of economic recovery

- Explain how recovery from GFC may affect DD for hotels
  - DD for most hotels likely to ↑ → P & Q ↑ → TCE ↑
  - DD for budget hotels may ↓ → P & Q ↓ → TCE ↓

Body (3) – Analyse & illustrate the combined effects on TCE of a type of hotel

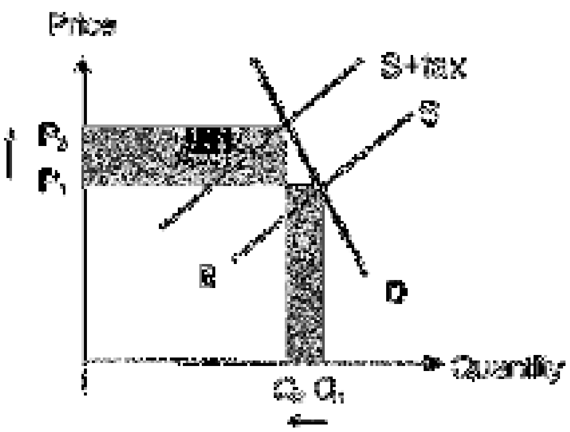
Evaluative Conclusion

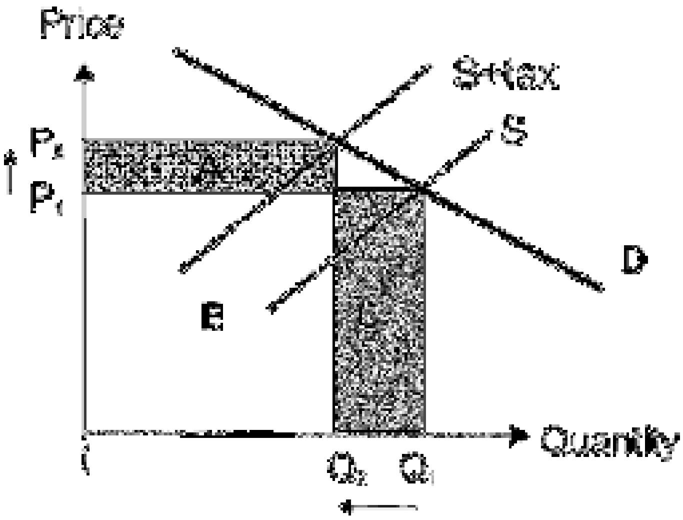
- Analyse the combined effects on TCE for different types of hotel.
- Any relevant evaluative comment, e.g. how the impact may differ in the long run.

Suggested Answer for H1 Prelim EQ3

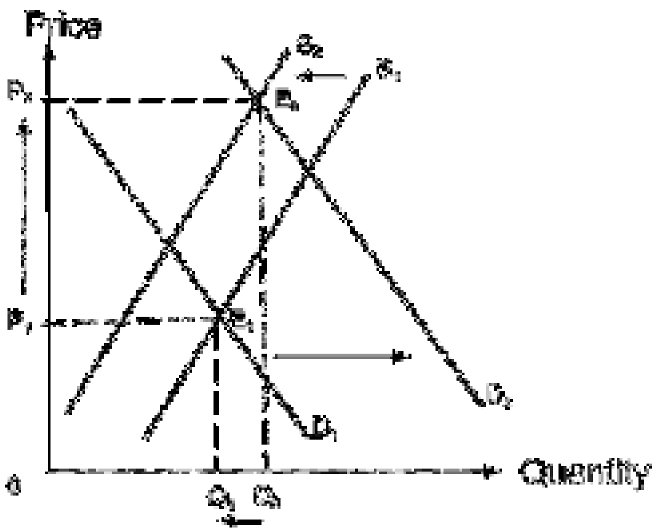
Suggested Answer	*Comments*
Total consumer expenditure is equal to price multiplied by quantity. The imposition of tourism tax and the recovery from the Global Financial Crisis will have differing impact on the expenditure on different types of hotels in Malaysia, depending on their price elasticity of demand (PED).	*Define total consumer expenditure (TCE).* *Provide an overview of the answer.*
The tourism tax on hotels is an indirect tax that raises producers' marginal cost because they will need to incur the additional costs of paying the tax. This thus causes the supply of hotel to fall, which may result in an increase in equilibrium price and a fall in equilibrium quantity. As total consumer expenditure is equal to price multiplied by quantity, the concept of price elasticity of demand is relevant in analysing the impact on total consumer expenditure.	*Explain the impact of tourism tax on supply of hotels.* *When supply changes, PED analysis is relevant in determining impact on TCE.*
Price elasticity of demand measures the responsiveness of quantity demanded of a good to a change in its price, ceteris paribus. Demand for a hotel may be price inelastic if it possesses unique feature(s) that make it less substitutable, e.g. theme park hotels like the Legoland Hotel, which is situated next to Legoland, has fully LEGO-themed bedrooms, and provide exclusive theme park packages that allow guests early entry to the theme park. Demand for a hotel may also be price inelastic if it is located in inaccessible areas where there are limited alternatives for accommodation, e.g. the hotels in Genting Highlands. Consumers may therefore be less sensitive to price changes as there are no or few close substitutes, and hence, an increase in its price is likely to result in a less than proportionate fall in quantity demanded. With reference to Figure 2, due to the imposition of tourism tax, a fall in supply from S to S+tax is likely to cause equilibrium price to increase more than proportionately from P_1 to P_2 relative to the fall in quantity from Q_1 to Q_2. Hence, the increase in consumer expenditure from paying higher prices (represented by area A) is likely to be greater than the fall in consumer expenditure from buying lesser quantity (represented by area C). Overall, total consumer expenditure for hotels with inelastic demand is likely to increase.	*Define PED.* *Apply determinants of PED to account for a hotel with inelastic demand.* *Analyse the impact of the tourism tax on the TCE on a hotel with inelastic demand, using a DD-SS model.*

