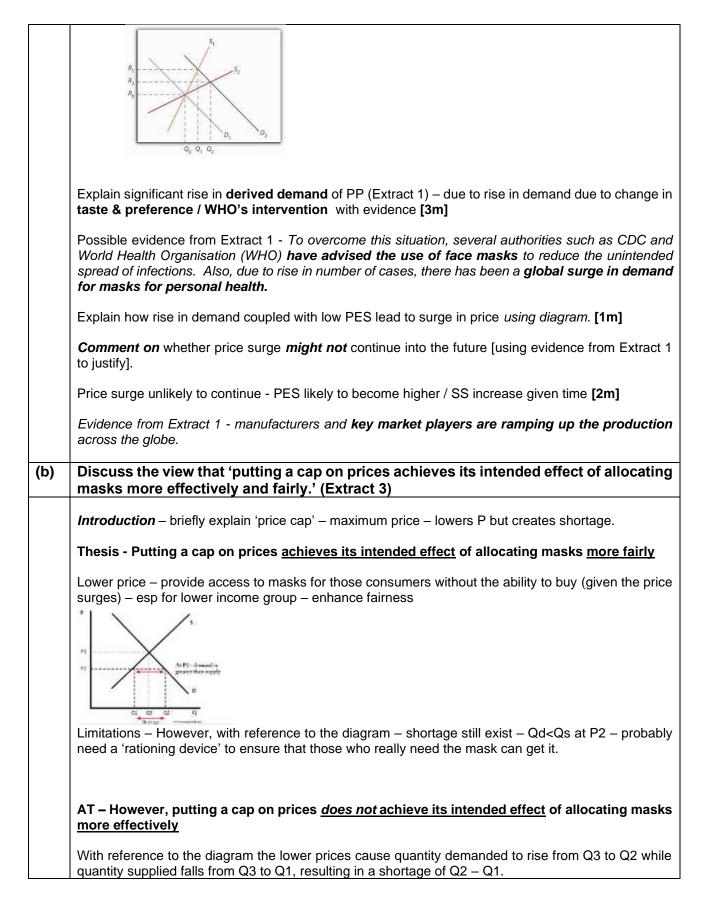
Question 1: The market for face mask

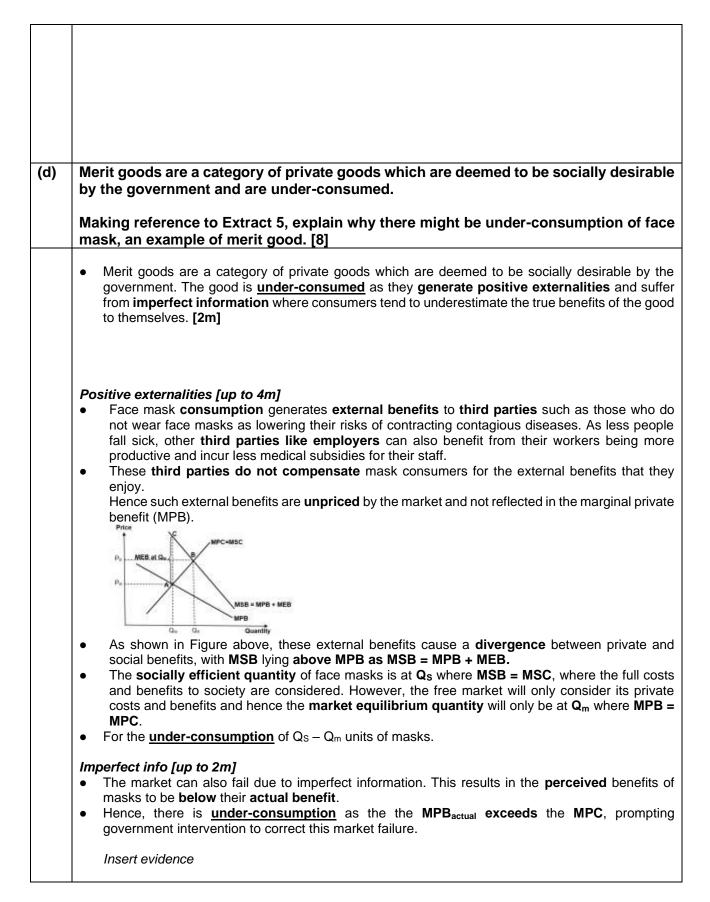
Suggested Answer Outline

(a) (i)	Using Figure 1, compare the change in the global price in polypropylene (PP) between September 2020 and December 2020 with that between December 2020 and March 2021. [2]
	Key Similarity: Both increasing [1m] Key Difference: Faster rate of increase in 2 nd period [1m]
(ii)	Using evidence from Extract 2 where appropriate, explain why the likely value of Price Elasticity of Supply (PES) of PP for face mask production is likely to be positive and low. [3]
	 Positive PES – due to Law of supply – explain that P and Qs are positively related [1m] Low PES – [2m] Explain any one of the two appropriate determinants of PES<1 using relevant evidence: Factor 1 – Nature of production/ease of factor substitution; OR Factor 2 – Time period
	Possible Evidence : PP electret melt-blown non-woven, is a specialised fabric produced by a limited number of companies globally due to the high initial investment required in heavy machinery.
	For this reason, it has been more difficult to increase production during the crisis, or to find companies that can switch to this manufacturing within a reasonable time and without massive investment.
(iii)	Using Extract 1 and PES value stated in (a)(ii), use a demand/supply diagram to account for the price variation of PP after December 2020, and comment why the price variation might not continue in the long term. [7]
	Diagram illustrating effects of low PES on P surge after Dec 2020 [1m]



The r		
	eduction in availability of face masks as quantity supply falls means that the face ma able only to those who are fortunate enough to get their hands on them at the controlled	
