Question 1:

China experienced a slowdown in GDP growth in the aftermath of the Eurozone crisis. Under the European Union (EU)-China Free Trade Agreement (FTA), China is reducing tax rates on European exports, ranging from Louis Vuitton accessories to beverages and tobacco.

- (a) Explain how China's reduction in tax rates might affect expenditure by Chinese consumers on the different types of European goods. [8]
- (b) Assess the impact of the above changes on the sales volume of different types of goods both in EU and in China. [17]

Suggested Answer:

<u> Part (a)</u>

Question Interpretation

- To explain the impact of fall in tax rates on expenditure by Chinese consumers (equivalent to total revenue earned by EU exporters) on different types of goods
- To identify that a fall in tax rates is expected to reduce the prices of goods, due to a fall in cost of production, resulting in an increase in supply
- To consider the 'different types of goods', PED can be used as a tool of analysis to determine the impact on expenditure

Introduction

Unpack key terms:

- Expenditure by Chinese households = Total revenue earned by EU exporters
- A fall in tax rates will affect expenditure by Chinese consumers on different types of goods, according to differences in price elasticity of demand (PED)
- PED is a measure of the degree of responsiveness of quantity demanded to a change in price of a good, ceteris paribus.
- As evident from the preamble. EU exports both luxury goods that are non-necessities, such as Louis Vuitton accessories and necessities with few substitutes, such as beverages and tobacco.

Development

I. Impact of a reduction in tax rates on European exports:

Point> A fall in tax rates will result in an increase in supply

<Elaboration> A fall in tax rates will reduce MC of production \rightarrow the same quantity of output can be supplied at a lower price \rightarrow illustrated by a rightward shift of the supply curve from S₀ to S₁, in Fig 1. At the initial, equilibrium price, P₀, quantity supplied exceeds quantity demanded creating a surplus. To get rid of the excess stock, producers will be willing to lower the price. Consumers observing such behaviour of producers will be willing and able to increase quantity demanded, ceteris paribus. Furthermore, as prices fall, producers will also lower quantity supplied, represented by a movement along the new supply curve, S₁. This process will continue and stop when the demand and new supply of intersects at the lower equilibrium price (P₁) and higher equilibrium quantity transacted (Q₁).

<Link> The impact on total revenue and hence total consumer expenditure may rise or fall, depending on the PED values of the goods.



Fig 1: Impact of fall in tax rates on EU exports to China

II. Consider the impact on expenditure when goods have PED>1

<Point> Consumer expenditure will increase for goods with price elastic demand i.e. PED >1.

<Exemplification> EU exports luxury goods, which are non-necessities such as Louis Vuitton accessories to China.

Explain why (using one PED factor) demand for Louis Vuitton accessories is price elastic:

Elaboration> These goods take up a <u>(i) large proportion of income</u> OR <u>(ii) have</u> many available close subsitutes, such as other branded accessories from Gucci, Chanel, Burberry, Mulberry etc. Hence, the quantity demanded will be more responsive to changes in price since Louis Vuitton accessories are not necessary for an individual's survival. A fall in price will lead to a more than proportionate rise in the quantity demanded, ceteris paribus.

Diagrammatical Illustration: Relating to Figure 2, the increase in expenditure arising from the rise in the number of units bought (area $Q_0 cbQ_1$) exceeds the decrease in expenditure arising from the fall in price paid on the number of units bought (area $P_0 acP_1$).



Fig 2: Impact on expenditure for PED >1 Fig 3: Impact on expenditure for 0<PED<1

<Link> For a good that has price elastic demand consumers' expenditure will rise with the decrease in tax rates.

III. Consider the impact on expenditure when goods have 0<PED<1

<Point> Consumer expenditure will decrease for goods with price inelastic demand i.e. 0<PED <1.

<Exemplification> EU exports goods with few substitutes such as beverages and tobacco to China.

Explain why (using one PED factor) demand for beverages and tobacco is price inelastic

<Elaboration> These goods take up a (i) small proportion of income OR (ii) have few close substitutes, given the broadness of definition of the commodities, such as beverages OR (iii) high degree of necessity due to addiction to cigars and cigarettes made from tobacco. Hence, the quantity demanded will be less responsive to changes in price since beverages and tobacco are necessities for an individual's survival. A fall in price will lead to a less than proportionate rise in the quantity demanded, ceteris paribus.

Diagrammatical Illustration: Relating to Figure 3, the decrease in expenditure arising from the fall in price paid on the number of units bought (area P_0egP_1) exceeds the increase in expenditure arising from the rise in the number of units bought (area Q_0gfQ_1)

<Link> For a good that has price inelastic demand consumers' expenditure will fall with the decrease in tax rates.

Conclusion

In summary, expenditure by Chinese consumers on on EU imported goods with PED>1 will be likely to rise while the expenditure on goods with PED<1 will likely to fall following the fall in the tax rates.

Mark Scheme

L3 (6-8)	For an answer that demonstrates scope and depth
	 Clear and accurate definition of PED
	 Impact of fall in tax rates on consumer expenditure of both types of goods; 0<ped<1 and="" ped="">1</ped<1>
	Depth
	 Identifying and explaining the relevant factors to account for the difference in PED for the various types if imported goods from EU
	 Explanation of the impact of decrease in tax rates on consumer expenditure on both types of goods along with necessary diagram(s)
L2 (4-5)	For an answer that lacks either the scope of the depth of explanation
	Scope:
	Considers only one type of good
	Depth:
	 Under developed explanation of how fall in tax rates impacts consumer
	expenditure on different types of goods using PED concepts.
	Cap at 4m
	 No diagrams

 For an answer that shows some knowledge of how rising GST causes supply to fall but fails to explain the impact on consumer expenditure OR the impact of rising GST on consumer expenditure but lacking in analysis no diagrams and glaring conceptual errors

Part (b)

Question Interpretation

- To identify the 'above changes' in EU and China
- In EU, fall in income (Eurozone crisis) and hence fall in demand of the various types of goods produced in EU. There will be no change in supply.
- In China, income is increasing albeit at a slower rate (slowdown in GDP growth). To use YED as a tool of analysis to determine the impact on sales volume of different types of good.
- To use XED as a tool and analyse the impact of the EU-China FTA on sales volume of domestically produced substitutes in China.

