Suggested answers for SL P1 Q1

(a) Explain that when producer surplus and consumer surplus are maximised, allocative efficiency is achieved. [10]

Answers may include:

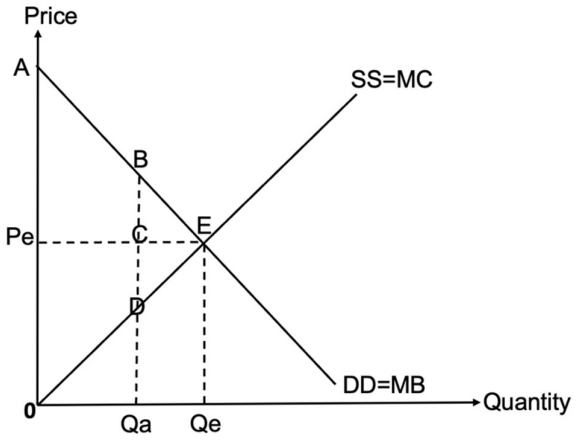
- Definitions of consumer surplus, producer surplus, allocative efficiency
- Diagram (demand and supply) to show producer and consumer surplus and allocative efficiency
- An explanation that consumer surplus is the difference between the price the consumer is willing and able to pay for a good and its selling price; an explanation that the producer surplus for a good is the difference between the price the producer is willing and able to sell the good for and its selling price; an explanation that the sum of consumer and producer surplus is maximised in competitive market equilibrium and allocative efficiency is achieved

Consumer surplus is defined as the highest price consumers are willing and able to pay for a good minus the price actually paid. The highest price they are willing and able to pay is given by the demand curve.

Producer surplus is defined as the price actually received by producers for selling their good minus the price that they are willing and able to accept. The lowest price they are willing and able to accept is shown by the supply curve.

The price actually paid and received by the consumers and producers is determined at the market equilibrium via demand and supply forces.

Allocative efficiency is achieved when scarce resources are allocated to produce the right amount of right goods desired by the society. In a competitive market, this is achieved when the social surplus (i.e. the sum of producer surplus and consumer surplus) is maximised.



The demand curve also depicts the marginal benefit as the extra benefit derived from consuming an additional unit of the good decreases as the quantity increases (hence, the

price consumers are willing and able to pay for every subsequent unit falls according to the law of demand).

The supply curve also depicts the marginal cost as the extra cost incurred from producing an additional unit of the good increases as the quantity increase (hence, to cover the rising cost, the price producers are willing and able to accept for every subsequent unit must increase in accordance with the law of supply).

The competitive market equilibrium occurs at E, where the demand (DD=MB) and supply (SS=MC) curves intersect. This is the point where the extra benefit to society of consuming an additional unit of the good equals to the extra cost to society of producing an additional unit of the good. At this point where Qe units of the good transacted in the market, the sum of consumer surplus (AEPe) and producer surplus (0EPe) is maximised. Allocative efficiency is achieved.

If Qa units are transacted instead, consumer surplus area will be lower at PeABC and producer surplus area will be lower at 0PeCD. This results in a welfare loss to society of area BDE. Since MB>MC for all units between Qa and Qe, this means that the society places a greater value on the last unit of the good produced and consumed, than it costs to produce it. There is an underallocation of resources. Hence, more resources should be allocated to the production and consumption of the good till all net benefit is reaped by the society (i.e. Until Qe where MB=MC).

On the other hand, producing beyond Qe would result in MB<MC. For every unit beyond Qe, society incurs a greater cost than the value derived from an additional unit. Resources should be allocated away from this market such that less units should be produced and consumed in order not to incur a net cost to the society.

Thus, society's welfare is maximised and allocative efficiency is achieved when Qe units of good are produced, where DD=MB meets SS=MC. At this point, consumer surplus and producer surplus are at their maximum.

**In order to access L4/L5, students need to illustrate the effect on consumer surplus and producer surplus when MB>MC (i.e. producing lesser than Qe).*

Markers' comments:

This question was not done well.

- Most candidates could define consumer and producer surplus and identify the relevant areas in a DD/SS diagram. However, most stopped here and asserted that area A is the consumer surplus and area B is the producer surplus and they are at their maximum at the market equilibrium and thus, allocative efficiency is achieved. This is just restating the question with nothing explained.
- A handful of students were able to use a quantity lower/higher than the market equilibrium output, to show that the consumer surplus and producer surplus areas would be smaller. Thereafter, it is asserted that hence, it is better for the society to be producing the market equilibrium output for a larger social surplus area.

- However, to fully address the question on how the market equilibrium where the CS and PS areas are maximised achieves 'allocative efficiency', candidates are required to use the marginalist approach to prove the condition of MB=MC.
- Many students made conceptual errors to claim that a discrepancy between quantity demanded and quantity supplied indicates allocative efficiency (e.g. If price is lower than Pe, there is a shortage where Qs < Qd, indicating that there is an underallocation of resources and hence, allocative inefficiency).

Marks	Level descriptor
0	• The work does not reach a standard described by the descriptors below.
1–2	• The response indicates little understanding of the specific demands of the question. • Economic theory is stated but it is not relevant. • Economic terms are stated but they are not relevant.
3–4	• The response indicates some understanding of the specific demands of the question. • Relevant theory is described. • Some relevant economic terms are included.
5–6	• The response indicates understanding of the specific demands of the question, but these demands are only partially addressed. • Relevant economic theory is partly explained. • Some relevant economic terms are used appropriately. • Where appropriate, relevant diagram(s) are included.
7–8	• The specific demands of the question are understood and addressed. • Relevant economic theory is explained. • Relevant economic terms are used mostly appropriately. • Where appropriate, relevant diagram(s) are included and explained.
9–10	• The specific demands of the question are understood and addressed. • Relevant economic theory is fully explained. • Relevant economic terms are used appropriately throughout the response. • Where appropriate, relevant diagram(s) are included and fully explained.

(b) Using real world examples, discuss the possible consequences of the imposition of a price ceiling for the different stakeholders in a market. [15]

Answers may include:

- Define price ceiling
- Diagram (supply and demand) to show the impact of a price ceiling
- An explanation that governments impose price ceiling to protect low income consumers; an explanation of the possible consequences of a price ceiling in terms of keeping price below the equilibrium level, excess demand, inefficient resource allocation, underground market, non-price rationing and welfare impacts, in context of a RWE
- Synthesis and evaluation

Price ceiling refers to the maximum price that can be legally charged by sellers. It is usually set in order to make certain goods more affordable to people of low income. To have an effect, the price ceiling must be set below the equilibrium price.

An example of a price ceiling is rent control. Rent control is a policy that limits the amount of rent that can be charged for a rental unit, how much the rent can be increased per year, or both. One such rent control is implemented in San Francisco since 1979 and enforced by the San Francisco Rent Board. As of 2019, the board has set the percentage by which landlords can raise the rents to a maximum of 10% per year. This new state law of California applies to buildings in San Francisco that were built after 1979 but before 2005. More than 60% of San Francisco rental units fall under this rent control. The landlords cannot increase the rent due to a new roommate or a new baby arriving, except through petition proving increased operating expenses.

Although the rent board does not set a maximum rent which is in theory how price ceilings work, since landlords are prevented from raising the rent freely, rent will be capped at Pc, below the otherwise equilibrium price of Pe which is based on market demand and supply forces without any control.

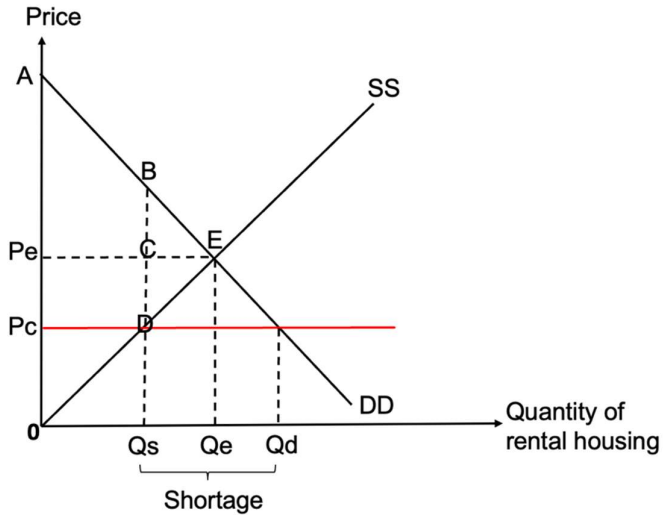


Figure 1: Effect of rent control on the market for rental housing

Consequences on consumers (i.e. tenants)

(+) Lower rent of Pc for those who are able to secure a rental unit.

(+) The rent board also offers protection for tenants from landlords' negligence and unfair eviction.

(-) However, a shortage of QsQd ensues at the lower price of Pc. This means that not all interested tenants who are willing and able to rent will be able to do so.

(+/-) Consumer surplus thus increases by area PePcDC but decreases by area BCE (Overall change in CS from area AEPe to ABDPc).

(-) Dissatisfied people who have not succeeded in securing a rental unit are willing to pay more than ceiling price to get it. This gives rise to underground markets which involve transactions that are unrecorded and illegal, whereby tenants who secured the unit at Pc sublet their apartments at rents above legal maximum.

(-) Rent controls might lead to landlords cutting back on maintenance spending of the existing stock of properties and this would reduce the overall quality of rented housing and thus, consumer welfare. For example, an increased risk of damp in houses where upkeep budgets have been cut might lead to a heightened risk of asthma for families living in such properties.

(-) A research paper published by Northwestern University and summarised in a Cato Institute research brief, suggests that rent control might be a poor means of providing tenant stability. It is found that the San Francisco's rent control law led to an increase in both evictions and complaints about wrongful evictions being filed with the city's rent board. Eviction notices filed with the rent board increased by 83 percent and that the number of wrongful eviction claims increased by 125 percent.

(-) EV: In the long run, capping rents would result in landlords withdrawing from the rental market. Some landlords may demolish homes for rent and replace with new housing available to buy. This would lead to a diminished supply of private sector rented housing as seen in Fig. 2 from a fall in supply from SS1 to SS2 which in turn would result in a larger shortage of Qs'Qd.

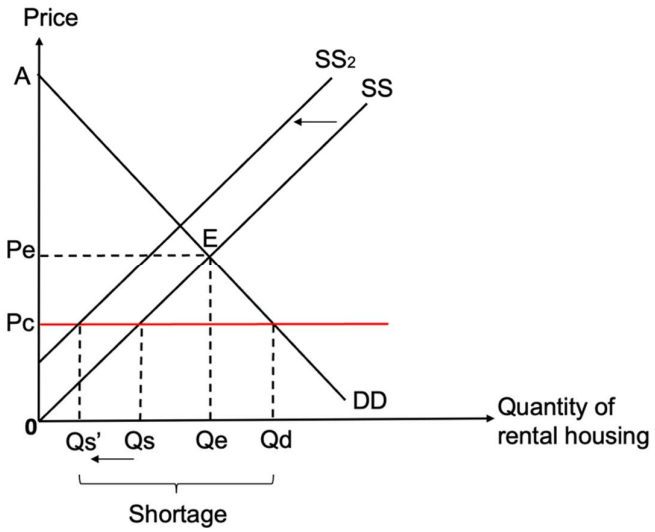


Figure 2: Fall in supply of rental housing in the long term

Consequences on producers (i.e. landlords)

(-) Producers are worse off as they are renting out a smaller quantity of Qs units at a lower price of Pc. This reduces their total revenue from 0PeEQe to 0PcDQs, with reference to Fig. 1. There is also a loss of producer surplus by the area PePcDE, out of which a part is transferred to consumers.

