

**Innova Junior College**  
**H2 Economics Prelim 2 Paper 1**  
**Case Study Question 1 Suggested Answer Scheme**

(a)	Compare the changes in world fish production (sum of aquaculture and capture fisheries) and consumption for food use between 1980 and 2010.	[2]
	<ul style="list-style-type: none"> <li>- Both world production and consumption of fish for food are increasing.</li> <li>- However, the level of consumption of fish for food use is <u>consistently</u> below that of production</li> </ul> <p><b>1m</b> for general trend (Similarity) and <b>1m</b> for distinct trend (difference).</p>	
(b)	With reference to the data, how far do you agree that there is sufficient fish production to meet consumption for food use in the next two decades as shown in Figure 1?	[4]
	<p>Figure 1 shows that <i>projected</i> production of fish continues to rise and is still higher than consumption of fish for food use.</p> <p><u>Thesis (There is sufficient fish production to meet consumption of fish for food use in the next 2 decades.)</u></p> <p>Sharp rise in fisheries production due to technological improvements. It increases the ability to fish in less accessible areas, which <u>increases the supply of fish</u>. This is evident in some countries in the EU where there are highly productive waters that have the potential to sustain a long-term and stable supply of fish, which is not yet utilized fully.</p> <p><u>Anti-thesis</u></p> <p>Rise in demand for fish for consumption as food which is faster than the rise in production of fish. This could be due to rising world GDP per capita → change in global diet to increase in consumption of fish. In addition, there is currently problem of overfishing → stocks continue to deplete (finite resource in a given period of time).</p> <p>2m each</p>	
(c)	Analyse the <i>possible</i> consequences on pattern of trade of major fish producer countries such as China as a result of overfishing.	[6]
	<ul style="list-style-type: none"> <li>■ Pattern of international trade is based on the theory of comparative advantage (CA). Based on the theory of CA, countries should specialize in the production of goods that they have comparative advantage in and export it for goods it does not have CA in producing.</li> <li>■ The amount of factor endowments a country has affects the comparative advantage a country has.</li> <li>■ Short run: Overfishing by countries in general could reflect increase in fish available in China for sales → increase in volume of fish export.</li> <li>■ Long run - Overfishing has resulted in depletion of the most traded fish from the sea/lake. This shortage (within a geographical location) drives</li> </ul>	

	up prices. This results in higher opportunity cost in the production of fish → lose comparative advantage in production of fish	
(d)	<p>“The governmental quota system, which is aimed at regulating the fishing industry to prevent over-fishing, only benefits large fishing businesses, while subsistence fishermen cannot afford to purchase permits with high enough quotas to make a living.” Discuss.</p> <ul style="list-style-type: none"> <li>■ Explain that overfishing is a source of market failure (negative externality in production) <i>briefly</i>.</li> <li>■ Explain how quota system aim to reducing overfishing</li> </ul> <p>Impose limits - need to purchase permits - fishermen would have to spend money to meet the standards set by the government, and thus increase their private costs (shift towards MSC). The quantity is reduced from <math>Q_A</math> to <math>Q_B</math>, and the welfare loss is therefore simultaneously lowered, as the market is moving closer to the socially optimum quantity.</p> <ul style="list-style-type: none"> <li>■ Analyse how it benefit large fishing businesses rather than subsistence fishing</li> </ul> <p>As required by Marine Living Resources Act, fishermen need to purchase permits in order to fish. Large fish businesses with their larger financial capability are able to purchase more permits and gain higher quotas → gain market share at the expense of subsistence fishermen → dd becomes more price-inelastic → higher profitability</p> <ul style="list-style-type: none"> <li>■ Valid evaluative comments – extent to which the above analysis is true</li> </ul> <p>However, it is not necessarily true because even with quotas imposed, it may not resolve the problem of overfishing. Large businesses with the ability to buy more quotas may still exploit resources → Long term exploitation results in shortages → reduces the amount of fish → hurts in profitability</p>	[8]