Introduction

Unpack key terms:

- Sales volume \rightarrow analysis is on quantities (Q) and not expenditure (P.Q)
- To assume that the rise in income is in real terms

Development

A) Impact on sales volume for different types of good in EU

Note: There will not be any change in supply of the various types of goods in the EU nations, as the reduction in tax rates is only applicable for EU exports to China

I. Explain the impact of the Eurozone crisis on normal necessities goods <Point> Due to the Eurozone crisis \rightarrow there is a fall in GDP \rightarrow resulting in less than proportionate fall in demand for goods with 0<YED<1 <Exemplication> Normal necessities, such as beverages and tobacco have very little dependence on the level of income. Hence, a fall in GDP may induce people to reduce the demand for beverages, but not significantly as it is deemed as necessities by most households. Hence, the demand for these goods will fall at a lower rate from D₀ to D₁ in Fig 4(a) than income, ceteris paribus.



Fig 4 (a): Mkt for goods with 0<YED<1 in EU

Fig 4(b): Mkt for goods with YED>1 in EU

II. Explain the impact of the Eurozone crisis on normal luxuries

<Point> The Eurozone crisis \rightarrow fall in GDP \rightarrow resulting in more than proportionate fall in demand for goods with YED>1

<Exemplication> Normal luxuries, such as Louis Vuitton accessories are only consumed after the expenditure on ncessities has been accounted for. The demand is income elastic and decreases at a higher rate than income, ceteris paribus.

Diagrammatical illustration: Hence, the demand for these goods will fall from D_0 to D_1 in Fig 4(b) at a higher rate than income, ceteris paribus.

<Link> The Eurozone crisis will result in fall in sales volume for both normalluxuries and normal-necessities, but the extent of fall is more significant for luxuries than for necessities.

B) Impact on sales volume for different types of good in China

increase at a slower rate than income.

Note: China is experiencing a slowdown in GDP growth, which implies GDP is increasing but at a slower rate.

- I. Explain the impact of slowdown in GDP growth on normal necessities: <Point> Slowdown in GDP growth → rise in GDP at a slower rate → resulting in less than proportionate rise in demand for goods with 0<YED<1 <Elaboration> For normal necessities, rise in income will induce people to buy more of beverages and tobacco but there is a limit to how much more of beverages they can consume. As such demand for necessities in China will
- II. Explain the impact of slowdown in GDP growth on normal luxuries <Point> GDP increasing at a slower rate → resulting in more than proportionate rise in demand for goods with YED>1 <Elaboration> For normal luxuries, rise in income will induce people to buy more of branded accessories. As these goods are only consumed after the expenditure on necessities has been accounted for, the demand for such goods is income elastic and increases at a higher rate than income.



Fig 5 (a): Imported goods with 0<YED<1 in China

Fig 5(b): Imported goods with YED>1 in China

III. Explain the combined effect of the two events on equilibrium quantity <Point> Sales volume will increase unambiguously for all types of goods in China due to the EU-China FTA and slowdown in GDP growth However, sales volume for normal necessities will increase by a lesser extent as compared to the increase in sales volume for normal luxuries. Diagrammatical Illustration:



goods with 0<YED<1 in China

Fig 6 (b): Combined impact on imported goods with YED>1 in China

IV. Explain the likely impact of the EU-China FTA on sales volume of domestically produced substitutes in China

A reduction in tax rates will result in fall in price of all types of imported goods from the EU nations. Thus, if the imported and locally produced goods are close substitutes, i.e., XED>0, then a fall in price of imported goods will result in a fall in demand for locally produced goods, ceteris paribus \rightarrow fall in sales volume for locally produced good, supply remaining constant.

Evaluation:

- <u>Restrictive assumptions, such as ceteris paribus does not hold in the real world</u> The actual extent of changes in DD and SS does not just depend on the nature of the goods (YED values) but on the extent on the initial changes in (i) tax rates, (ii) income and (iii) changes in other demand or supply factors. For e.g a small increase in income and a significant increase in consumer awareness of the harmful effects of smoking, can actually lead to a fall in demand for tobacco and therefore, sales volume
- 2. <u>Relevance of the elasticity concepts:</u> Depends on the availability and accuracy of the data used to measure PED, YED or XED.
- 3. Market forces of <u>both demand and supply are dynamic</u>. It would be difficult to preempt accurately the economic outcomes at any point of time.

Conclusion:

- Sales volume unambiguously decreases for all types of goods in EU, whereas it increases in China.
- The extent of increase in sales volume depends on (i) YED values, (ii) extent of fall in tax rates on EU exports and (iii) extent of change of GDP, both in EU and in China

Mark Scheme

L3 (10-13)	For an answer that
	 Depicts good understanding of question requirements with a very clear attempt to discuss both aspects of the question (including diagrams), using information from the preamble Provides sufficient rigour to explain how the triggers mentioned in the preamble can cause a change in sales volume of different types of goods both in EU and in China Should be using YED concepts
L2 (7-9)	For an answer that
	 Provides lacks in either scope or depth in coverage Undeveloped arguments (lack of clarity and coherence), insufficient use of YED concepts Minor conceptual error Cap at 8m if answer only addresses the impact on sales volume in China
L1 (1-6)	For an answer that
	• only considers the impact of slowdown in GDP growth and not falling in tax rates inn China

	 limited or no use of YED concepts has severe conceptual errors Cap at 4m, is answer only addresses the impact on sales volume in EU
E2 (3-4)	 Judgement based on sound economic analysis Comparison between EU and China Comparison across the different types of goods
E1 (1-2)	 For an unexplained judgment, or one that is not supported by analysis. Lack of comparison between EU and China

Question 2:

Restaurants across Singapore are engaging in differential pricing strategy, whereby weekend dinners pay more than weekday customers and special discounts are offered to both students and senior citizens alike.

- (a) Explain how restaurants in Singapore discriminate buyers by charging different prices for the same meals. [8]
- (b) Discuss the extent to which barrier to entry is the most important factor influencing a firm's behavior in your country. [17]

Suggested Answer

Part (a)

Question Interpretation

- To define price discrimination
- To identify and explain the prerequisites for price discrimination, **exemplified in the given context of restaurants in Singapore**
- To explain how restaurants in Singapore can engage in 2nd degree price discrimination OR 3rd degree price discrimination

Introduction

Unpack key terms:

- Identify 'differential pricing strategy' implies price discrimination
- Define price discrimination
 Restaurants in Singapore can engage in price discrimination <u>which refers to a</u> pricing strategy whereby a firm charges different prices for the same product for reasons not associated with differences in cost of production.

Development

- I. To identify and explain the prerequisites for restaurants to engage in price discrimination
 - 1. price-setting ability;
 - 2. segregation of markets, whereby resale of the good is impossible berween markets;
 - 3. price-elasticity of demand (PED) for the good in each market must differ.