	shortage can result in the formation of black markets where the black-market price can l r than the original market equilibrium price P1.	be ev
incom	e the reduced availability of face masks or the problem of black markets can still result ne households having no access to the face masks, limiting the effectiveness of the price nieving a fair distribution of face masks.	
	when DD rise faster – price adjustment cannot keep up (Extract 3) as the price signaling opressed + SS remains low – production cannot keep up (Extract 1)	functi
fact, v might	On the whole, price cap cannot achieve its intended effects of achieving both object with the likely Black market situation, both outcomes become unachievable . Marke be a better mechanism to allocate mask more effectively in the LR, but the fairness issu to be tackled using a different mechanism like rationing and/or subsidies.	et forc
L2	Consolidate (Application and Analysis)	4
		-
	Sound analysis and coherent economic arguments.	
	Analyse how price cap can/cannot achieve fairness + allocating masks effectively, using economic reasoning, with reference to appropriate analysis / <i>diagram(s)</i> - <i>optional</i> .	
	Clarify – give examples from data with elaboration.	
L1	For an answer that demonstrates knowledge but lacks understanding, application and analysis:	1
	Insufficient scope of discussion, only touches on either shortage OR fairness.	
	Lack of accuracy in the use of economic concepts, terms or phrasing of explanation.	
	Mainly lifting from extracts without economic analysis.	
E2	Evaluative Comment For an evaluation that contains:	
	A synthesis using economic arguments to arrive at relevant judgements/decisions	
	Evaluative comments supported by accurate, logical and clear analysis Relevant judgement(s) (did answer the question) but may not follow from relevant	