(-) EV: Although the purpose of a price ceiling is meant to ensure affordability of necessities for low-income consumers, this aim may be unfairly pursued at the expense of producers. In the context of rent control, some landlords may not high-income earners who are exploiting tenants of high rents in pursuit of big profits. A separate evidence from London suggests that three fifths of London's landlords own only one extra property and many are elderly relying heavily on rental income as a source of income. In such cases, the negative consequences of rent control on landlords will be to a larger extent.

Consequences on government

(-) As price mechanism can no longer serve its rationing function, the limited quantity of Qs units of rental housing among interested tenants can only be distributed through non-price rationing methods. One example is via favouritism, where the landlords end up renting out their units based on a personal bias to their preferred tenants, such as race, religion and acquaintance. This may result in a waste of time and resources for the government to step in to determine the eligibility and urgency of individual tenants.

Consequences on society

(-) Overall welfare loss of area BED as consumer and producer surplus are not maximised (This is under the assumption of perfect competition and no externalities are present).

(+) Improvement in equity in resource distribution. The increase in affordability is especially important as rental housing is a necessity for low-income individuals who are unable to purchase a home of their own.

(+/-) Housing is also a merit good that generates positive externalities in consumption, such as decrease in crime rates and improved hygiene and sanitation for the society due to less homelessness.

EV: Should positive externalities be taken into consideration, a price ceiling may further increase the underconsumption of housing, resulting in a larger deadweight loss for the society than there already is.

In conclusion, price ceiling has a variety of different consequences on the various stakeholders involved in the market. In the context of rent control in San Francisco, rent control has been seen as a tool to maintain affordability of necessity housing for the low-income group, should they be able to secure a unit.

This is seen from a landmark 2019 study from researchers found that indeed, tenants in rent-controlled buildings were less likely to have moved than their counterparts in non-rent-controlled buildings. However, the same study also found that the supply of rental housing fell by 15 percent as landlords converted their buildings to condominiums or otherwise withdrew them from the rental market. This lends credence to the idea that rent control provides a mix of stability for incumbent tenants and less availability and higher prices for new entrants in the rental housing market.

Also, as the San Francisco rent control ordinance allows landlords to reset rents to market rates for a new tenant (a policy known as vacancy decontrol), the Stanford study found that this gave landlords a financial incentive to get rid of rent-controlled tenants through either eviction or negotiated payments and get a new tenant to start from paying the new market rent.

Hence, even with price controls in place, market forces will heavily influence outcomes. Rent controls just make the process a lot less efficient, workable, and difficult for everyone involved. For example, landlords have to undertake the cost of filing and pursuing an eviction and should they be successful, a tenant is forced to move *and* gets an eviction on their record.

Thus, the intended positive effects of rent controls can be reaped to a larger extent with accompanying measures in place, such as stepping up enforcement activities against illegal/unfair evictions and eliminating various means by which landlords could remove their units from rent control.

**In order to access L4/L5, students should present a balanced discussion of the consequences on three different stakeholders.*

Opinions or conclusions should be presented clearly and should be supported by appropriate real world examples.

Any other valid discussion should be rewarded.

Markers' comments:

- Part (b) was done considerably better, with all candidates who attempted this question knowing how to define price ceiling, draw the price ceiling diagram and explain the basic workings of a price ceiling (e.g. Creation of shortage).
- Most scripts identified a relevant real-world example but not many were able to use the RWE throughout to contextualise the effects on the stakeholders.
- Some candidates cited inappropriate/wrong examples of price ceiling (e.g. Public housing projects by HDB, some hawker centres selling affordable food under joint project with town council, etc.)
- Many candidates were unable to identify the correct new consumer surplus area and had an inaccurate idea that consumers can consume as much as they are willing and able to consume at Pc (and not be bounded by a lower quantity supplied).
- Many descriptive answers with no economic analysis, especially in citing effects on producers and the government.
- Many conclusions were just summaries.
- No attempts at any elasticities application when the question is using a DD/SS model

Marks	Level descriptor
0	• The work does not reach a standard described by the descriptors below.
1–3	• The response indicates little understanding of the specific demands of the question. • Economic theory is stated but it is not relevant. • Economic terms are stated but they are not relevant. • The response contains no evidence of synthesis or evaluation. • A real-world example(s) is identified but it is irrelevant.
4–6	• The response indicates some understanding of the specific demands of the question. • Relevant economic theory is described. • Some relevant economic terms are included. • The response contains evidence of superficial synthesis or evaluation. • A relevant real-world example(s) is identified.
7–9	• The response indicates understanding of the specific demands of the question, but these demands are only partially addressed. • Relevant economic theory is partly explained. • Some relevant economic terms are used appropriately. • Where appropriate, relevant diagram(s) are included. • The response contains evidence of appropriate synthesis or evaluation but lacks balance. • A relevant real-world example(s) is identified and partly developed in the context of the question.
10–12	• The specific demands of the question are understood and addressed. • Relevant economic theory is explained. • Relevant economic terms are used mostly appropriately. • Where appropriate, relevant diagram(s) are included and explained. • The response contains evidence of appropriate synthesis or evaluation that is mostly balanced. • A relevant real-world example(s) is identified and developed in the context of the question.
13–15	• The specific demands of the question are understood and addressed. • Relevant economic theory is fully explained • Relevant economic terms are used appropriately throughout the response. • Where appropriate, relevant diagram(s) are included and fully explained. • The response contains evidence of effective and balanced synthesis or evaluation. • A relevant real-world example(s) is identified and fully developed to support the argument.

Anglo-Chinese School (Independent)

Candidate session number

Candidate Name

Good job!

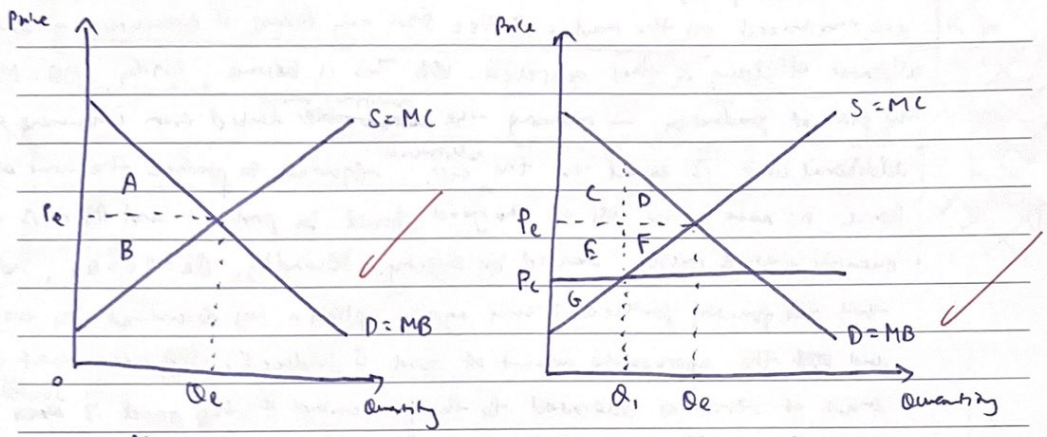
24/25

International Baccalaureate
Baccalaureat International
Bachillerato Internacional

At the start of each answer to a question, write the question number in the box using your normal handwriting.

pls dont start an essay with diagrams....

1. (a)



Productive efficiency ?

Allocative efficiency is defined as the use of the least possible resources to produce the maximum quantity and combinations of goods and services that are most wanted by society. The marginal benefit, represented by the demand curve, represents the additional benefit gained by consumers for each additional unit of the good consumed — as more units are consumed, the price has to fall in order for consumers to consume an additional unit and derive the extra benefit. Similarly, the marginal cost, represented by the supply curve, represents the additional costs imposed on producers for producing an additional unit of good — for producers to produce an additional unit, the price must increase to offset the cost and make production profitable. Pe and Qe represent the equilibrium price and quantity respectively — these are the market optimum price and quantity freely determined by the forces of demand and supply through the price mechanism. We see that in diagram 1, without government intervention, the quantity of the good produced is at its equilibrium or optimum level — Qe. ~~It is only in this case where~~ consumer surplus is determined by the maximum price consumers are willing (and able) to pay for a good minus to actual price paid for the good, ~~producer surplus~~ up to the quantity consumed. producer surplus is defined as the minimum price producers are willing to sell the good at, up to the price the good is sold at, minus the quantity produced and supplied.

In the case of diagram 1, we see that consumer surplus is given by area A, between the marginal benefit curve and the equilibrium price, P_e, for the quantity consumed, Q_e (Q_c). Similarly, producer surplus is given by area A, between the marginal cost curve and equilibrium price, P_e, for the quantity supplied, Q_e (Q_s). Comparing with diagram 2 (explained below), areas A and B are maximized as the market is free from any forms of intervention — and allocative efficiency is thus achieved. This is because, firstly, MB = MC at the point of production — meaning the additional benefit derived from consuming an additional unit is equal to the additional cost required to produce the unit of good, hence no more or no less of the good should be produced and it is at the quantity that is mostly wanted by society. Secondly, $Q_e = Q_s = Q_c$, indicating that the quantity produced is once again optimum (as determined by the market) and the appropriate amount of good is produced, which means that the amount of resources allocated to the production of the good is socially optimum, and thus allocative efficiency is achieved.

Conversely, consider the case where consumer and producer surplus are not maximized, in the case of diagram 2. The quantity supplied and consumed lies at Q_1, while the market optimum lies at Q_e. Consumer surplus is given by C+E, while producer surplus is given by G, up till the point of consumption and production. Evidently, social surplus is not maximized — and therefore allocative efficiency is not achieved. This is as there is an underallocation of resources to the production of the good, since $Q_s = Q_c = Q_1 < Q_e$, and MB > MC at the point of production — signifying that society would be better off if more of the good is produced. The good is hence underproduced and there exists allocative inefficiency — given by the welfare loss, or the loss of social benefits in areas D and F (comparing with diagram 1), indicating that some benefits have been lost to society. Conversely, diagram 1 has no welfare loss — showing how producer surplus and consumer surplus are hence maximized, and, as explained above, allocative efficiency is achieved.

8

Anglo-Chinese School (Independent)

Candidate session number

Candidate Name

International Baccalaureate
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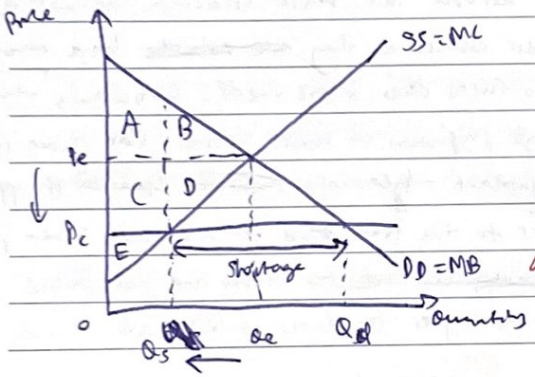
At the start of each answer to a question, write the question number in the box using your normal handwriting.