These conditions must to be met because:

 Restaurants should be able to set different prices without losing market share completely, with their market power derived from product differentiation → restaurants have price setting ability given that their products are often differentiated, i.e, the meals offered by different restaurants are not perfect substitutes of each other, hence a restaurant can increase the price without losing all it's sales

- Restaurants should be able to identify different market groups and segregate consumers into the respective groups, while at the same time preventing resale and arbitrage→ restaurants are able to identify different market groups by the degree of preference for the meals, as mentioned in the preamble between students, senior citizens and young adults. Furthermore resale and/or arbitrage is impossible as the meals provided is easily perishable and due to hygiene reasons unlikely to have second-hand buyers;
- Restaurants can maximise profits by charging consumers with higher PED a lower price to increase total revenue (TR) and charging consumers with lower PED a higher price to increase TR.

II. To explain how restaurants can discriminate buyers by engaging in

- <Point> Second-degree price discrimination, whereby weekend dinners pay more than weekday customers

<Elaboration> Restaurants can engage in 2nd degree price discrimination which refers to charging consumers different per unit prices based on the amount of quantity they consume <u>or</u> the provision of different price options for what is essentially the same product but allowing consumers to reveal their willingness and ability to pay, and hence consumers end up paying different prices for the same product through this self-selection process; **need to emphasise that cost differences are zero or negligible**, between meals produced during weekdays and weekends.

<Exemplification>

- As mentioned in the preamble, 'weekend dinners pay more than weekday customers'. On weekends, consumers view restaurants dining as a form of recreational activity or spending leisure time with family and friends, thus increasing the degree of necessity for restaurant meals. Hence, they are less reponsive to price changes, ceteris paribus. An increase in price for weekend dinners will result in less than proportionate fall in quantity demanded for retaurant meals, thus increasing the TR.
- On the other hand, during weekdays due to busier work schedule, consumers view restaurant meals to be more of a luxury than a necessity, thus they are more repsonsive to prices of the meals. By charging lower prices for the same meals for the weekday customers, restaurants can increase TR and hence increasing profits.

OR,

<Point> Third-degree price discrimination, whereby special discounts are offered to both students and senior citizens alike

<u><Elaboration></u> In addition, restaurants can also engage in 3rd degree price discrimination by dividing consumers into different groups based on observed characteristics regarding differences in price-elasticity of demand, and charging these different groups varying prices, but the same price for all consumers within the same group <u>or</u> where the firms have more complete information regarding consumers and are able to clearly segregate them into different consumer groups and charge them different prices based on these observed characteristics regarding

differences in price-elasticity of demand; need to emphasise that cost differences are zero or negligible.

<Exemplification> Restaurants are able to segregate the market into two distinct groups – (i) students & senior citizens and (ii) working adults. Given that students and senior citizens are not monthly income earners, a restaurant meal will take up a large proportion of their monthly expenditure, making demand for restaurant meals to be relatively more price elastic. Furthermore, for this group of people restaurant meals have many close substitutes, such as hawkers centre or home-cooked meals. Thus, this group of people is more responsive to price changes, as represented in Fig 1(b).

However, for working adults, restaurants meals will only take a small proportion of their income, making demand for restaurant meals to be price inelastic. Furthermore, for this group of people hawkers centre or home-cooked meals may be an inferior substitute to restaurant meals, making them less responsive to price changes, as represented in Fig 1(a).

Restaurants are able to practice price discrimination in these 2 separate markets: sub-market A and B with the demand and MR curves shown in Fig 1(a) and Fig 1(b). Fig 1(c) shows the MC and MR curves for the firm as a whole. The market demand curve here is the summation of the demand curves in Fig. 1a and Fig. 1b horizontally at each and every price level. The MR curve in Fig. 1c is also derived in similar manner as the demand curve. Total profit is maximised where MC = MR.

This output must then be divided between the two sub markets so that MC is equal to MR in each market: i.e. MC = MR in each market. MR must be the same in both markets; otherwise revenue could be increased by switching output to the market with the higher MR. Once the output in the individual markets have been determined, the price to set is simply read off the demand curve for each market – the highest price that consumers in each market is willing and able to pay for the allocated output.

<Link> As is evident from Fig 1, restaurants charge a higher price for working adults, as represented by price P_A and charges a lower price for students and senior citizens as represented by price P_B .



Mark scheme

L3 (6-8)	For an answer that demonstrates scope and depth
	 Clear and accurate definition of price discrimination including explanation of the prerequisites to price discrimination; it should also include well-explained and well-exemplified 2nd or 3rd degree price discrimination
	 Explanation for why the prerequisites to price discrimination are necessary
	with exemplification to restaurants in Singapore
	 Explanation and exemplification of 2nd or 3rd degree price discrimination;
	along with necessary diagram(s)
L2 (4-5)	For an answer that lacks either the scope of the depth of explanation
	Cap at 5m
	 No diagrams
	Cap at 4m
	 Well-explained and well-exemplified prerequisites to price discrimination, but no mention of the type(s) of price discrimination that can be engaged
	Cap at 4m Moll evaluated and well exemplified type(a) of price discrimination that cap
	be engaged, but no mention of the prerequisites to price discrimination
L1 (1-3)	For an answer that contains explanations with no application to restaurants context; again with more credit given to explanation of prerequisites to price discrimination as compared to type(s) of price discrimination that can be engaged
	Depth of explanation:
	 Answer contains unexplained diagrams
	 Answer contains unexplained statements
	 Answer contains limited or poor exemplification
	 Answer contains major misconceptions

<u> Part (b)</u>

Question Interpretation

- Define barrier to entry
- Understand that firm's behaviour will encapsulate both pricing behaviour and non-pricing competitive behaviour
- Identify and explain two other factors influencing firm's behavior in Singapore and then to evaluate the most important factor influeincing firm's behavior

Introduction

Unpack key terms:

- Define barrier to entry (BTEs) Barriers to entry are obstacles that prevent new rival firms from entering the industry and eroding the incumbent's profits.
- Explain briefly the different types of BTEs They may be either natural or artificial.
 - Natural BTE → Ownership/Control of Key Resources → single firm's ownership or control over some non-reproducible resource that is crucial to production. It can deny access to these inputs to potential rivals.
 - Artificial BTE → Legal barriers e.g. Govt. Regulations, Financial Barriers, High fixed capital outlay
- BTEs form the basis of monopoly power.