Figure 2: Market for Legoland Hotel



On the other hand, if a hotel has many close substitutes, or has a low degree of necessity, e.g. a luxurious 5-star hotel, consumers may be more sensitive to price changes. Hence, demand for the hotel may be price elastic and an increase in its price is likely to result in a more than proportionate fall in quantity demanded. With reference to Figure 3, given a fall in supply from S_1 to S_2 due to the imposition of tourism tax, prices are likely to increase less than proportionately from P_1 to P_2 relative to the large fall in quantity from Q_1 to Q_2. Hence, the increase in consumer expenditure from paying at higher prices (represented by area A) is likely to be smaller than the fall in consumer expenditure from buying lesser units (represented by area C). Overall, total consumer expenditure for hotels with elastic demand is likely to decrease. **Figure 3: Market for a 5-star luxury hotel**  	*Apply determinants of PED to account for a hotel with elastic demand.* *Analyse the impact of the tourism tax on the TCE on a hotel with elastic demand, using a DD-SS model.*
With the rise of Airbnb, demand for hotels are becoming more price elastic due to the greater availability of substitutes. Therefore, the imposition of taxes is likely to cause the total consumer expenditure for most consumers to fall. At the same time, recovery from the Global Financial Crisis has seen a rise in business activities and increasing income levels. With a rise in business activities, there may be more business trips or conferences to Malaysia, which may result in an increase in demand for hotels. With increasing income levels, more consumers may be able to afford overseas holidays, increasing the demand for hotels too. As demand increases, price and quantity are likely to increase, resulting in an increase in total consumer expenditure. However, for the lower-end or budget hotels, the increasing income levels may cause the tourists to switch to stay in non-budget hotels, increasing the demand for non-budget hotels and lowering the demand for budget hotels. In this case, equilibrium price and quantity of budget hotels are likely to fall, resulting in a fall in consumer expenditure.	*Apply analysis to the real world context & evaluate the likely PED & outcome on TCE* *Analyse the impact of recovery from the GFC on the demand & application to TCE for most hotels.* *Application of understanding regarding changes in demand factors to provide an alternative view.*

<table>
<tr>
<td>Combining the effects of tourism tax and economy recovery, for a non-budget hotel with a price inelastic demand, total consumer expenditure is likely to increase, while for a budget hotel with a price elastic demand, total consumer expenditure is likely to fall. In the case of a non-budget hotel with a price elastic demand, or a budget hotel with a price inelastic demand, the impact on total consumer expenditure is indeterminate.</td>
<td>Synthesis/Evaluation – Analyse the combined effects of the 2 events on different types of hotels.</td>
</tr>
<tr>
<td>Figure 4 below illustrates the impact of the 2 factors on the market for a non-budget hotel with a price elastic demand. Suppose the economic recovery increases demand significantly from D_1 to D_2 and the tourism tax causes a relatively smaller fall in supply from S_1 to S_2, the equilibrium price is likely to increase significantly from P_1 to P_2 while the equilibrium quantity falls slightly from Q_1 to Q_2. Overall consumer expenditure increases from $0P_1E_1Q_1$ to $0P_2E_2Q_2$.

Figure 4: Market for non-budget hotel with price elastic demand

</td>
<td>Synthesis – Illustrate the impact on TCE for one of the uncertain outcomes.</td>
</tr>
<tr>
<td>In the long run, if the government uses the tax consumer expenditure collected to improve tourism infrastructure, more tourists may be attracted to visit Malaysia, resulting in an increase demand for hotels, and hence an increase in total consumer expenditure.</td>
<td>An evaluative comment on the long run impact of the tax.</td>
</tr>
</table>

Suggested Answer for H1 Prelim EQ3

	Knowledge, Application / Understanding and Analysis	
L3	Answers that use the relevant elasticity concept to analyse thoroughly the impact of the 2 factors on the total consumer expenditure on different types of hotels. Answers in this range are characterised by strong and well-structured paragraphs with relevant and complete diagrams.	9 – 11
L2	Insufficient rigour: Answers that inadequately analyse the impact of the 2 factors on the total consumer expenditure on different types of hotels. There is little application of the relevant elasticity concept and/or contain some minor errors in the analysis. Insufficient scope: Answers that analyse thoroughly the impact of 1 factor on the total consumer expenditure on different types of hotels OR Answers that analyse thoroughly the impact of the 2 factors on the total consumer expenditure on hotels in general.	5 – 8
L1	A very superficial description of how the 2 factors may impact the total consumer expenditure on different types of hotels.	1 – 4
	Evaluation/Synthesis	
E2	For an answer that synthesizes economic arguments to arrive at a well-reasoned conclusion. Insightful, and convincing evaluative comments are supported by economic or contextual analysis, demonstrating good awareness of real world context.	3-4
E1	For an answer that gives an unsupported evaluative statement(s).	1-2