1. (b)

A price ceiling is defined as the maximum legal price imposed (by the government) on a particular good or service, set below the equilibrium price. This is usually imposed to make the price of the good more affordable to low-income consumers, in efforts to support equity.



This essay will focus on rent controls, specifically maximum legal rent increases imposed on rental housing in San Francisco. The diagram thus shows the market for rental housing, with the price determining the price of rent in the city, supply representing quantity of rental units willing and able to be supplied by landlords, and demand representing quantity of rental units willing and able to be consumed by consumers/residents. As seen, initial quantity and price are given by Pe and Qe respectively. With the imposition of the price ceiling, P_c, set below the equilibrium price, prices are unable to adjust above that price and the market remains in a disequilibrium state. By the law of demand, quantity demanded increases to Qd while quantity supplied decreases to Qs, thus resulting in a shortage given by the horizontal difference between Qd and Qs at price Pc. In San Francisco, the maximum legal rent increases are set at 7% every year — this has resulted in often lower than 3% of rental housing being vacant to consumers, due to the shortage generated by the price ceiling. This is as the number of consumers who are willing and able to consume rental housing is larger than the number of rental units supplied. The effects of the shortage will be elaborated below.

As a result of the price ceiling, consumers are forced to consume at Q_s (as only that quantity is supplied). Yet, the price of rental housing decreases from P_e to P_c. This indicates that consumers who are able to get rental housing are better off as they pay a lower price, but this comes at the expense of less units available; thus resulting in even lower vacancy rates, sometimes as low as 1-2%. This decrease in price, is however beneficial, especially to lower-income consumers. Houses fulfill one's basic needs of shelter and a place to live, and by lowering the maximum rent increase, this enables more lower-income households to be able to afford this basic necessity, as well as lowering the burden on their incomes as they have more disposable income to fulfill other basic needs. Considering that housing takes up a very large proportion of one's income (big ticket item), its effects are thus highly significant in ensuring equality of opportunity and equal access to the good for a stable, lower price, thus promotes higher and more stable incomes for consumers which translate to higher standards of living and possibly greatly move people out of poverty. OK.

Any PED application?

Yet, price ceilings have major disadvantages on suppliers of the good. they are forced to sell a lower quantity of the good, Q_s, at a lower price, P_c, which ultimately translates to lower total revenues (decrease from $P_e \times Q_e$ to $P_c \times Q_s$) and hence lower incomes for landlords or suppliers of rental housing. This has several effects - firstly, many of such suppliers have switched to non-rental units or condominiums, i.e., housing substitutes, to supply to the market; as the resulting lack of incomes is too low and unprofitable. This has resulted in a further decrease in supply, which leads to a further increase in shortage. Secondly, suppliers who remain in the market are seen to sell lower-quality and poorly-maintained rental units, as the revenue generated is simply insufficient and thus unprofitable for landlords to maintain the quality of housing since that would incur additional costs. Overall, price ceilings are highly detrimental to producers. This decrease in rental housing

could, although not likely to, also have an impact on the construction industry. As less housing is produced, suppliers require less labour and hence resulting in increased unemployment of workers, such as construction workers, contraction firms, etc.

The price ceiling has little impact on the government, although the government could gain popularity amongst the consumers in this case, due to the lower ~~price~~ maximum price of rent increases.

Ultimately, society suffers from the effects of the price ceiling. ~~Firstly~~ In terms of welfare, consumers lose area B and gain area C from producers (since they now consume a smaller quantity for a lower price), leaving them with A+C. Producers lose areas C and D, leaving them with only area E. The result is that welfare is lost to society, given by areas B and D, and allocative inefficiency persists. Too little of the good is produced, as $Q_S < Q_e$ at P1 and $MB > MC$ at the point of production Q_S, indicating society would be better off if more resources were allocated to the good and more of it were produced.

This price ceiling also has other impacts on consumers and producers. Firstly, since the price mechanism is unable to fulfill its function, non-price rationing methods are needed to distribute the good amidst the shortage. This has resulted in long waiting lists ~~for applications~~ of residents for rental apartments but could also result in unfavourable circumstances such as favouritism or worse, underground/parallel markets. This is where the prices of the good, or rent, are increased above the price ceiling, ~~to be sold~~ and sold in an unregulated and unregistered transaction, to consumers whom were dissatisfied and unable to obtain housing. Such circumstances ~~are dangerous~~ simply frustrate the objective sought

Not v. appropriate for rental housing

out by the price ceiling and are inequitable (as people are ~~forced to pay~~ forced to pay higher prices). In the case of rental housing, this is simply ~~done~~ achieved by increasing rent beyond the legal limit ~~in order for landlords for renters to obtain housing~~ and offering it to desperate residents whom are unable to find housing.

Overall, effects of the price ceiling are ultimately detrimental ~~to the~~ to society's welfare, as with any form of government intervention. Yet, it could help ~~to~~ control rising prices which may be ~~rising~~ increasing at a rapid rate, or price gouging, so as to make necessities more affordable to the poor. In the case of rental housing in San Francisco, the policy can be justified, firstly, on the terms that landlords generally have higher incomes while residents paying for rental housing are generally on lower incomes (since they cannot afford to pay for the house itself) — and therefore its ~~already so called~~ positive effects on the lower-income and negative effects on the relatively higher-income landlords helps to promote equity and a more equal distribution of income by ~~taxing~~ "redistributing" ~~the~~ that of the rich to the poor, as symbolized by area C transferred from producers to ~~the poor~~ consumers. Secondly, given that housing is a necessity, the PED of housing should be inelastic and hence its effects on increasing demand would be minimal. Thus the shortage of rental housing is also minimal.

Good attempt!
Better contextualisation to RWE can be done.

13

Question 2

(a) Explain the limitations of the Consumer Price Index (CPI) in measuring inflation. [10]
(b) Using real-world examples, evaluate the use of government policies in reducing a country's rate of inflation. [15]

Suggested answer outline:

(a) Limitations of the Consumer Price Index (CPI) in measuring inflation

- Define inflation - A sustained increase in the general or average level of prices and a fall in the value of money. (keywords: sustained increase, average/general price level)
- Define CPI - A measure of the average rate of inflation which calculates the change in the price of a representative basket of goods and services purchased by the "average" consumer. (keywords: average prices, basket of g & s, typical/average households)
- State formula to calculate inflation – (CPIcurrent – CPIprevious)/(CPIprevious) * 100% (optional; keyword in formula: previous year, NOT base year)

- Explain about 2 – 3 limitations:
  - Composition bias
    - CPI is calculated based on the consumption pattern of the average household in a population.
    - But individual households with different consumption patterns & qty purchased → selected consumer baskets and weights assigned may not be representative.
    - Variation in consumer baskets may arise due to income, regional or cultural differences. E.g. basket of goods and services consumed by a typical households in rural vs urban areas may differ.
    - Inflation rates may thus differ across households.
  - Changes in consumption patterns
    - Consumption patterns of households change over time. The representative basket may NOT reflect these changes. This makes comparability over time difficult.
    - (Substitution bias) Weights based on qty purchased may change due to substitution effect when relative price of goods & serv change → CPI with fixed weights may thus overstate the inflation rate.
    - Popularity of store discounts and sales, online shopping platforms → prices of g&s may be lower than the indicative price in basket → CPI may overstate inflation
    - Even if the basket is updated, this limits the accuracy of comparison over time.
  - Quality change bias
    - New products introduced, increased variety in consumer choices and improvement in quality are not included in calculation of CPI.

    - At times, prices of goods and services rise because of quality improvement, rather than pure price increases.
    - Inflation as measured by the CPI may thus overstate the true inflation effect.
- Volatility of certain goods
    - There are certain goods, notably food and energy products (such as oil) that may have volatile prices due to wide swings in demand or supply conditions, causing large and abrupt price changes which can often be due to temporary factors and are sometimes unrelated to broad conditions in the economy.
    - When such goods are included in the CPI, they may give rise to misleading impressions regarding the underlying rate of inflation faced by households.
- Sampling / response/ data collection errors in measurement
    - Because the CPI measures price changes based on a sample of items, the published indexes differ somewhat from what the results would be if actual records of all retail purchases by everyone in the index population could be used to compile the index. Moreover, there is a risk of the right sample not being chosen. Hence the sample chosen might not accurately represent the entire population. These estimating or sampling errors are limitations on the accuracy of the index, hence hindering the accuracy of the inflation rate calculated.
    - Non-sampling errors are caused by problems of price data collection, logistical lags in conducting surveys, difficulties in defining basic concepts and their operational implementation can be far more hazardous to the accuracy of a price index than sampling errors.
- Difficulty in regional/international comparison
    - Differences in household composition, consumer baskets, methods of calculation, weights assigned to g & s in the basket between countries make the comparison of CPI and inflation rates difficult and inaccurate.

Part (a) 10 marks

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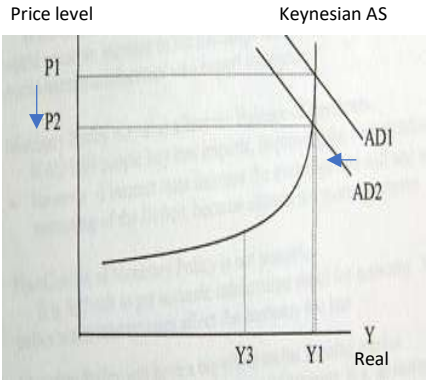
- *Wide ranging marks awarded from 0 to 10m.*
- *Students need to memorise definitions which are already provided in the IB glossary. Doing so will avoid losing unnecessary marks across all papers.*
- *Limitations explained need to spell out the difficulties / challenges in using CPI to measure inflation, rather than just state the weaknesses.*
- *Weak responses tend to lack the basic content knowledge to answer this question and included irrelevant weaknesses such as CPI being unable to distinguish between demand and cost-push inflation, unable to measure effects of economic growth, income inequality, unable to measure changes in cost of production etc. The inclusion of these limitations demonstrates the lack of inherent understanding of the basic function of CPI as a measurement of inflation from the consumers/households' perspective.*

(b) Using real-world examples, evaluate the use of government policies in reducing a country's rate of inflation. [15]

1. Define the 2 types of inflation – demand pull and cost-push
2. Interpret qn – There are various policies that can be used to reduce inflation, depending on the causes and not without their strengths and weaknesses.

3. With RWEs, explain how either 1 contractionary demand management policies (monetary **OR** fiscal policy) can be used to reduce demand pull inflation:
   a) Define demand-pull inflation
   b) Explain how either 1 can be used to reduce inflation rate, with RWEs and AD/AS diagrams:
      i. Explanation of how contractionary monetary policy (CMP) works and its effectiveness (strengths) has to be elaborated with the use of a real-world example*;*
         - *Define CMP*
         - *Analysis of CMP in controlling demand-pull inflation:*
            - *↑ interest rates → ↑ cost of borrowing new loans, ↑ cost of servicing existing loans with variable interest rates & higher opportunity cost of spending due to higher interest returns from saving →↓C*
            - *With higher borrowing cost & lower expectation of investment returns →↓I*
            - *Given C, I are components of AD, the decrease in these components will result in the ↓AD from AD2 to AD3 as seen in diagram 1 hence, addressing demand-pull inflation*

Diagram 1 *(Note: it is also acceptable to draw a classical AD/AS diagram and a fall in AD to close inflationary gap)*



RWEs:

- US experienced strong recovery from the COVID pandemic with the economy expanding 5.7% in 2021 with inflation rate of 5.4% mainly

characterised by demand-pull inflation. By March 2022, US Fed hiked interest rates from 0.25% to 0.5% to control its protracted inflation rate.