	ntify and define the characteristics of public good, and carefully explain why the servic ovided by Singapore's 'pandemic taskforce' is considered a public good. [7]
Ide	ntify and define the TWO characteristics of public goods
No	n-excludability and non-rivalry in consumption. [1m]
	n-excludable in consumption refers to the situation when it is technically impossible hibitively expensive to exclude non-payers from consuming the good/service. [1m]
ser	n-rivalry in consumption refers to the situation where the consumption or use of the goo vice by one consumer does not diminish the amount (and quality) of the good/service available by the next consumer. [1m]
Not	te: the definitions must be based on perspective of consumption.
bor me	rvices provided by Singapore's pandemic taskforce' (SPTF) [up to 4m] - measures included a control, mandatory 14-day quarantining for all returning residents, contact tracing and provided a leave for mild cases allowing possible COVID-19 cases to self-isolate at home thus redunmunity transmission.
•	SPTF provides various services (above examples) to ensure that there is minimal commutations transmission of the disease and a healthier environment. The consumption of such service by one resident in Singapore will not reduce the amount benefit enjoyed by the next resident. Hence, the consumption of SPT's service is non-rival in consumption .
•	On the other hand, SPTF's service is also non-excludable in consumption .
•	Once the service is provided to ensure that community transmission is minimised, every resi in Singapore enjoys the benefits of better health environment in the country regardless of whe they pay for it. And it is technically impractical/impossible to charge consumers for the ser rendered.
	c onclusion , services by SPTF is a pure public good as it is both non-rivalrous and non-exclud consumption.



(e)	Using appropriate data from various extracts, discuss whether the provision of government subsidies would be the best policy to ensure merit goods are allocated more efficiently in a society.
	Introduction
	In the context on ongoing COVID-19 pandemic, face mask is an example of a merit good which the government deemed as socially desirable for consumption. However, current consumption is below the socially desirable level because of inefficient allocation due to the existence of Positiv Externalities and Imperfect Information. Government intervention should aimed at correcting these two forms of market failure.
	Thesis – Subsidies would be the best policy to correct market failure in the market for fac mask (in the context of positive externalities).
	Government can use subsidies to internalise the significant positive externalities of a merit good, which is a market based approach. This approach gives private individuals the freedom of choice in making rational decisions with regard to the best level of consumption that would maximise society's welfare
	Price P P P P P P P C C C C C C C C C C C C C
	The government might give a subsidy to producers corresponding to the marginal external benefit i.e Subsidy = MEB at Qs (distance BD) on each unit of face mask. This 'internalising of external benefits shifts the MPC downwards so that the new PMC, which equals MPC – Subsidy, coincides with the MPB at Qs.
	Hence, the new market equilibrium quantity where MPB = MPC – Subsidy, now coincides with th socially efficient quantity Qs, where MSB = MSC.
	The intervention by government in this case has led to efficient allocation of resources and effective dealt with the market failure caused by positive externalities.
	AT1 – Limitations of Subsidy in dealing with Market Failure
	However, government may over-estimate the extent of external benefits accurately and thus en up over-subsidizing face mask. Allocation of resources is thus inefficient as there may be over allocation of resources and lead to wastages. If the deadweight welfare loss due to over-subsidizin is more than the deadweight welfare loss without government's intervention, the society might be wors off in terms of allocative inefficiency.
	AT2 – Alternative measure

In the case of a merit good, there exists imperfect information because consumers do not know the full extent of the benefits of wearing face masks to themselves. (Insert evidence). A subsidy will reduce the market price of face mask for consumers. This will reduce the MPC for consumers because they pay less. (MPC without subsidy to MPC with subsidy)

However, this will **mitigate** the issue of under-consumption of healthcare due to imperfect information - it does not solve the root cause of information gap. Public education/communications (Clear communication/nudging (Extract 5)) may instead be a better policy to correct the root cause of the problem and ensure a longer term impact. Thus, the perceived MPB of face mask to consumers will increase and the quantity of face mask consumed will increase from Qm to Qs.

Evaluation/Conclusion

Whether the policy of subsidies is the 'best' would thus depends on the source of the market failure for the merit good. Subsidy is probably best for internalising positive externalities, but it is not the best / most effective in achieving AE due to the imperfect information. Hence a more holistic approach, encompassing both subsidies and public communication is probably the best solution.