	<table border="1"> <tr> <th>Level</th><th>Descriptor</th><th>Marks</th></tr> <tr> <td>L3</td><td>For an answer that presents both sides of argument with in depth analysis.</td><td>7-8</td></tr> <tr> <td>L2</td><td>For an answer that presents some analysis, but explanation can be further developed <u>OR</u>  An answer that is one-sided.  Max of 4 if candidates did not explain overfishing as a market failure and how quotas aim to reduce overfishing.</td><td>4-6</td></tr> <tr> <td>L1</td><td>Some valid points without anchoring on economic analysis</td><td>1-3</td></tr> </table>	Level	Descriptor	Marks	L3	For an answer that presents both sides of argument with in depth analysis.	7-8	L2	For an answer that presents some analysis, but explanation can be further developed <u>OR</u>  An answer that is one-sided.  Max of 4 if candidates did not explain overfishing as a market failure and how quotas aim to reduce overfishing.	4-6	L1	Some valid points without anchoring on economic analysis	1-3							
Level	Descriptor	Marks																		
L3	For an answer that presents both sides of argument with in depth analysis.	7-8																		
L2	For an answer that presents some analysis, but explanation can be further developed <u>OR</u>  An answer that is one-sided.  Max of 4 if candidates did not explain overfishing as a market failure and how quotas aim to reduce overfishing.	4-6																		
L1	Some valid points without anchoring on economic analysis	1-3																		
(e)	As a consultant economist, what alternative options would you present to the world's governments as possible responses to the threat of shortages of fish, and what would you recommend? Justify your answer.	[10]																		
	<p>Accept valid suggestions, backed by economic analysis. Candidate should consider the underlying causes of shortages of fish (rising DD&gt; SS; overfishing where fish is a finite resource within a given period of time.)</p> <p>Possible options:</p> <ul style="list-style-type: none"> <li>i. tax-based fishery management system</li> <li>ii. Education (marine protection)</li> <li>ii. R&amp;D on aquaculture to increase production of fish for consumption</li> </ul> <p>Candidates should provide recommendation with reason.</p> <table border="1"> <tr> <th>Level</th><th>Descriptor</th><th>Marks</th></tr> <tr> <td>L2</td><td>For an answer that presents at least 3 options with in depth analysis (for at least 2 options). There is also recommendation to answer question requirement. If there is no recommendation [max 7m]</td><td>4-6</td></tr> <tr> <td>L1</td><td>For an answer that presents some analysis, but explanation can be further developed <u>OR</u>  <b>Max of 3m</b> if candidates provide an answer that only provides one option</td><td>1-3</td></tr> <tr> <td>Evaluation</td><td></td><td></td></tr> <tr> <td>E2</td><td>Apply relevant economic concepts to make good judgement</td><td>3-4</td></tr> <tr> <td>E1</td><td>Make some valid evaluative comments, without much justification</td><td>1-2</td></tr> </table>	Level	Descriptor	Marks	L2	For an answer that presents at least 3 options with in depth analysis (for at least 2 options). There is also recommendation to answer question requirement. If there is no recommendation [max 7m]	4-6	L1	For an answer that presents some analysis, but explanation can be further developed <u>OR</u>  <b>Max of 3m</b> if candidates provide an answer that only provides one option	1-3	Evaluation			E2	Apply relevant economic concepts to make good judgement	3-4	E1	Make some valid evaluative comments, without much justification	1-2	
Level	Descriptor	Marks																		
L2	For an answer that presents at least 3 options with in depth analysis (for at least 2 options). There is also recommendation to answer question requirement. If there is no recommendation [max 7m]	4-6																		
L1	For an answer that presents some analysis, but explanation can be further developed <u>OR</u>  <b>Max of 3m</b> if candidates provide an answer that only provides one option	1-3																		
Evaluation																				
E2	Apply relevant economic concepts to make good judgement	3-4																		
E1	Make some valid evaluative comments, without much justification	1-2																		