Development

<u>Thesis Statement: Barriers to entry is an important criterion in determining a firm's</u> <u>behaviour</u>

BTEs determine the type of market structure and hence influences a firm's pricing and nonpricing behaviour

Firms in monopolistically competitive (MpC) market structure faces lower BTEs, whearas firms in oligopolistic market faces a higher BTEs

<Exemplification>

Restaurants in Singapore has low BTEs due to low start-up cost such as rental, cost of raw materials (ingredients and tools for cooking), labour cost, etc.

Petrol retailers in Singapore has high BTEs due to high start-up costs involved in terms of development of infrastructure (underground pumps, conforming to safety regulations, maintenance); exclusive contractual agreements with suppliers of crude oil forms another significant barrier to entry.

A) Explain how the nature of BTEs affect pricing and output decisions of firms in the various market structures

Simple Case: setting price/output so as to maximize short run profits

- Firms' in both MpC and oligopolistic markets have some ability to set price / output
- Downward sloping dd curve
- AR / DD curve tends to be relatively price elastic for MpC firms due to the availability of many restaurants in Singapore while relatively price inelastic for oligopolistic firms

due to limited amount of petrol retailers, constrained to only four major suppliers – Shell, Exxo-Mobile, Caltex and Singapore Petroleum Company (SPC)

- Pricing and output decisions assuming both restaurants and petrol retailers are profit maximisers is at the level of output where → MC=MR condition and MC must cut MR from below, as illustrated in Fig 2.
- The profit-maximising output where MC = MR_e = MR_i is at Q₀. When BTE is weak, the firm faces a more elastic demand curve (DDe) and charges price P_e. When BTE is strong, the firm faces a more inelastic demand curve (DDi) and charges a higher price P_i.

Fig 2: Pricing behaviour with differing BTEs

Strategic Behaviour: The Kinked Demand Curve Model

High BTEs can result in significant market power in the hands of few firms and this can result in mutually interdependent behaviour of firms, explaining price rigidity.

Firms looking to protect and maintain their market share, are unlikely to match another's price increase but may match a price fall. For example, if one firm lowers its price, other firms will lower their price in order to remain competitive. This will cancel out any potential benefits of a price reduction as the firm initiating the price cut will not be able to lure many customers away from his rivals. But if the firm increases its price, rivals firms are unlikely to react because they will gain as customers turn to their products which are now relatively cheaper. Thus, an oligopolist's demand curve will be kinked at the prevailing price – more elastic above the prevailing price but less elastic below the prevailing price. Associated with each demand curve (AR) is its MR. This explains why at the kink of the demand curve, the MR is discontinuous.

Thus, high BTEs can result in price rigidity by firms over the discontinuous range of the MR curve.

B) Explain how the nature of BTEs affect non-pricing behavior of firms in the various market structures

Dominant mode of competition

1. Due to low BTEs and resultant normal profits in the LR, MpC firms, such as restaurants engages in predominantly non-price competition such as

- Small-scale advertisement to promote brand loyalty
- Slight product differentiation

2. Due to high BTEs and strategic interdependence explaining price rigidity, oligopolistic firms also engage in non – price competition, but at a larger scale as compared to MpC firms.

- Large-scale product diiferentiation: Shell offers 3 superior grades of petrol products as well as diesel (Shell Formula 98, Shell Formula 95, Shell V-Power and Shell Diesel).
- Large-scale advertisement: Exemplification using real world examples e.g. all
 petrol retailers have tie-ups with credit card companies to provide price discounts
 and accumulation of reward points; petrol retailers also aggressively engage in
 advertising campaigns on newspapers and radio stations.

Note: Stress that as opposed to MpC that also relies on non-price strategies, oligopolies employ such strategies more aggressively. Relate to their LR supernormal profits due to high BTEs that provide the funds to finance marketing campaigns on a much larger scale e.g. mass media.

Antihesis Statement: Barriers to entry is not the only criterion in determining a firm's behaviour

Any two points from the following:

A) Alternative Objectives of firms

Principal-Agent Problem: Managers of firms pursue other goals, such as managerial utility, sales/growth maximization.

In Figure 3 below, if the firm aims to maximise short-run profits, it will produce Q1, where MC = MR and charge P1. If the manager instead aims to maximise revenue, he will produce Q2 where MR=0 and charge P2. Since P2 > AC, supernormal profits are still earned so the shareholders will likely be satisfied. If the manager instead aims to maximise output, then the highest possible output and lowest possible price will be Q3 and P3 where AC = AR. Here the firm earns only normal profits, so it is just sufficient to keep shareholders invested in the firm. If the shareholders requires more than normal profit to be satisfied, then output will have to be correspondingly lower than Q3 and price higher than P3.



Fig 3: Profit Satisficing with Revenue and Output Maximisation

B) Government policies such as price controls and regulations

The government can introduce price controls to regulate the price charged by firms with high market power and hence profits earned, thus achieving the government goals of efficiency and equity. There are two types of price controls:

- i) average cost (AC) pricing and
- ii) marginal cost (MC) pricing.

The government can make it mandatory for firms to charge a price equals to their average cost (AC pricing) or set prices equals to marginal cost (MC pricing), to improve efficiency.

- i) Setting P = AC ensures that the firm earns only normal profits, thus improving equity.
- ii) On the other hand, setting P = MC ensures that allocative efficiency is achieved but results in monopolies earning subnormal profits.

Either way, compared to an unregulated market with high concentration ratio, prices will be lower and quantity higher.

C) The theory of Contestable Markets

The theory argues that price and output (and underlying behaviour) in an industry is not determined by level of BTEs but the potential threat of competition. Threat of competition will force firms with high market power to be more efficient to be able to charge lower price and prevent success of new entrants.

Evaluation

There are different factors that influence a firm's behaviour, of which barriers to entry is only one of them.

In Singapore BTEs may not be the most important factor influencing the behaviour of firms due to

- 1. Small domestic market and lack of natural resources makes Singapore an open economy, encouraging foreign competition
- Competition Commission of Singapore is established and tasked to enforce regulation so as to prevent any unfair or anti-competitive means. This is necessary in order to create a conducive environment for investment and innovation to take place as both aspects are crucial to sustain LTEG and GDP growth in Singapore.