	Consolidate (Application and Analysis)	4 – 7
	Sound analysis and coherent economic arguments.	
	Analyse effectiveness of subsidies in tackling market failure for merit good using	
	economic reasoning, with reference to appropriate analysis / <i>diagram(s) - optional</i> .	
	Clarify – give examples from data with elaboration.	
L1	For an answer that demonstrates knowledge but lacks understanding, application	1 – 3
	and analysis:	
	Insufficient scope of discussion / one-sided.	
	Lack of accuracy in the use of economic concepts, terms or phrasing of explanation.	
	Mainly lifting from extracts without economic analysis.	
E2	Evaluative Comment	2-3
	For an evaluation that contains:	
	A synthesis using economic arguments to arrive at relevant judgements/decisions	
	on whether subsidy is best to achieve an efficient allocation of resources in the	
	market for face mask.	
	Evaluative comments supported by accurate, logical and clear analysis.	

E1	Relevant judgement(s) (did answer the question) but may not follow from relevant	1
	economic arguments.	
	Comment (s) may lack depth, clarity, and logic.	

Question 2 Singapore economy and the pandemic

Suggested Answer

(a)	With reference to Table 1, describe Singapore's real GDP, general price level and unemployment rate in 2020. [6]
	Real GDP: Real GDP decreased in 2020. It was decreasing at an increasing rate from the 1 st to 2 nd quarter of 2020 before it decreasing at a decreasing rate.
	GPL: GPL (as measured by CPI) decreased in 2020. It increased by 0.4% in 1 st quarter before experiencing a decrease in 2 nd quarter onwards.
	Unemployment rate: The unemployment rate increases in 2020. Unemployment rate increased in the 1 st quarter to 3 rd quarter before decreasing slightly in the 4 th quarter.
(b)	Explain the likely impact on an economy's aggregate demand and aggregate supply in 2020 based on the information found in Extract 6. [6]
	In Extract 2, "the economy had to grapple with both demand- and supply-side shocks, such as a fall in external demand for goods and services produced in Singapore caused by the economic slowdown in major economies and global travel restrictions, supply chain disruptions, as well as the implementation of the Circuit Breaker (CB) measures domestically from April to June 2020."
	Demand-side changes
	"a fall in external demand for goods and services produced in Singapore caused by the economic slowdown in major economies and global travel restrictions" represents a fall in exports of goods and services from Singapore. This decreases in aggregate demand.
	The implementation of Circuit Breaker (CB) measures domestically" reduces domestic consumption. This decreases in aggregate demand.
	Supply-side changes
	"Supply-chain disruption" for items such raw material and other factor of production represents a decrease in short-run aggregate supply when the cost of factor inputs rises following a reduction in the supply.

	Singapore. This also affects short-run aggregate supply.
(c)	Explain how the Circuit Breaker measure affected the standard of living in Singapore. (Extract 7) [4]
	Standard of living is defined as the material and non-material well-being of an average resident in a country.
	From Extract 2,
	<i>"reduce their discretionary expenditure, especially on luxury and durable goods"</i> This illustrates the reduction in consumption of luxury goods and services which reduces the ability to enjoy material standard of living .
	In addition, the <i>"temporary rise in prices of some imported food items"</i> also meant a decrease in real income, thus reducing the amount of imported goods and services to be consumed by locals.
	"Visits to restaurants, malls and other recreational places such as public parks have also declined." Non-material aspects such as recreational activities to reduce stress have also reduced. In addition, the "anticipation of more layoffs and uncertain economic prospects" may also may lead to higher stress levels.
(d)	Explain the intended consequence of a gradual and modest appreciation policy in Singapore and comment how the changes in prices of crude oil and food (in Extract 7) affected Monetary Authority of Singapore (MAS) decision not to implement such a measure in 2020. [7]
	Explanation of intended consequences of gradual and modest appreciation on General Price Level.
	 Given Singapore's high import dependence, due to a lack of natural resources, large and sudden increases in prices of imported inputs will result in severe imported inflation. This not only affects the cost of living for domestic households, but also severely affects Singapore's export competitiveness as most of Singapore's exports require substantial imported inputs to manufacturer. By managing of exchange rates, MAS is thus able to directly reduce the costs of imported inputs, hence reducing imported inflation. Revaluing the Singapore Dollar (SGD) also helps to dampen net exports and AD thus curbing demand-pull inflation as well. Inflation is thus kept low and stable which promotes savings and investments, thus providing the foundation for strong actual and potential economic growth.