- Norway hiked its interest rates from near 0% to 0.25% in 2021, South Korea from 0.5% to 1% via 2 consecutive hikes in 2021, Brazil from 2% to 9.25% via 7 consecutive hikes in 2021 and US from 0.25% in 2021 to 0.5% in March 2022 to fight inflation mainly driven by demand-pull.

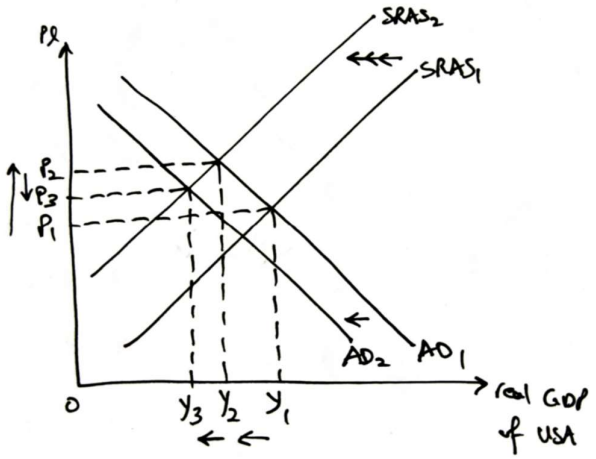
4. Explain strengths and limitations of the chosen policy:
   a) Strengths of CMP (optional to compare with fiscal and/or supply side policies):
      i. Monetary policy is effective due to its strengths namely, its quick implementation; a relatively shorter implementation lag compared to fiscal policy that is impeded by the bureaucractic approval (or supply-side policies that have long effect time lag from start to completion) thus, making monetary policy the "first-responder" policy to address inflation in a timely manner to minimise aggravation of the problem.
      ii. Ability to adjust in small incremental of 1 basis point (0.01%) allows for fine-tuning without risking over-shooting and very flexible in its ability to easily reverse from contractionary to expansionary in its discretionary effort which helps to minimise overcorrection of the inflation rate. This is in contrast to fiscal policy which decreases G and increases tax revenue which has the effect of altering AD by a larger magnitude
      iii. As seen from the recent world-wide inflation caused by the COVID-induced supply shortage and the Russia-Ukraine war where the US Fed further raise its Fed funds rate from 0.5% in March 2022 to 2.5% in July 2022 in three consecutive hikes to tame its inflation from the high of 9.1% to 8.5%.
      iv. Other possible strengths/advantages relative to alternative policies: E.g. limited political constraints/conflicts with central bank independence relative to fiscal policy.

   b) Limitations / Weaknesses of CMP (optional to compare with alternative policies):
      i. A weakness of monetary policy that renders it ineffective in taming inflation is its dependence on economic outlook or subject to offsetting factors. When outlook is highly optimistic, the interest rate hikes may not be effective or sufficient to curb the growth of AD in the economy (interest Inelasticity of C & I)
         ➔ in such cases, the growth in C & I may require central banks to hike interest rates rate more than once to overcome the optimism in order to achieve the target inflation rate. This may come at a high risk of slowing down economic growth.
         ➔ Uncertainty in outcomes may limit the effectiveness of contractionary monetary policy which is dependent on how firms and households respond to the interest rate hikes. If firms and households are optimistic and C & I is financed by other funds other than borrowing, then AD is not likely to fall despite the rise in cost of borrowing.
         ➔ Optional: In contrast, contractionary fiscal policy that lowers govt spending, a component of AD, has a direct and more certain impact on AD as G is less dependent on outlook or offsetting factors.

ii. Conflict with economic growth and unemployment
- ➔ Tight monetary policy controls inflation by reducing AD → fall in real GDP and rise in unemployment.
- ➔ For central bank that are NOT independent, with dual mandate of low inflation and low unemployment, they may be forced to give up the fight on inflation if unemployment becomes too high and hence reverses the monetary policy.

iii. Contractionary monetary policy which targets deflating AD is problematic against cost-push inflation (define) that arises from supply-side instability in the economy as it does not address the root cause of the problem and cost would continue increasing. Hence reducing AD to suppress cost-inflation inflation would be unsustainable and incur a higher tradeoff with economic growth → make reference to Diag 2 below
- The Russian-Ukraine war in 2022 led to a global energy crunch and increased price of energy resource in many countries including US → Cost-push inflation – SRAS falls from SRAS1 to SRAS2 → rise in price level from P1 to P3 and fall in real GDP from Y1 to Y2. The use of contractionary monetary policy to control cost-push inflation can aggravate the recession as real GDP decreases further from Y2 to Y3.

Diagram 2



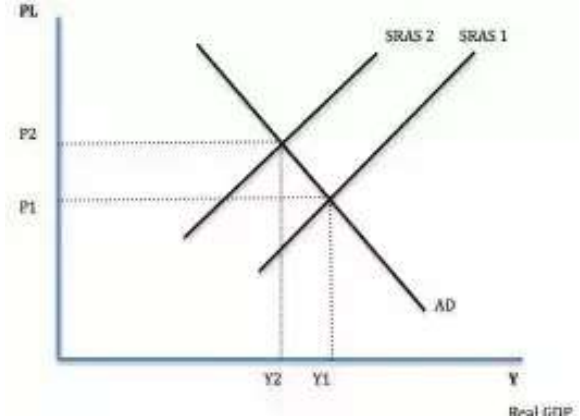
Note: The use of contractionary fiscal policy to control demand-pull inflation is also acceptable as long as it is supported by accurate RWEs and economic analysis, including its strengths and weaknesses.

5. <u>With RWE, explain how either 1 type of supply side policies (SSP) can be used to reduce cost-push inflation:</u>
   a. State the different types of cost push inflation – wage push, profit push, tax push, imported inflation
   b. Define SSP & list types
   c. Explain either 1 measure of market-oriented policy **OR** interventionist SSP which can be used to address wage-push inflation

E.g.

i. Define market-oriented policies and list the different types.

ii. Explain how reducing labour market rigidities such as reducing or abolishing the minimum wage level or reducing trade union power works to lower unit labour cost and tackle cost – push inflation by lowering unit labour cost → increase SRAS from SRAS2 to SRAS1 → lower price level from P2 to P1 and increase real GDP from Y2 to Y1 (diag 3)



iii. RWEs (any 1):

- Deregulation: In 2017, the United States implemented deregulatory measures in the energy sector. This included rolling back environmental regulations and facilitating the expansion of domestic oil and gas production. The objective was to increase energy supply, reduce energy costs, and potentially alleviate inflationary pressures in industries heavily reliant on energy.
- Labour market reforms (reduce labour market rigidities): In 2019, France introduced labour market reforms to streamline employment regulations, simplify collective bargaining, and promote flexibility in hiring and firing practices. These reforms aimed to address structural inefficiencies in the labour market and increase cost competitiveness in the labour market.
- Labour market reforms (abolish minimum wage): In February 2020, the Malaysian government revised its minimum wage policy and reduced the minimum wage for both the Peninsular Malaysia and East Malaysia regions. This decision was taken as part of broader economic reforms and to lower labour cost of doing business.
- Trade liberalization: In May 2022, when inflation stood at 8.3%, trade liberalization was proposed to President Biden as a possible solution to tackle imported inflation. A 2-percentage point tariff-equivalent reduction across a broad array of goods entering the US market could deliver an estimated one-time reduction of 1.3 percentage points in CPI inflation.

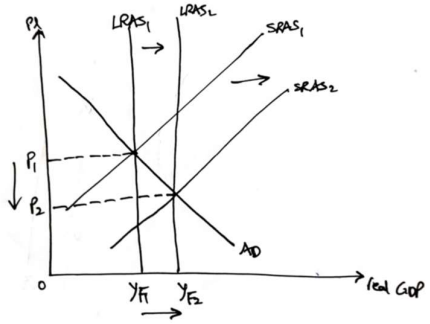
OR

i. Define interventionist policies and list the different types.

ii. Explain how investment in human capital such as quality education/skill training can be used to increase labour productivity to control wage puh inflation
→ rise in LRAS as quality of labour increases → production capacity increases and ↑LRAS from LRAS 1 to LRAS2 → in the long run when labour productivity increases

→ ↓ cost of production in the future period→ ↑SRAS from SRAS1 back to SRAS2 (Diagram 4) → price level in economy ↓ from P1 to P2 and higher real GDP from Yf1 to Yf2.

Diagram 4



c. RWEs (Any 1):
   - Germany has a well-known dual education system that combines classroom instruction with on-the-job training. In recent years, Germany has continued to invest in this system by expanding apprenticeship programs and offering vocational training opportunities to young people. This investment in human capital helps to develop a skilled workforce and improve labor productivity.
   - In 2020, the European Union unveiled the European Skills Agenda, which emphasized investment in human capital as a key driver of economic recovery and growth. The agenda focused on improving skills acquisition, supporting lifelong learning, and facilitating labor market transitions. It aimed to boost labor productivity by ensuring that individuals have the necessary skills to thrive in a rapidly evolving economy through targeted investments in education, training, and upskilling programs.
   - <u>Investment in infrastructure:</u> In 2018, India launched the Bharatmala project, which aimed to develop and upgrade road infrastructure across the country. By improving transportation networks and reducing logistics costs, such infrastructure investments can contribute to mitigating cost-push inflation.

6. <u>Explain 1 or 2 strengths of using SSP to reduce cost push inflation:</u>
   i. Achieve other macro goals unlike contractionary demand management policies which lower AD and hence economic growth and employment.
   → E.g. I in human capital & infrastructure → rise in productivity → potential growth & lower structural unemployment (sectoral and regional) + boost income of lowly-skilled/poor → promotes income equality and economic development.
   → E.g. market-oriented policies → increase competition and efficiency → potential growth; abolishing or lowering min wage can lower unemployment arising from labour market rigidities.
   ii. Market oriented policies such as deregulation → no govt spending involved → avoid unsustainable debt and minimise crowding out effect or opportunity cost in the use of govt funds.

iii. Increased competitiveness from market-based policies such as trade liberalization and deregulation can improve consumers welfare as firms strive to offer better and wider variety of products and services at more affordable prices.

7. <u>Explain 1 or 2 weaknesses of SS-side policies in tackling cost-push inflation:</u>
   i. Long term – Lengthy effect time lag before benefits are realized due to extended nature of the policies to boost productive capacity → unable to tackle inflation in the short term unlike monetary policy that has a relatively short implementation time lag as interest rates can be adjusted on a monthly basis;
   ii. Market-based policies that increases reliance on market forces – e.g. deregulation and trade liberalisation → subject to abuse of market power and foreign players (e.g. dumping) and exploitation of consumers + threaten domestic employment; labour market reforms → may worsen income inequality and subject workers to exploitation by firms
   iii. Interventionist policies can be costly as it requires govt funding to finance such policies → strain on govt's budget → may lead to crowding out effect if financed through borrowing or increase burden on taxpayers. In contrast, contractionary fiscal and monetary policy do not have such an effect.