Marking scheme:

L3 (10-13)	For an answer that
	 Depicts good understanding of question requirements with a very clear attempt to discuss both aspects of the question (including diagrams), using local examples Provides sufficient rigour to explain the role of barriers to entry in influencing firm's behaviour and is well-supported by rigorous economic analysis Considers both pricing and non-pricing behaviour of firms
L2 (7-9)	For an answer that
	 Provides lacks in either scope or depth in coverage Undeveloped arguments (lack of clarity and coherence) with some attempt to provide local examples Minor conceptual error Lower L2 mark range
	 For lop-sided analysis For considering either pricing behaviour or non-pricing behaviour
L1 (1-6)	For an answer that
	 does not link BTEs to firm's behaviour is largely descriptive has severe conceptual errors
E2 (3-4)	For an evaluative judgement based on economic analysis Emphasis on Singapore oconomy
E1 (1-2)	• For an unexplained judgment, or one that is not supported by analysis.

3. Governments across the world play an active role in intervention, whether to reduce the growing income inequality or to address market failure.

(a) Explain the role of prices in resource allocation in a market economy. [10]

(b) Assess whether government intervention in markets is always justified.

[15]

(a) Explain the role of prices in resource allocation in a market economy. [10]

Suggested Approach:

Students are to

- 1. explain the central economic problem of scarcity which leads to the need for resource allocation (i.e, with its limited resources, society needs to decide on 'What and how much to produce', 'how to produce', 'for whom to produce')
- explain that the role of prices is central in resource allocation in a market economy as resources are allocated via the price mechanism, be it in the factor or product markets
- In deciding what, how much and how to produce, prices act as signals that coordinate the actions of consumers and producers through the market forces of DD and SS. DD and SS interaction leads to equilibrium price and output (stating the assumptions). Changes in DD and/or SS result in shortage/surplus which in turn lead to changes in prices and hence reallocation of resources.
- In deciding 'for whom to produce', <u>prices act as rationing mechanism</u> that allocate goods among consumers based on their willingness and ability to pay for the good.

Levels	Descriptors
L3 (7m – 10m)	 Clear explanation of both the signalling and rationing roles of prices in addressing all 3 basic questions of allocation with demand-supply analysis Sufficient depth/ scope Max of 8 m if 'rationing' role of prices is not mentioned
L2 (5m – 6m)	 Insufficient depth/scope in addressing the basic questions of allocation. Does not explicitly explain the signalling and the rationing role Explain at most 2 of the 3 basic questions Some attempt in using the demand-supply analysis Some errors in explanation. Max of 5 if no mention of the dd-ss analysis
L1 (1m - 4m)	 Poor and erroneous explanation with little understanding the roles of prices in allocating resources.

Suggested Answer Outline

(a) Explain the role of prices in resource allocation in a market economy. [10]

Introduction

As resources are scarce relative to the insatiable demands of human wants, economies are concerned with basic questions of allocation:

i. What and how much to produce?

- ii. How to produce?
- iii.For whom to produce?

Define a market economy as one in which resources are allocated based on the price mechanism in which prices plays an signalling function as it allocates resources to the production of different types of goods. It also acts as a rationing mechanism by synchronizing decisions by buyers and sellers.

Development:

i. What and how much to produce?

Resources are limited and cannot produce enough goods and services to satisfy human wants which are unlimited

- ➔ economy must make a choice on the types of goods and services that it wants to make available to the country.
- ➔ For example, an economy has to decide on the different quantities of consumer goods and capital goods.
 - determined jointly by producers and consumers through the signaling role of prices and their self-interest.
 - price of a good reflects the value placed on it by consumers.
 - Consumers indicate their tastes and preferences to firms by the price they are willing and able to pay for the goods (effective demand).
 - Producers would only produce goods which consumers demand because they want to maximize profits.
 - The higher the price that the consumers are willing and able to pay, the more the producers will supply that good
- ➔ In this way, the *price acts as a signal* telling the producers what to produce and how much of the good to produce
 - Thus determines the allocation of resources among various goods.

→ Explanation of demand and supply analysis with the help of a diagram

- If market is in disequilibrium → market will adjust until equilibrium price and quantity achieved → satisfaction of both buyers and sellers maximized
- For example, when Qd < Qs for rice, ceteris paribus, a shortage results. There will be upward pressure on the price and the price increase will signal an increase in profit which leads to a reallocation of resources into the production of that good.

iii. For whom to produce?

How are the final goods/services allocated to the society?

- → Resources are scarce, no society can satisfy all the wants of its people.
- ➔ finished goods/services have to be distributed to households, firms and the government.
 - How the limited supply of final goods/services produced is allocated among the members of society?
 - price acts as a rationing mechanism in a market economy and distributes the output only to people who are able and willing to pay for the good.
 - This in turn depends on the purchasing power and the value that people place on the good.
 - Using the DD/SS diagram above, the equilibrium output at Qe will be allocated to consumers who are willing and able to pay at least the equilibrium price which is set at Pe.

ii. How to produce?

What method of production should the scarce resources be used to produce the desired combination of goods/services as efficiently as possible.

- ➔ In the factor market the producers demand for resources (fops) and the consumers are the factor owners that supply the resources (fops). The allocation of resources among the competing uses is based on the prices of the resources (fops)
- → For example, a manufactured good can either be produced by capital intensive methods (where there is little use of labour and greater use of machines) or labour intensive methods (where greater use is made of labour).
 o involves the organization of production.
- → Main aim: to achieve the least cost combination guided by relative factor prices.

(b) Assess whether government intervention in markets is always justified. [15]

Suggested Approach:

- Requirement: 2-sided balanced arguments considering whether government intervention in the markets is always justified or not.
- Thesis: Explain why government intervention is justified. Answers must span across the problem of efficiency in resource allocation and equity in income and wealth distribution.
- Anti-Thesis: Explain why government intervention in the market may not be justified. Discuss limitations and consequences of government intervention -> costs exceed benefits -> government failure
- Judgment based on cost and benefit analysis

L3 (9-11)	For an answer that
	• considers both inefficiency and inequity issues when justifying
	government intervention in the market
	• discuss both the justifications for and against government intervention
	(including diagrams), using relevant examples
	Addresses the issue of government failure
L2 (6-8)	For an answer that
. ,	• lacks in either scope or depth in coverage - considers only inefficiency or
	inequity issues
	Unbalanced / undeveloped arguments (lack of clarity and coherence)
	 some attempt to provide examples
	 discuss limitations and consequences of government intervention without
	discuss initiations and consequences of government intervention without ensidering the concent of government failure
L1 (1-5)	For an answer that
	is largely descriptive
	has severe conceptual errors
E2 (3-4)	• For an evaluative judgment based on economic analysis focusing on
	costs and benefits in given context
E1 (1-2)	• For an unexplained judgment, or one that is not supported by analysis.