Application of Extract 7

In Extract 7, "inflation is expected to moderate during this economic downturn" due to "benchmark oil prices forecast to stay low due to worldwide lacklustre demand. But while global food supplies are ample, supply chain disruptions arising from international containment measures could lead to a temporary rise in prices of some imported food items" Low oil prices create low imported inflation pressures while higher food prices could cause some higher imported inflation. However, overall the imported inflation (cost-push inflation) is moderate. (Please use Table 1 to note that Singapore is facing deflation for most of the year) Therefore. MAS should not use gradual and modest appreciation when inflationary pressure are absent in Singapore and this policy is contractionary in nature which is not beneficial to an already weak economy. **Comment:** Any acceptable statements on the issue. For example, "given the nature of recession and lack of inflation in 2020, MAS should instead take a bold step to let Singapore dollar devalue against major currencies in order to boost exports" (e) Budget spending may result in conflict between economic growth and inflation. Explain the above statement and discuss if this is the main reason for the Singapore government to consider an unprecedented four Budgets for 2020. [8] **Explanation of Fiscal Policy (Budget Spending)** Expansionary Fiscal Policy involves increasing government expenditure to increase aggregate demand. With the increase in aggregate demand via the multiplier process would lead to a multiplied increase in Real GDP. Conflict between macro goals Conflict between macroeconomic goals occurs when AD increases which lead to lower unemployment/higher economic growth but result in higher demand-pull inflation. This occurs when the economy is facing a full employment level of resources and when the increase in aggregate supply is not sufficient to meet the increase in aggregate demand. Figure 1: Rapid growth at the expense of demand-pull inflation General Price Lovol P. Ρ, AD. Real GDP Y. Y. Other considerations

Other concerns (limitations) would be the **small size of multiplier** that is not able to increase AD sufficiently. Given that consumption and investment are weak, government expenditure could boost economic growth but the effectiveness is limited.

The **extent of the recession** was another consideration, given the large negative economic growth and the increasing unemployment rate. "Singapore's four Budgets are estimated to help its economy cushion average output loss of 5 percentage points, and to prevent large scale job losses over 2020 and 2021"

Another possible consideration for the government could be the **budget** that is used which requires a draw down from the reserves. There could be an opportunity cost to be used for other purpose such as healthcare and education. However, such use of the budget is justified on a rainy day but it should be unlimited.

Conclusion

The main concern is in the effectiveness of the budgets in preserving jobs for Singaporeans (maintaining a relatively low rate of increase in unemployment) in order to weather such a heavy recession. Inflation was hardly a concern in 2020 with the deflation in the economy. The reason for the four budgets was that events deteriorated rapidly to have the government to be able to analyse all the implications. The government had to add a new supplementary budget as the pandemic deteriorated with time in 2020/2021.(Note: This could be an example of the Marginalist Principle) The government could not wait for another fiscal year to implement a new budget.

L2	Consolidate (Application and Analysis)	4 – 6
	Sound analysis and coherent economic arguments.	
	Scope – Good explanation of the conflict and other considerations.	
	Depth – Sufficient rigour in the analysis of the conflict and other considerations	
L1	For an answer that demonstrates knowledge but lacks understanding, application and	1 – 3
	analysis:	
	Insufficient scope of discussion, only touches conflict or other considerations.	
	Lack of accuracy in the use of economic concepts, terms or phrasing of explanation.	
	Mainly lifting from extracts without economic analysis.	