Note: The use of currency appreciation to control imported inflation is also acceptable as long as it is supported by accurate RWEs and economic analysis, including its strengths and weaknesses.

Synthesis:

- It's worth noting that the effectiveness of the various policies in reducing inflation varies depending on the causes of inflation. SSP can be effective against cost-push since it targets the root cause of inflation originating from the SS side. Likewise, contractionary demand management policies may be more effective in reducing demand pull inflation for the same reason.
- Yet SSP takes time to materialize fully and with its secondary effect on AD in the short term, it may worse inflationary pressure from since it increases G and hence AD.
- As such, Central Banks would generally rely on contractionary monetary policy as a quick and first responder policy to prevent inflation from escalating regardless of the cause. This is especially true for central banks that have gained independence and been given the primary role of maintaining price stability through the use of monetary tools.
- Hence it is not uncommon to see governments using a policy mix of both monetary policy and supply-side policies to reduce the rate of inflation in the short term while promoting price stability in the long term.

Part (b) 15 marks

Marks	Level descriptor
0	• The work does not reach a standard described by the descriptors below.
1–3	• The response indicates little understanding of the specific demands of the question. • Economic theory is stated but it is not relevant. • Economic terms are stated but they are not relevant. • The response contains no evidence of synthesis or evaluation. • A real-world example(s) is identified but it is irrelevant.
4–6	• The response indicates some understanding of the specific demands of the question. • Relevant economic theory is described. • Some relevant economic terms are included. • The response contains evidence of superficial synthesis or evaluation. • A relevant real-world example(s) is identified.
7–9	• The response indicates understanding of the specific demands of the question, but these demands are only partially addressed. • Relevant economic theory is partly explained. • Some relevant economic terms are used appropriately. • Where appropriate, relevant diagram(s) are included. • The response contains evidence of appropriate synthesis or evaluation but lacks balance. • A relevant real-world example(s) is identified and partly developed in the context of the question.
10–12	• The specific demands of the question are understood and addressed. • Relevant economic theory is explained. • Relevant economic terms are used mostly appropriately. • Where appropriate, relevant diagram(s) are included and explained. • The response contains evidence of appropriate synthesis or evaluation that is mostly balanced. • A relevant real-world example(s) is identified and developed in the context of the question.
13–15	• The specific demands of the question are understood and addressed. • Relevant economic theory is fully explained • Relevant economic terms are used appropriately throughout the response. • Where appropriate, relevant diagram(s) are included and fully explained. • The response contains evidence of effective and balanced synthesis or evaluation. • A relevant real-world example(s) is identified and fully developed to support the argument.

- *Students seem to be relatively more prepared for this question compared to (a), largely due to ample exposure to similar questions but on a different macroeconomic area of focus. That said, it is disappointing to see some students not doing well for this due to weak conceptual understanding or underdeveloped ideas, especially when discussing strengths and weaknesses of the selected policies.*
- *An area worth highlighting is that students tend to exclude the primary effect of SSP on LRAS and explained how interventionist SSP will increase SRAS directly even though the rise in productive capacity is acknowledged. This issue seemed to be carried over from previous assignments/common test.*
- *RWEs when applied effectively can enhance the quality of the essay. That said, a handful still included historical or outdated RWEs when there are more recent ones of similar nature/situation.*

- *Students that access the higher marks tend to be those that can produce more targeted discussion the selected policies based on the 2 different causes of inflation and supported by effective RWEs and diagrams, rather than a generic approach of lowering inflation.*
- *There seems to be an excessive selection of contractionary fiscal policy (over contractionary monetary policy), paired with interventionist SSP. While both policies are acceptable, those who discussed the 2 policies tend to approach it in a contradictory manner – often suggesting the use of contractionary fiscal policy in the short term via lowering G and then only to increase AS by increasing G in terms of interventionist policies. As such, students were unable to arrive at a coherent synthesis.*
- *It is strange to see some scripts which regarded monetary policy as a central bank policy, distinct from government policy, citing central bank independence as the reason. That said, students need to be aware that NOT all central banks are independent. Moreover, central bank, whether independent or not, is the institutionalised conductor of monetary policy for the economy.*

2 (a)

The ~~co~~ Consumer Price Index (CPI) is a method used to measure ~~inflation~~ the inflation rate of a country. Inflation refers to a sustained increase in average price level over time. By tracking the changes in price over time of a basket of goods that an average household in the country purchases, the CPI is able to provide an estimate of the country's inflation rate over time. However, the CPI ~~is not a perfect~~ does not provide an accurate is unable to generate a fully accurate rate of inflation, due to the limitations discussed below:

Firstly, not all households are identical. Some households consists of more members, perhaps due to more children. As such, ~~their basket of~~ the basket of goods they purchase will differ from that of the average household, in the sense that they consume a higher quantity of ~~goo~~ goods and services. Thus, the value of their basket of goods is higher than average. ~~Fu Additionally, for lower income households of average size, the ca average basket of goods purchased by an average household will constitute a larger proportion of their income. For th both the two groups mentioned above,~~ Therefore, the CPI will underestimate the rate of inflation ~~they experience.~~ this group of households experience.

Secondly, the basket of goods that an average household purchases changes over time due to changing tastes, preferences and needs. Therefore, the original basket of goods chosen ~~as a bas~~ for the calculation of the CPI will no longer ~~be provide~~ be an accurate reflection of the rate of inflation ~~of~~ experienced by households as they may no longer purchase

some of these goods, ~~on~~ and instead purchase other goods that experience varying rates of inflation. Therefore, the CPI will either underestimate or overestimate the rate of inflation experienced by the average household, depending on whether the new goods they purchase experience a ~~lower or~~ higher or lower rate of inflation than the goods in the original basket. ~~Furthermore~~ Furthermore, the original basket of goods cannot be changed in accordance with ~~consu~~ changes in ~~consumer~~ household purchasing patterns over time, as it would ~~make it~~ not be possible to derive an accurate rate of inflation from the comparison of two different baskets of goods.

Lastly, there ~~is~~ may be inaccuracies in data collection, ~~leading to causing the CPI to be unable to provide~~ preventing the CPI from being an accurate measure of inflation. When surveys are sent out to households, households may not accurately record down all their purchases. Furthermore, some households may not even ~~be~~ complete the survey, resulting in the CPI failing to take the purchases of all households into account. Both of the above result in the generation of an inaccurate CPI that is not ~~equal to the~~ an accurate reflection of inflation.

In ~~conclus~~ conclusion, ~~for~~ due to the above reasons, the CPI is only able to provide an estimate of the rate of inflation, and should not be considered an accurate measure of the inflation rate ~~of~~ experienced in a country.

2 b.

Inflation is the sustained increase in the general price level over a period of time. ~~This~~ ~~the effect can be due to demand-pull inflation~~ The general price level can increase due to demand-pull inflation where ~~demand is exceeding the~~ increases in aggregate demand (AD) cause ~~prices levels to increase~~ price levels to increase, or due to cost-push inflation where the costs of production change; results in a ~~a~~ decrease in the short-run ~~aggre~~ aggregate supply (SRAS). that increases general price levels. ~~Inflat~~ Both kinds of inflation can be tackled through demand-side and supply-side policies. This essay will evaluate the use of these government policies in reducing a country's rate of inflation, which is the measure of increase in price levels over a period of time.

Demand-pull inflation can be reduced in the short run through the use of contractionary monetary policy. Contractionary monetary policy is the central bank's ~~manipulation of the increasing the interest rates to lower meet macroeconomic goals, such as reduced inflation~~. manipulation of interest rates by decreasing interest rates to meet the macroeconomic objectives, including reducing ~~the~~ inflation. In 2018, the ~~Philippines~~ Filipino government ~~used~~ started the "Build Build Build" infrastructure program to boost economic growth in Philippines. This was through government spending to build infrastructure such as buildings and roads. This increase in government expenditure caused AD to increase, resulting in AD to shift to the right from AD_1 to AD_2, thus causing the general price level to increase from GPL_1 to GPL_2 and real GDP to increase from Y_1 to Y_2 in Diagram 1. Thus, there was demand-pull inflation in ~~the~~ the Philippines, where inflation rate increased to 5.3%. other was this?

(Diagram 1 on next page)

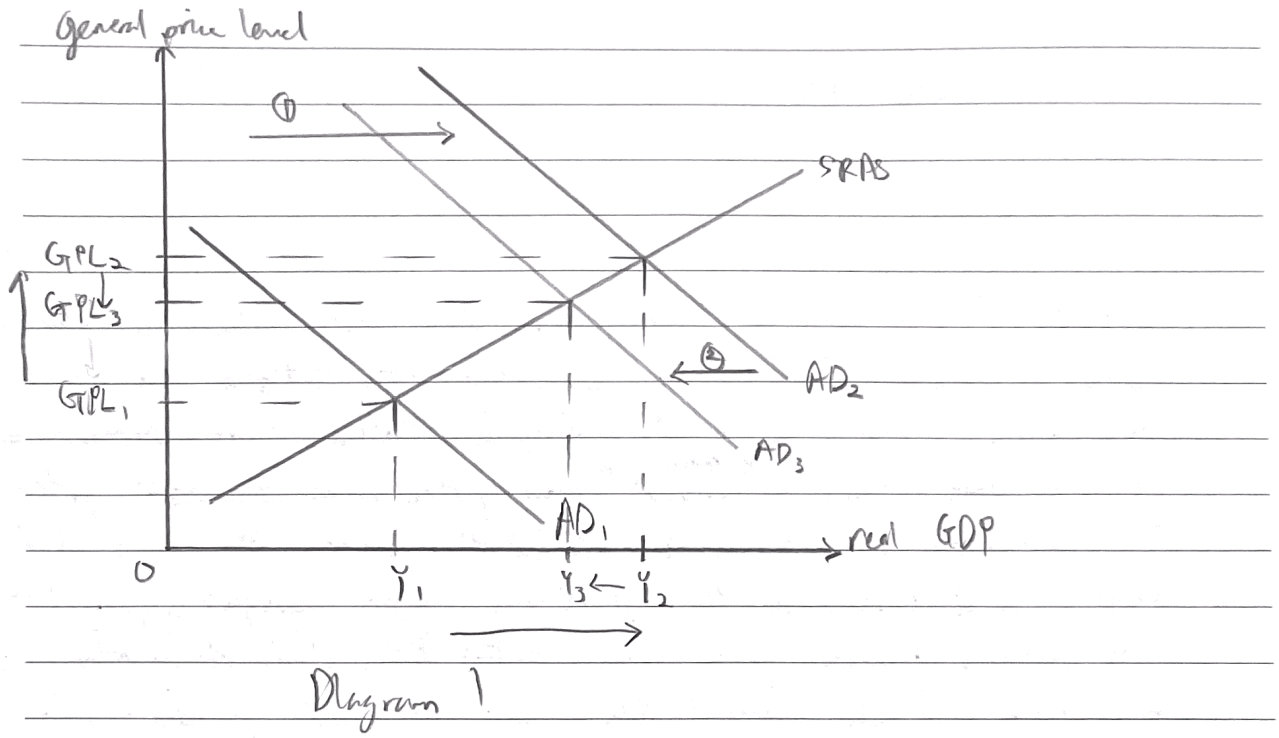


Diagram 1

To counter the increase in price levels due to inflation, the Philippines central bank ~~used~~ contractionary monetary policy where they ~~lowered~~ increased the interest rates from 3.75% in ~~Oct~~ October 2018 to 4.25%. In ~~Nov 28~~ November 2018. This increased the cost of borrowing and rate of returns on savings, resulting in firms borrowing less from banks to fund their investment, and consumers placing their money in banks instead of spending them on goods and services. This decreased consumption and investment expenditure, resulting in a decrease in AD from AD_2 to AD_3, thus ~~lowering~~ lowering the general price level from GPL_2 to GPL_3 and decreasing real GDP from Y_2 to Y_3. in Diagram ~~2~~ 1. Thus, contractionary monetary policy ~~was use~~ can reduce inflation rate, where inflation rate decreased from ~~5.2%~~ 5.31% to around 3% in 2019.