Introduction:

 In a market economy, resources are privately owned and markets are the main mechanism for allocating resources. However, government will intervene in the markets when they fail to allocate resources efficiently to maximise economic welfare of the people, i.e. Market failure necessitate government intervention to regulate markets. In addition, government may intervene in the market to redistribute income to promote equity.

- Government intervention in the markets is justified based on 2 main reasons: Inefficiency and Inequity.
 - Market Failure -> Inefficiency

Sources of market failure include

- Market Imperfections (Market dominance, Imperfect information, Immobility of factors of production)
- Externalities (Positive & Negative)
- Existence of Public, Merit and Demerit Goods

Inequity due to

Unfair distribution of income and wealth

Development:

Thesis 1: To explain how government intervention can resolve inefficiency in the markets

i) Using externalities as a source of market failure, justify government intervention in the markets

With reference to examples of education and healthcare, and the the aid of a diagram, explain how positive externalities result in an inefficient allocation of resources and how government intervention in the education market can help achieve greater allocative efficiency.

Education

- Positive externalities or external benefits occur when third parties who are not directly involved in the consumption or production of the goods are indirectly affected favourably.
- In the absence of government intervention, being rational individuals, both consumers and producers only take into account private costs and private benefits, ignoring the positive benefits enjoyed by third parties.
- There are however, external benefits of education on third parties. With an educated workforce who possesses higher productivity and higher skills, a country will be able to attract more foreign direct investments -> creates employment opportunities not only for the educated and skilled workforce but also for the less educated workforce via the multiplier effect.



Diagram 1: Market Failure due to Positive Externalities

With reference to Diagram 1, since rational individuals only consider MPB against marginal private costs (MPC) and ignore external benefits, they only consume

education up to the quantity Q_m , where MPB = MPC. However, if all possible benefits and costs were accounted for, and the optimal quantity of education that should have been consumed occurs at quantity Q_s , where MSB = MSC. Hence there is an under-consumption of education by Q_mQ_s amount, where there is an under-allocation of resources to the market of education and over-allocation of resources for other markets. This leads to a deadweight loss of area ABC, since the additional benefits of consuming Q_mQ_s (area ACQ_sQ_m) which are however not consumed under free market forces, exceed the additional costs (area BCQ_sQ_m).

Pigouvian subsidies to correct under-production of goods that generate positive externalities

For goods with positive externalities e.g. education, healthcare, most governments intervene in the market by heavily subsidising on these goods to increase consumption to the socially optimal level.





Anti-Thesis: To explain how government intervention can worsen inefficiency in the markets

- Even with the best intent, government intervention in the market may not be justified if there is government failure, i.e. if government intervention worsens the problem of resource allocation instead of improving it. This is often due to imperfect information
- A lack of information about the true value of an externality be it positive or negative, would lead to government failure. It is often very difficult to price the value of an externality in monetary terms.
- In general, the government could either underestimate or overestimate the quantity of the good that is required by society. This could lead to under-production or over-production and thus lead to the problem of inefficiency.

In addition, government intervention may not be justified because of

1. High Resource Cost

 Government intervention in the market may not be justified if the gain from government intervention is weighed out against the costs of government intervention. Such costs may include administration or operational costs incurred by the government. Allocative and productive efficiency could be reduced after government intervention to correct market failures because of the waste of scarce resources – leading to a reduction in consumer and producer welfare. Hence, in this case, government intervention in the market will not be justified.

2. Unintended side-effects

Government intervention in the market may not be justified if it leads to consequences that impact the economy. For example, anti-pollution measures may increase the unit cost of production which deter FDI -> affecting potential growth

Evaluation

- Even if over-subsidisation still causes resource misallocation to persist, as long as the relative deadweight loss incurred after government intervention is still smaller than without intervention by the government, government's intervention in markets can still be justified.
- The costs of government intervention can be reduced by using measures that rely more on market forces rather than overriding the entire workings of the market mechanism.

Thesis 2: To explain how government intervention can resolve inequity in the markets

- Income and wealth are unevenly distributed in a market economy, and people with the
 most incomes and wealth are the ones who determine what goods and services should
 be produced. The demand and supply of goods produced reflect only the wants of the
 rich people. At times when the prices of necessities such as housing and food and
 energy surge, the poor will be priced out of the market too.
- As such, market may also fail to the extent that they fail to achieve other social objectives such as greater equality in the distribution of income.
- The cost of market failure caused by inequalities in the distribution of income and wealth is that the market mechanism will allocate nothing to those who cannot pay such as the unemployed and under-privileged.
- To overcome this market failure, government can use fiscal policy tools to redistribute income through subsidies to the lower income households. E.g. increasing the subsidies for conservancy charges for lower income households; providing GST vouchers to help lower income and giving workfare income supplements.
- Alternatively the government can subsidise training and skills upgrading of workers so as to prevent rising structural unemployment and reduce income inequality.

Antithesis 2: To explain why government intervention to promote equity in the markets may not be justified.

Redistribution of income and wealth through taxes / subsidies may lead to disincentive to work and invest. May lead to outflow of talent and investment -> adverse impact on economy growth

Evaluation: Whether government intervention is justified or not depends on the degree and causes of income inequality.

Judgement:

Intervention is justified only if

- there is market failure in that industry (govt should not intervene in all markets)
- method of intervention is effective -> consequences
- intervention does not lead to further inefficiency or other consequence (government failure arises)

4. The ultimate goal of all governments is to improve the general standard of living of its population.

(a) Explain how a government can improve the current and future standard of living of its population [12]

(b) Discuss the extent to which a government can assess that its goal to improve the general standard of living of its population has been achieved. [13]

(a) Explain how a government can improve the current and future standard of living of its population [12]

Approach

Students are to

- explain what is meant by standard of living (SOL) making clear that it consists of both material and non-material aspects.
- explain how a government can improve both the current and future SOL of its population through its demand-management and supply-side policies as well as measures to redistribute income.

Levels	Descriptors
L3 (9m – 12m)	 Clear explanation of the policy measures that the government can undertake to improve the current and future SOL of its population Using AD/AD analysis Focus should be on both current and future SOL and on both material and non-material SOL. Both demand-management and supply-side policies should be explained (3 policies each focusing on one aspect - current and future material SOL and non-material SOL) Sufficient depth/ scope
L2	- Insufficient depth / scope
(6m – 8m)	 Only focus on current or future SOL; material or no-material SOL; demand-management or supply-side policies
L1	For an answer that
(1m - 5m)	 Focuses on NY instead of material SOL is largely descriptive has severe conceptual errors

Introduction

Standard of living refers to the level of economic welfare and social well-being of an individual or household. It includes the quantitative (material) and qualitative (non-material) aspects of living. The material standard of living is affected by the amount of goods and services that individuals within the country have available for consumption. Non-material

aspects of living standards will involve indicators like the amount of leisure people consume, life expectancy, standard of education, absence of pollution and other social factors.