	E2	Evaluative Comment	2
		For an evaluation that contains:	
		A synthesis using economic arguments to arrive at relevant judgements/decisions	
		Evaluative comments supported by accurate, logical and clear analysis	
	E1	Relevant judgement(s) (did answer the question) but may not follow from relevant economic arguments.	1
		Comment (s) may lack depth, clarity, and logic.	
(f)		reference to the data, explain whether lower-income households in Singapore v recent years.	were "worse [4]
	In Ta	•	
	20 pe	r 20 percentile has a higher decrease in income (in percentage) compared to te ercentiles. Income inequality worsen in 2020. The lower income take-hom ased in 2020.	
	In Ext	tract 9	
	COVI stayir	ever, in Extract 9 with <i>"a significant amount of government support provided</i> D-19 crisis in 2020, such as rental, water and electricity rebates, especially for ag in the smaller HDB flats," there were fewer expenses that the lower-income red in 2020.	households
	cent a as go	mes all grew in the five years from 2015 to 2020, with increases ranging from 0 a year. The income divide as measured by the Gini coefficient was the lowest in to vernment transfers closed the gap." Income inequality in fact improved for the pa government assistance.	vo decades,

	In addition, the Progressive Wage Model provided minimum wage and subsidies for training for some low-income households.
	Lower-income were not worse off for the past few years, even in 2020.
(0	Discuss if the measures to make Singapore more inclusive should be removed or enhanced in the future. [10]
	The analysis should demonstrate how measures can help low-income households and promote inclusivity and possible evaluation of these measures on whether they should be removed or enhanced in the future.
	• Government transfers Government transfers are the ways that the government redistributes income and wealth to the population. In Singapore, this is most apparent in the various government schemes targeted at the lower income group. This includes rental, water and electricity rebates.
	Evaluation: It is not likely that income inequality to be completely eliminated in the future. In fact, with the greater movement of capital and labour, the Gini coefficient (before transfers) is expected to worsen. Thus the government is likely to enhance the transfers for years to come. Higher-income earners may expect to pay higher (progressive) taxes in the future to pay for this. Such an enhancement of government transfer may create social tensions.
	• Subsidy for training and education to equip skills relevant for the job market. These would increase their productivity level and their demand for labour would increase and thus receiving a higher wages.
	Evaluation: With rapid technological changes, skills could be irrelevant in a short period of time. In order to equip low-income households with up-to-date skills, the government and industries would have to play a greater role and subsidise relevant training schemes in the future. This is a supply-side policy that the Singapore government would be willing to enhance in order to benefit both the workers and the economy.
	• Minimum wage scheme (Progressive Wage Model) Price Floor to ensure that low-income workers receive a decent wage. It has raised wages at a sustainable and meaningful pace, without hurting the livelihoods of the lower- wage workers. Examples of jobs in PWM are in security, cleaning and landscaping.
	Evaluation: With more Singaporeans receiving higher education, fewer Singaporeans will take up low-skilled which could mean that this measure would be unnecessary in the future. There would be less of a need for such a minimum wage in the future. (Candidates may offer differing views)

Summative evaluation – income inequality will continue to exist in the future. The number of lowincome households in absolute terms will fall and most will be lifted out of poverty. Thus there is less need to give large handouts for basic survival. However, relative income inequality (i.e perceived income gap between high and low-income households) will always remain and could worsen with greater globalisation. In this respect, we would expect government support to continue or enhanced.

L2	Consolidate (Application and Analysis)	4 – 7
	Sound analysis and coherent economic arguments.	
	Scope – measures in were sufficiently explained (such as those in Extract 9)	
	Depth – the measures were analyzed if they were to be enhanced or removed in the future	
	Clarify – give examples from data with elaboration.	
L1	For an answer that demonstrates knowledge but lacks understanding, application and analysis:	1 – 3
	Insufficient scope of discussion.	
	Lack of accuracy in the use of economic concepts, terms or phrasing of explanation.	
	Mainly lifting from extracts without economic analysis.	
E2	Evaluative Comment	2-3
LL	For an evaluation that contains:	2-3
	A synthesis using economic arguments to arrive at relevant judgements/decisions	
	Evaluative comments supported by accurate, logical and clear analysis	

E1	Relevant judgement(s) (did answer the question) but may not follow from relevant economic arguments.	1
	Comment (s) may lack depth, clarity, and logic .	