The policy ~~was effective~~ had its advantages, such as how it could be implemented ~~in a short period~~ with short time lags. When the inflation rate quickly spiked, the Filipino central bank could quickly (how quick?) address the increased inflation through their lowering of interest rates, thereby reducing the potential harms of inflation to society such as increasing unemployment, and poorer standard of living for poorer people due to

2 b.

increased price of goods and services caused by increasing inflation.

Moreover, this policy could be implemented in small increments. In the Philippines, the interest rate was increased slowly in the month of October leading to November. This would be crucial in preventing a sudden drop in real GDP that could lead the Philippines into a recession. How much?

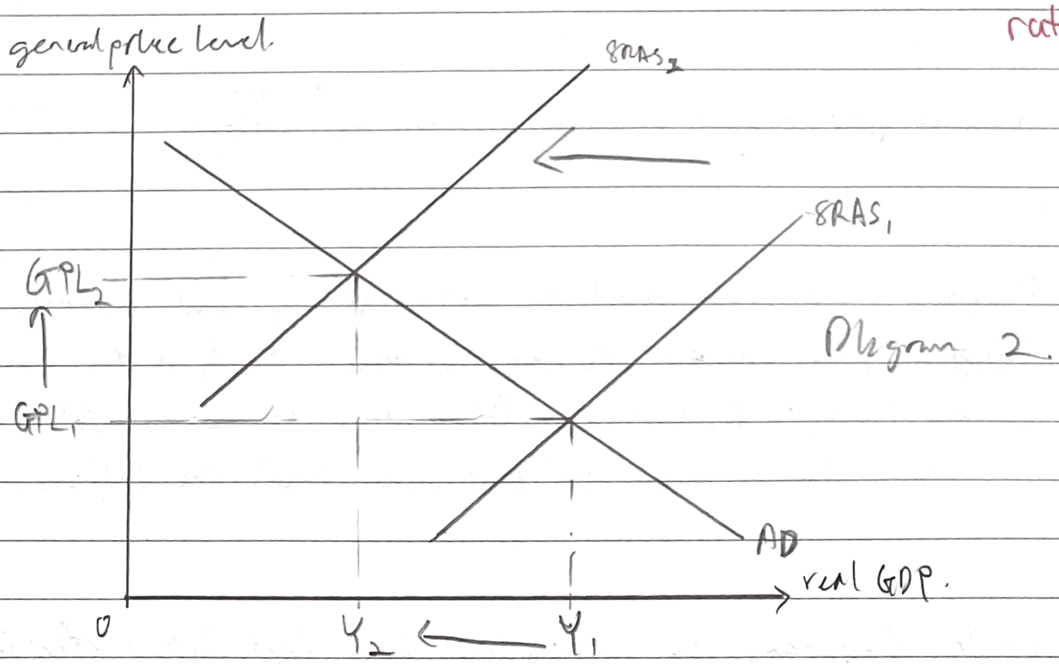
On the other hand, the policy may have had limited effect in the Philippines due to the economy being near full employment levels. When the economy is near full employment levels, the consumers and firms have increased optimism of future profits and the economy's future. Thus, they may be less willing to decrease their consumption and investment expenditure. Thus, there is limited decrease in inflation as seen by the general price level dropping to GPL_3 which is higher than GPL_1, before inflation. Nonetheless, the contractionary monetary policy is still effective in decreasing inflation rate.

Interventionist supply-side policies, which aim to increase government intervention to promote long run aggregate supply (LRAS) and potential growth can also reduce cost-push inflation in long run. In 2013, the Singaporean government restricted inflow of foreign workers leading to a shortage in supply of workers for the food and beverage industry, thus as there was greater increases in wages as compared to increases in productivity, which is output produced per hour, there was an increase in costs of production for food and beverage firms, thus resulting in a decrease in SRAS from $SRAS_1$ to $SRAS_2$ in Types? only?

2 b

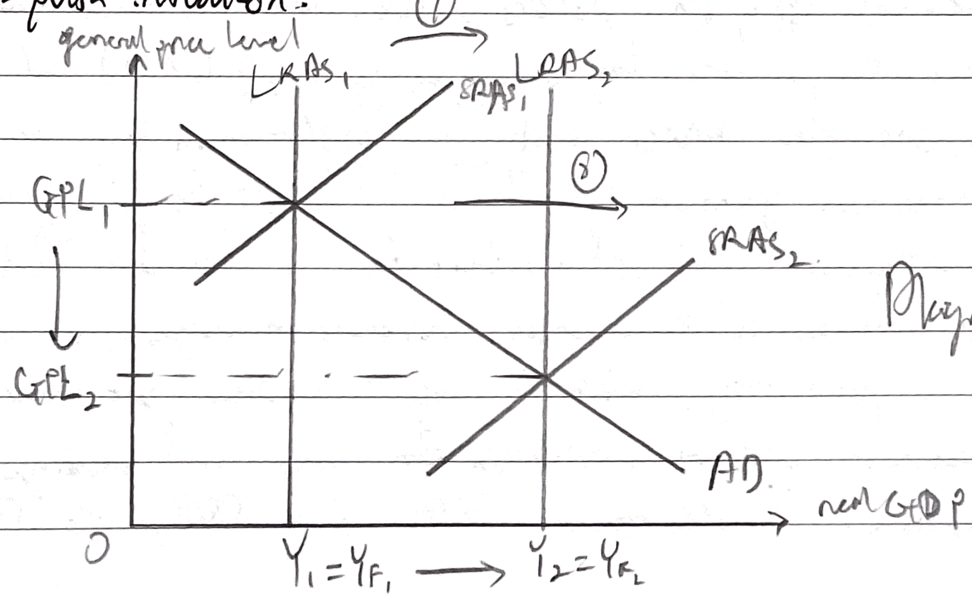
Diagram 2. Thus, the general price level increased from GPL₁ to GPL₂, and real GDP decreased from Y_1 to Y_2. Thus there was wage-push inflation, a form of cost-push inflation.

How high was the inflation rate?



When?

Through the SkillsFuture Singapore programme, a reskilling and training programme, S$500 credits were used by workers to learn to use automated cooking machines, thus allowing them to learn skills to be in the food and beverage industry. Thus, by increasing quality and quantity of factors of production, this increased productive capacity, hence increasing LRAS from $LRAS_1$ to $LRAS_2$ in Diagram 3. Hence in long run there was a increase in supply, causing wages to fall and real GDP increased from Y_1 to Y_2, and reduce costs of production, thus increasing SRAS from $SRAS_1$ to $SRAS_2$ in Diagram 3 thus reducing general price level from GPL_1 to GPL_2 and reducing cost-push inflation.



2 b.

An advantage of this ~~[illegible]~~ supply-side policy where ~~retraining~~ reskilling and training was used, there was long term benefit in that there is reduced ~~cyclical~~ unemployment, ~~as~~ as more workers join the labour force after upskilling themselves. ✓ Moreover, the reduced ~~inflation~~ inflation causes a reduction in prices of goods and services, thus increasing material standard of living. The intake of new workers who may have been structurally unemployed also helps increase income equality in Singapore. why so?

The other advantage of this policy is that it directly ~~[illegible]~~ counters ✓ wage-push inflation in the long run, by reducing wages, and helping firms make more profit, hire more workers and repeat, thus keeping wages at a right amount for employment and good productivity. ⇒ Should relate to LT sustained soln. NOT an adv since it is how it is expected to solve ē problem.

However, the policy ~~is~~ ~~lacking~~ ~~due~~ ~~to~~ has disadvantages such as ~~a need for~~ a long time lag for the policy's benefits to take place, with ~~reducing~~ the government's budget, creating a higher opportunity cost as the budget cannot be used for other policies. Moreover, this also requires the workers wanting to learn and reskill themselves, which may hinder the policy's ability to decrease cost-push inflation. ~~As~~ Also, ~~it is~~ ~~to~~ the government will not be able to predict the true ~~effects of the policy~~ effectiveness of policy and whether ~~reskilling~~ reskilling workers has actually improved productivity and decreased cost-push inflation in the ~~[illegible]~~ long run.. How so?? what do you mean?

In conclusion, both policies have their fair share of advantages and disadvantages for reducing the rate of inflation along with meeting

other macroeconomic goals, such as long and short term economic growth. However, the government should ~~supply side~~ implement both supply- and demand- side policies as both will have benefits to economy, ~~in reducing the supply-side policies take of the~~ where the demand-side policy can boost actual growth to continue steadily potential growth ~~with~~ while supply-side policy, while reducing both ~~the~~ demand-pull and cost-push inflation. It should be noted whether the economy is in a recession when may ~~have~~ these policies.

Really?

13

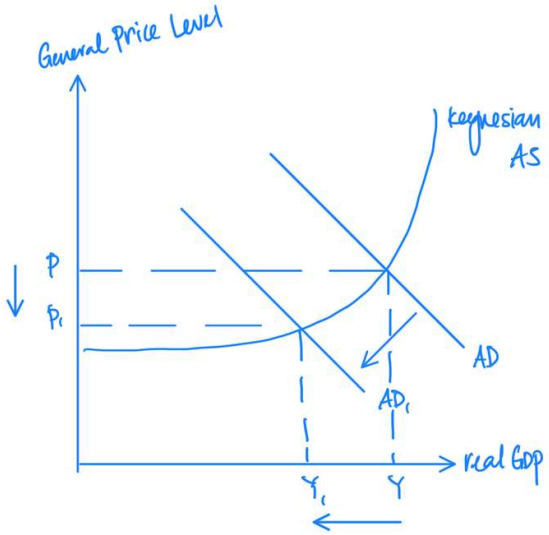
Question 3 (HL and SL)

a) Explain how a recession can lead to poverty. (10m)

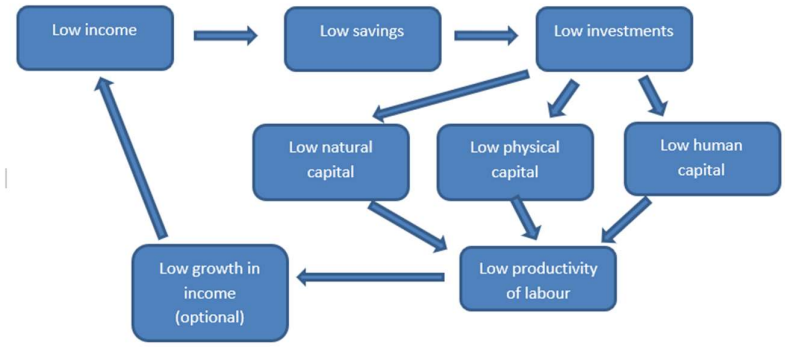
Answers may include:

Definition of recession, poverty.