A country that experiences actual economic growth (i.e. an increase in real per capita GDP) over a period of time implies an improvement in the current standard of living of its population since quantity of goods and services produced in an economy has increased over time. A country that projects potential growth on the other hand indicates future improvement standard of living.

Development

Explain how the government can improve the current SOL of its population through its expansionary demand-management policy measures -> increase AD -> actual growth

- Expansionary monetary policy Fall in interest rate increases incentive to borrow; firms are more likely to invest and households are more likely to borrow to purchase big-ticket consumer durables, resulting in an increase in C and I.
- Expansionary exchange rate policy Fall in domestic currency will reduce the price
 of exports in foreign currency and increase price of imports in domestic currency
 (switch over to consuming domestic goods and services -> increase in Cd) -> an
 increase in X and Cd
- Expansionary fiscal policy Fall in direct tax increases disposable income of households; more induced C occurs, resulting in an increase in C.
- Expansionary fiscal policy Increase in government spending on final goods and services to increase G component of AD.

Explain how a sound and efficient government can also increase consumer and investor confidence -> indirectly increase AD -> actual growth

- If households expect their future income to increase, they may be more willing to spend now even when current income is constant, causing an increase in C.
- It firms expect good future economic performance; the strong business confidence will incentivise them to invest more, resulting in an increase in I.

Explain how the government can improve the current SOL of its population through it short-term supply-side measure (i.e. cost-cutting measures) -> increase AS -> actual growth

Explain how the government can change of the composition of o/p though its policy measures to promote current standard of living, example promoting consumption for investment; domestic consumption for exports

Explain how government intervention in the markets will lead to greater efficiency in resource allocation when market failure arise (e.g. subsidies to ensure optimal quantity of merit goods, decrease negative externality)

Using AD/AS analysis, illustrate how the government can improve current standard of living through promoting actual economic growth



A rightward shift of AD from AD₀ to AD leads to an increase in real N_{Ref}^{γ} from Y_{0} to X_{E} ceteris paribus.

paribus. $Y_0 Y_F$ The increase in AD results in unplanned disinvestment, where actual output is less than planned demand. The excess aggregate quantity demanded signals to firms to increase output in the next production cycle. This will cause an increase in demand for factors of production (including labour). As factor income increases, there will be excess aggregate quantity demanded, leading to further increase in production. This will continue until aggregate quantity demanded equals to aggregate quantity supplied. The equilibrium real national income would have increased from Y_0 to the full employment level at Y_F . This is actual growth where national income has risen.





A fall in the unit cost of production $(COP)^{V_0}$ leads to a downward shift of AS from AS₁ to AS₀. This is because with lower unit COP, firms are able to produce and supply the same quantity of goods and services at a lower price (illustrated by a shift from AS₀ to AS₁). Note that there is no change in the productive capacity of the economy, hence, the Classical range of the AS curve remains fixed \rightarrow As unit cost of production decreases, firms will increase output \rightarrow As firms increase production, they will also increase demand for factors of production, including labour which is a derived demand \rightarrow Real NY will rise from Y₁ to Y₀ which signals positive economic growth \rightarrow unemployment falls \rightarrow Firms will also pass on some of the decrease in unit cost of production to consumers which causes the GPL to fall from P₁ to P₀.

Explain how the government can increase the future SOL of its population through long-term supply side policies to promote potential economic growth (i.e. increase the full-employment national income of its economy)



With an increase in the quantity and quality of factor inputs (e.g. improved technology and skills), the productive capacity of the economy expands. This may be shown by a rightward shift of the AS towards a higher level of potential output Yf', from AS0 to AS1. The rightward shift of the AS allows for an increase in national income in real terms (Yf' to Yf') while helping to relieve the inflationary pressure as the general price level is brought downwards to P1.

The vertical portion of the AS changes when the productive capacity / potential output of the economy changes. This can be summed up in the 2Qs – Quantity and Quality of factors of production.

(b) Discuss the extent to which a government can assess that its goal to improve the general standard of living of its population has been achieved. [13]

Approach:

- Requirement: 2-sided balanced arguments considering whether a government can assess its goal to improve the general SOL of its population has been achieved.
- Thesis 1: Explain how a govt can assess the improvement in material SOL using national income data (i.e. real GDP per capita) as an indicator.
- Anti-Thesis 1: Explain why a government is not able to assess improvement in the material aspect of SOL accurately
- Evaluate the extent to which a government can assess that material SOL has increased
- Anti-thesis 2: Explain why a government cannot use national income data to assess the non-material aspect of SOL.
- Thesis 2: Explain how a govt can use alternative indicators to complement national income data in assessing improvement in general SOL of its population to improve on its accuracy as an indicator of both material and non-material SOL.
- Evaluate the extent to which a government is able to assess non-material SOL has increased
- Judgment using economic reasoning Criteria Degree of accuracy in assessment varies across countries – depend on stage of development, level of admin efficiency of government

L3 (7 - 9)	For an answer that
	 discuss how a government can assess its goal to improve <u>both</u> material
	and non-material SOL of its population has been achieved using both
	national income data (real GDP per capita) and alternative indicators
	• discuss the limitations of using both national income data and alternative
	indicators in assessing both material and non-material SOL
L2 (5 - 6)	For an answer that
	• lacks in either scope or depth in coverage – only consider government's
	ability to measure improvement in material or non-material SOL; using
	national income data or alternative indicators
	• Unbalanced arguments – only consider whether the government can or
	cannot assess its goals to improve SOL
	some attempt to provide examples
L1 (1-4)	For an answer that
	is largely descriptive
	has severe conceptual errors
E2 (3-4)	• For an evaluative judgment based on economic analysis focusing on
. /	costs and benefits in given context
E1 (1-2)	• For an unexplained judgment, or one that is not supported by analysis.

Introduction

An increase in real per capita GDP within a country over a period of time is taken as an indication of an improvement in the standard of living of its population.

Thesis 1: Explain how a government can assess the improvement in material SOL using national income data (i.e. real GDP per capita) as an indicator.

Increase in real GDP per capita -> increase in average household income -> increase in purchasing power -> increase in quantity of goods and services consume -> increase in material SOL.