AD/AS Diagram to show how a recession happens and fall in income. Poverty cycle diagram to show how a fall in income could lead to a poverty trap.



Poverty Cycle



- Explanation that a fall in AD could result in recessions and therefore a fall in income. AD falls due to a fall in the components of AD, either C, I, G or (X-M). There should be clear analysis and reference to the diagrams.

Eg: With a decrease in net exports, the AD of a country could fall from AD to AD1 and this would result in a decrease in real GDP from Y to Y1 and price levels from P to P1. This leads to a recession which is a decrease in real GDP over 2 consecutive quarters. With recessions, more people could lose their jobs due to a fall in demand for labour as less labour is

demanded due to lower real output being produced. This results in a fall in income for the individual.

- Link fall of income to increased levels of poverty through poverty cycle.

With lower incomes, as seen in the poverty cycle above, it would lead to lower savings and thus lower investment which could lead to lower growth and thus lower income again. This means that low incomes could perpetuate across generations resulting in people being stuck in a poverty trap.

Comments:

Most Students were able to explain how a fall in AD could lead to a recession. However, an explanation of business cycles did very little to explain how poverty could have resulted. The link to poverty was less well done as students were not able to link recession to job losses and therefore income falls. Causation and effect here tended to be confused.

Part (a) 10 marks

Marks	Level descriptor
0	• The work does not reach a standard described by the descriptors below.
1–2	• The response indicates little understanding of the specific demands of the question. • Economic theory is stated but it is not relevant. • Economic terms are stated but they are not relevant.
3–4	• The response indicates some understanding of the specific demands of the question. • Relevant theory is described. • Some relevant economic terms are included.
5–6	• The response indicates understanding of the specific demands of the question, but these demands are only partially addressed. • Relevant economic theory is partly explained. • Some relevant economic terms are used appropriately. • Where appropriate, relevant diagram(s) are included.
7–8	• The specific demands of the question are understood and addressed. • Relevant economic theory is explained. • Relevant economic terms are used mostly appropriately. • Where appropriate, relevant diagram(s) are included and explained.
9–10	• The specific demands of the question are understood and addressed. • Relevant economic theory is fully explained. • Relevant economic terms are used appropriately throughout the response. • Where appropriate, relevant diagram(s) are included and fully explained.

b) Using real world examples, evaluate the effectiveness of FDI in promoting economic growth and economic development. (15m)

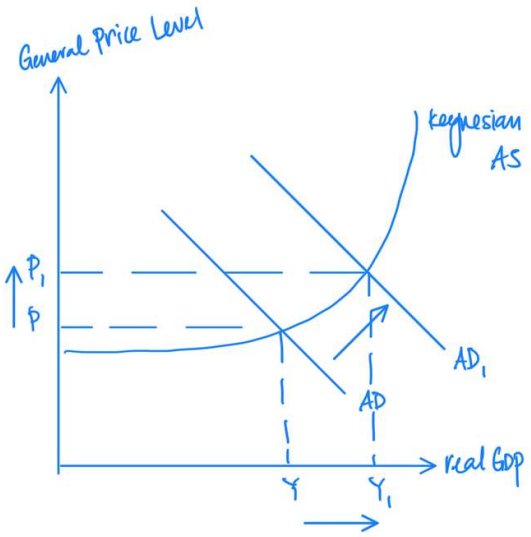
Answers may include:

Definition of FDI, economic growth and development

Pros of FDI

- Supplement foreign exchange earnings
    - Inflow in financial account can offset current account deficits
    - Allow for greater export earnings
- Supplements and improves upon local technical and management skills and technology
    - One of the important advantages of FDI
    - Increases level of human capital and productivity
    - Allows for the country to move up in the stages of development
- Bridging the savings gap
    - Supplement insufficient domestic savings increasing the amount of investment (AD/AS diagram to show AD increasing)
    - Usually helps to increase level of physical capital
    - Breaking the poverty cycle (poverty cycle diagram to be used)
- Greater tax revenues
    - MNCs contribute to tax revenue of the country
- Help promote local industry
    - When local products are bought as inputs
- Increase employment and thus contribute to growth
    - Stems from increased investment and thus increased AD

Should link to growth and development in order to get higher level grades
Eg of analysis:
FDI inflows into Vietnam have increased significantly over the past three decades, rising from 180,000 USD in 1990 to 15.7 billion USD in 2021. FDI inflows have helped to sustain Vietnam's impressive economic growth, which averaged 6.8% per year from 2016 to 2019, making it one of the fastest-growing economies in the region.



With an increase in FDI, this would result in an increase in AD from AD to AD1 due to increase in I, which would result in an increase in GDP from Y to Y1, hence achieving short term economic growth. Due to the greater aggregate demand for goods and services, the derived demand for labour would also increase. This allows for an increase in employment. Increase in incomes would mean an increase in material welfare for the Vietnamese as they can now afford a greater amount of goods and services. The Vietnamese government would also see a boost in tax revenues from both increases in income and corporate tax. If spent appropriately on merit and public goods would boost non material welfare and help promote economic growth and development.

FDI may not lead to growth or development as

1) Profit repatriation
2) Hiring from their own countries so may not lead to knowledge flow
3) Tax privileges given to MNCs
4) May force local businesses out of business instead
5) Capital intensive industries may not be suitable for the developing country and would not increase employment
6) Environmental degradation
    1) Usually they invest in countries that do not have heavy regulations on pollution
7) Promote inappropriate consumption patterns
    1) Advertising on the consumption of goods that are more suited to a lifestyle in a developed country

8) Infrastructure building more suitable to MNC
    1) The infrastructure built may not be suitable for the developing country
    2) Scarce resources are shifted away from providing goods for the people
9) MNCs have too much political power
    1) Countries may make decisions to please the MNCs
    2) These could be detrimental to the people
    3) MNCs have threatened to pull out of the developing country if demands are not met
10) Race to the bottom
    1) Developing countries compete for FDI
    2) The desire to host FDI may involve sacrifices of needed development

Eg of analysis:
Due to the governments prioritising economic growth, many developing countries have less stringent pollution laws as compared to developed countries. This may attract MNCs into investing into the country and setting up firms which are highly polluting in nature. As seen in China, where the average PM2.5 is 30.2 $\mu g/m^3$, however the WHO guidelines is at 5 $\mu g/m^3$. This could result in an average potential gain in life expectancy of 2.47 years should the guidelines be met. This would directly help to improve the HDI of country. A better living environment would also result in an improvement in non-material welfare of the country. Therefore, FDI in this case may not actually contribute to an increase in economic growth and development as the impacts on health and non-material welfare may outweigh that of increased incomes.
Any other points
Synthesis suggestion: to what extent a country benefits from FDI depends heavily on how the countries can manage the disadvantages that come with over reliance on MNCs or the exposure of domestic industries to foreign competition. There is no hard and fast rule to how much FDI is healthy, however, governments should learn to strike a balance.

Part (b) 15 marks

Marks	Level descriptor
0	• The work does not reach a standard described by the descriptors below.
1–3	• The response indicates little understanding of the specific demands of the question. • Economic theory is stated but it is not relevant. • Economic terms are stated but they are not relevant. • The response contains no evidence of synthesis or evaluation. • A real-world example(s) is identified but it is irrelevant.
4–6	• The response indicates some understanding of the specific demands of the question. • Relevant economic theory is described. • Some relevant economic terms are included. • The response contains evidence of superficial synthesis or evaluation. • A relevant real-world example(s) is identified.
7–9	• The response indicates understanding of the specific demands of the question, but these demands are only partially addressed. • Relevant economic theory is partly explained. • Some relevant economic terms are used appropriately. • Where appropriate, relevant diagram(s) are included. • The response contains evidence of appropriate synthesis or evaluation but lacks balance. • A relevant real-world example(s) is identified and partly developed in the context of the question.
10–12	• The specific demands of the question are understood and addressed. • Relevant economic theory is explained. • Relevant economic terms are used mostly appropriately. • Where appropriate, relevant diagram(s) are included and explained. • The response contains evidence of appropriate synthesis or evaluation that is mostly balanced. • A relevant real-world example(s) is identified and developed in the context of the question.
13–15	• The specific demands of the question are understood and addressed. • Relevant economic theory is fully explained • Relevant economic terms are used appropriately throughout the response. • Where appropriate, relevant diagram(s) are included and fully explained. • The response contains evidence of effective and balanced synthesis or evaluation. • A relevant real-world example(s) is identified and fully developed to support the argument.

Comments:

This was a rather poorly attempted question in terms of examples and application. Although the students were able to explain the theory but the application of examples lacked understanding of the question. There is little value in using developed countries as examples in the question nor is it appropriate to state that FDI would not benefit developing countries. The benefits to non-material welfare is usually not addressed which makes the answer rather limited. Students were only required to have 2 well developed points for each side.

Anglo-Chinese School (Independent)

[redacted]

International Baccalaureate
Baccalaureat International
Bachillerato Internacional

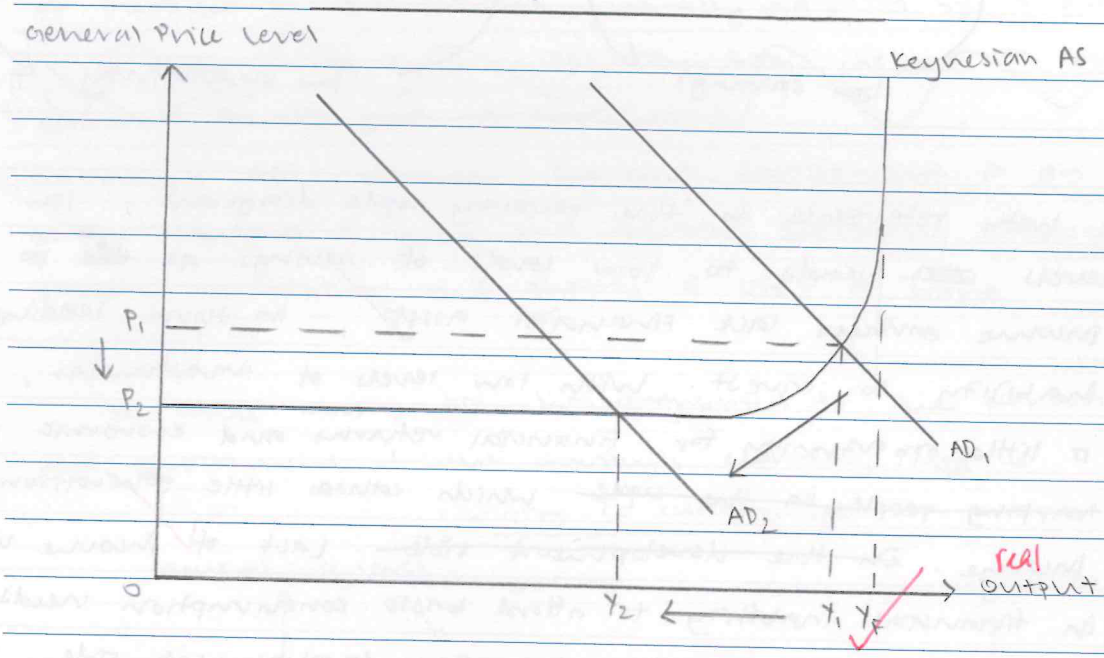
20/25

At the start of each answer to a question, write the question number in the box using your normal handwriting.

3 a.

A recession is a period of time in which the economy experience negative economic growth, usually indicated by a fall in gross domestic product (GDP). Due to the slowdown of economic activity, recessions can lead to poverty — a person's inability to meet basic consumption needs — beyond the years of recession.

X economy in recession

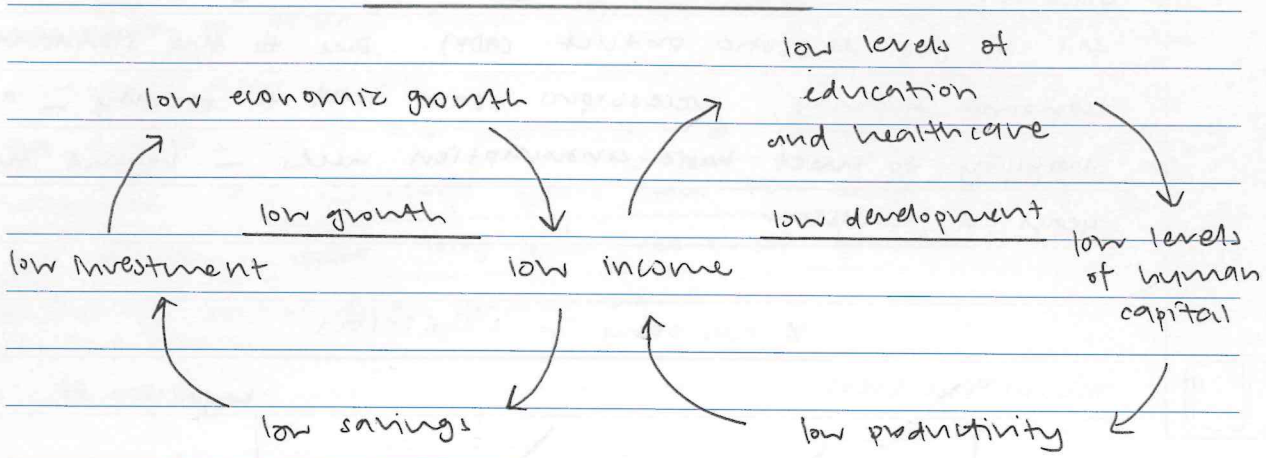


~~major~~ significant

During recession, ~~the~~ a fall in any of the components of aggregate demand (AD) — consumption, investment, government expenditure or the balance of trade — will cause AD to decrease, shifting left from AD_1 to AD_2 as shown in the diagram. As the economy's level of production decreases, output falls further away from the full employment level, ~~shifting left from~~ decreasing from Y_1 to Y_2. Since there is less output, demand for factors of production like ~~workers~~ labour decreases greatly. This results in ~~unemployment~~

widespread cyclical unemployment, in which people who are actively looking for jobs are unable to find one due to lack of employment opportunities in recession. The loss of employment causes loss of, or low income levels for a substantial portion of the population.

Poverty cycle Diagram



With reference to the poverty cycle diagram, low income levels ~~cause~~ leads to low levels of savings as ~~the~~ ~~po~~ low-income earners lack financial assets, in turn leading to inability to invest. With low levels of investment, there is little opportunity for financial returns and economic growth, ~~trapping people in the cycle~~ which causes little generation of income. ~~On the development side~~ Lack of income results in financial inability to afford basic consumption needs, trapping people in poverty. On the development side, low levels of income causes lack of financial capability to invest in education and healthcare. As a result, the level and quality of human capital is low, translating to low worker productivity and in turn, low generation of income. The low-income earners are unable to meet a basic standard of living nor achieve economic fulfilment, so their economic wellbeing is low in poverty. // As a result of the cyclical unemployment brought about by recession, people suffer from low income levels that trap them in poverty.

gd answer. 9/10.

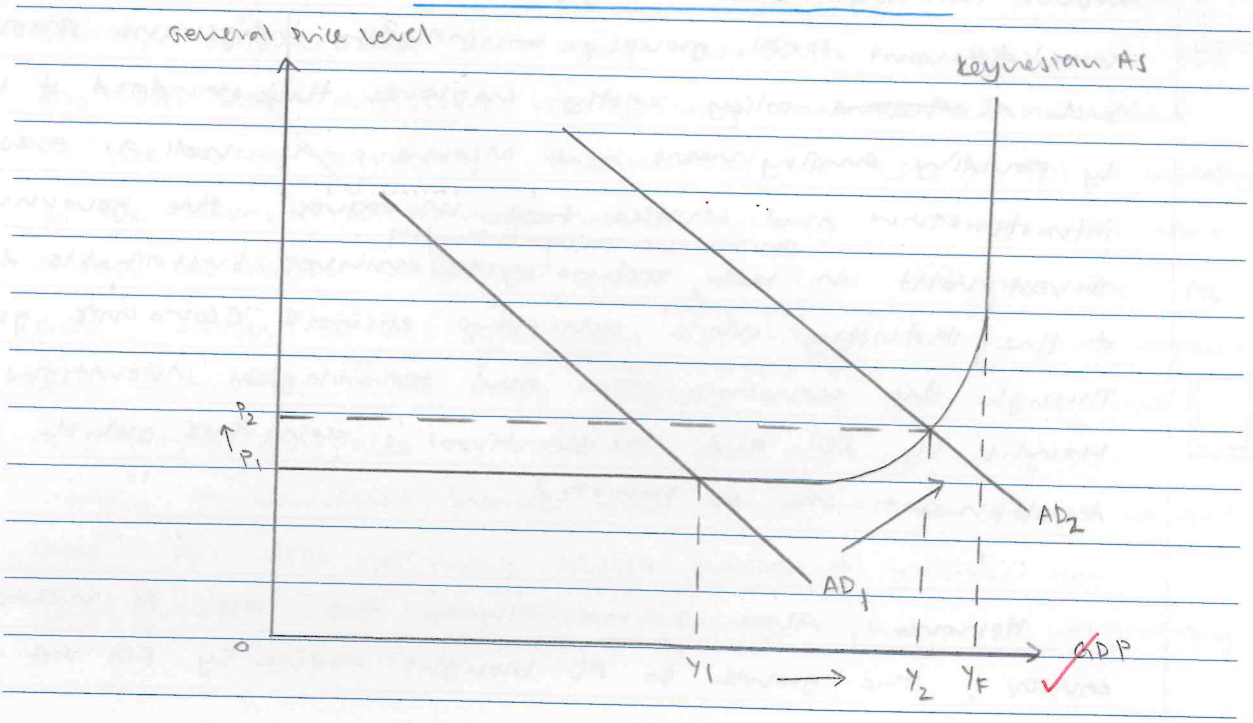
At the start of each answer to a question, write the question number in the box using your normal handwriting.

3 b.

Foreign direct investment (FDI) is an inflow of capital from a foreign firm into the domestic economy of a country. With increasing globalisation, FDI has become an important component of global financial flow, accounting for a third of global financial flows. Many countries seek to attract FDI to promote economic growth and development in their economy, but it has not always been effective. Economic growth is an increase in real output, usually indicated by a rise in the economy's GDP. Economic development is an increase in the standards of living and economic wellbeing (employment, economic satisfaction and quality of life) of people.

In some cases, FDI has contributed to the economic growth and development of the country's economy.

country Y's economy with FDI



FDI is a component of aggregate demand (AD) in itself since it is a form of investment. Hence, an increase in FDI will cause AD to increase, shifting right from AD_1 to AD_2 in the diagram. As a result, GDP increases from Y_1 to Y_2, indicating economic growth. Furthermore, FDI also provides access to wider overseas and global markets, which may benefit exporting sectors of the country. Since (exports minus imports) is also a component of AD, this translates to greater economic growth. With the increase in GDP and government revenue from corporate taxes on foreign firms, the government budget benefits, giving the government greater financial ability to provide public and merit goods like education, healthcare and other infrastructure. This greatly increases the standards of living and quality of life for its citizens, which boosts economic development. For example, the New Zealand government's industry policy in which a substantial part of the government budget goes toward research and development for new technologies like agritech and attracting FDI. This is with the intention of increasing sustainability, productivity and inclusivity of the local agricultural sector, through grants for firms using "green" solutions, as well as worker training and employment of people from different social groups — including indigenous Maori. Such a policy vastly improves their standard of living by providing employment and income, as well as access to infrastructure and services. Moreover, the government's investment in new environmentally-friendly technologies ensures sustainable development of the industry while achieving efficient economic growth. Through the economic gains and technological innovations brought by FDI and foreign firms, economic growth and development can be promoted.

However, this is not always the case. As mentioned earlier, the growth in AD brought about by FDI not only

At the start of each answer to a question, write the question number in the box using your normal handwriting.

causes ~~the~~ GDP to increase, but also a rise in general price level from P_1 to P_2 in the diagram. This may exacerbate inflation, and decrease the affordability of basic goods and services for low-income earners. With reference to the poverty cycle diagram in part 3(a), ~~the~~ low income levels lead to low levels of education and healthcare, in turn affecting human capital and productivity, trapping them in poverty. Standard of living and economic satisfaction may decrease, ~~with~~ which is detrimental to economic development. Furthermore, FDI has a tendency to ~~ex~~ worsen economic inequality, due to the clustering effect of FDI in urban area with more accessibility and more developed infrastructure. However, this skews the distribution of wealth away from rural areas to urban areas, resulting in a rural-urban divide. For instance, in Thailand, ~~which~~ majority of FDI is channelled to the capital city of Bangkok, where GDP has tripled some of Thailand's rural regions. Greater inequality could lead to increased relative poverty, ~~and~~ decreasing economic development. FDI also has been criticised for having too limited an effect on the local economy. Particularly for LDCs, FDI is usually in the form of outsourced manufacturing, hiring local low-skilled labourers without much beneficial skill transfer. As such, workers do not gain the benefits ~~of~~ purported technological know-hows that FDIs may bring for advancing local technologies and growth. Workers may even experience exploitative contracts or work in poor working conditions, leading to worsened health and standards of living. In such cases, FDI does not bring about economic growth nor development and may even detriment the local economy.

When would ↑ in price level be more severe?

To fully reap the benefits of FDI and efficiently achieve economic growth and development, the country should have * strong government intervention such as in New Zealand. This would allow governments to channel the tax and economic gains brought about by FDI into provision of merit goods that benefit the local economy. * ~~at best~~ It is also critical for effective ~~regulation~~ policies to ~~ensure~~ encourage FDI that brings about beneficial employment opportunities for locals, increasing the productivity of the workforce. ** If ~~the~~ effectively harnessed, the economic gains from FDI could greatly benefit the country's ~~econ~~ long-term economic growth, and encourage sustainable development.

11
~~12~~/15

- A generally good answer.
- link to development can be more robust.