Anti-Thesis 1: Explain why a government is not able to accurately assess improvement in material SOL

Limitations

1. Changes in the income distribution are not considered

Real per capita GDP does not reflect income distribution. For example, the rich minority in a country could be receiving a larger proportion of the increase in GDP while the poor majority could be receiving an even smaller share of GDP. In this case, it is difficult to say in general that the standard of living has improved though real per capita GDP may have increased.

Evaluation: Although there is currently no way to incorporate information on income distribution into a single measure of standard of living of a country, economists complement national income data with other statistics that reveal something about the income distribution such as the **Gini Coefficient**

2. GDP statistics do not distinguish between the type of output

Production is not equal to consumption. If the growth in real per capita GDP is due to increase in the production of capital goods (as opposed to consumer goods), current living standards may not increase. A rise in real per capita GDP due to increase in government military expenditure also does not imply a rise in living standards. Similarly, a rise in real per capita GDP that stems from increase in exports will not contribute to a rise in living standards if the income generated from exports is not spent on consumer imports.

Evaluation: However, the increase in productive investment should help raise future consumption and living standards.

3. Changes in the quality and type of goods and services are not reflected

Even if GDP remains the same from one year to the next, standard of living will increase if there are improvements in the quality of output or development of new products. We see that when the bundle of goods available and its quality differ substantially overtime, the meaningfulness of National Income comparison over time diminishes.

4. Inclusion of previously excluded productive activities

This is of significance when comparison is done over long periods of time, long enough for there to be major changes to the way people life and work or in countries with high levels of rural-urban migration. As an economy develops, previously non-marketed items may now be transacted through the market for example many household chores (cooking, laundry, child care, home maintenance, etc) previously done by the families themselves could, at a later time, be bought in the market place. The increase in GDP due to such monetisation of transactions will not increase standard of living since the increase is not due to the production of more goods and services.

5. Reliability of data improved overtime

Data collection will become more comprehensive and reliable over time. For example, the use of computers has allowed for more information input and more accurate analysis. Improvements in the reliability of data over time have thus made comparisons more difficult and less accurate.

Antithesis 2: Explain that the government cannot assess non-material SOL using National income data

- Externalities are ignored. Increase in output may generate negative externalities including polluted air and rivers, congestion, the ozone layer depletion and global warming. As these harmful side effects to third parties are not recorded in national income statistics, the improvement in standard of living may be overstated, i.e. the net benefits of such increased production will be much less.
- Leisure is not taken into account. If the growth in real per capita GDP is due to everyone working longer hours and the leisure time is reduced substantially, the improvement in standard of living may be overstated.

Evaluation

To overcome the limitations of National income accounts as a measure of both material and non-material SOL, governments are turning to alternative indicators to help assess non-material SOL more accurately.

Thesis 2: Explain that the government can assess non-material SOL using alternative indicators.

Alternative indicators

Recognising that National Income statistics offers at best only a measure of the material standard of living, the government has complemented the real GDP per capita with other indicators.

a. Education: literacy rate

With better education, the people in a country will be able to read and appreciate aesthetics or literacy work, enjoy the fine arts and engage in pursue of their own aspirations. This ability to pursue self-realisation is a non-material aspect of SOL.

b. Health: Infant mortality rate, life expectancy, quality adjusted life years, availability of medical infrastructure per 1000 person

Infant mortality measures the proportion of babies born who die before the age of one out of total births. A decrease in infant mortality rate & improvement in the ratio of the medical infrastructure signalsgreater quantity of resources and more availability to healthcare system or greater frequency to access healthcare infrastructure. This would improve both material and non-material SOL.

c. Composite indices

These combine two or more indicators to provide a more holistic measurement.

(i) Human Development Index (HDI)

The Human Development Index is an index developed by the United Nations Development Program. HDI is a composite index comprising of three indicators: real GDP per capita, knowledge (measured by literacy rate) and health (measured by life expectancy). Through HDI, UNDPaims to promote human values rather than mere monetary achievements.

5a) Explain what would affect the effectiveness of fiscal policy as a measure to reduce a country's unemployment rate. [10]

(b) Although the Singapore government remains cautious of deficit-spending, most governments see it as an acceptable method to reduce their unemployment rates. Discuss whether a government should pursue full employment at all costs. [15]

a) Explain what would affect the effectiveness of fiscal policy as a measure to reduce a country's unemployment rate

Suggested Approach

Students are to

- Highlight the various types of unemployment (cyclical, structural etc)
- Explain rationale for reducing unemployment rate and
- Explain fiscal policy is a demand-management policy and how expansionary fiscal tools can be used to reduce cyclical unemployment rate via increase in AD -> increase in o/p -> increase in employment
- highlight how effectiveness of a policy can be gauged extent of increase in employment to reach full employment
- explain the factors that affect the effectiveness of fiscal policy as demandmanagement policy to reduce cyclical unemployment
 - \circ Size of the multiplier (the larger the MPC_d, the larger the multiplier, the more effective the FP)
 - Availability of reserves (the greater the amount of reserves, the greater the extent of intervention, the more effective the FP
 - Extent of crowding out effects
 - Cause of unemployment (FP as a demand-management policy is not effective in reducing structural and frictional unemployment)

Levels	Descriptors
L3 (7m – 10m)	 Recognise that there are several types of unemployment Clear explanation of how expansionary FP (as a demand- management policy) can reduce cyclical unemployment. Clear explanation of three factors that may affect effectiveness of fiscal policy in reducing cyclical unemployment. Recognise that FP as a demand-management policy will not be effective in reducing these other types of unemployment. Sufficient depth/ scope Cap 8 m if student only discuss cyclical unemployment Note: Students should have a clear understanding that there are several types of unemployment. Even if student chooses to focus on FP as a demand-management and goes on to explain factors that affect FP's ability to reduce cyclical unemployment (e.g. structural and frictional). Hence they should highlight that FP as a demand-management policy cannot reduce structural and frictional unemployment unless the FP focuses on ss-side effects.
L2 (5m – 6m)	 Insufficient depth / scope Less than three factors Focuses only on cyclical unemployment

	- Explain at most 2 factors
L1 (1m - 4m)	For an answer that - is largely descriptive - has severe conceptual errors

Introduction

- **Definition of Fiscal Policy:** Fiscal policy involves the Government affecting aggregate demand by changing the levels of Taxation ('T') and Government Expenditure ('G') in order to influence the level of economic activity. Fiscal policy may involves the Government affecting aggregate supply from its G too (cost-cutting measures, spending on trainings and R&D)
- Cyclical unemployment is caused by a deficiency in AD. Structural unemployment is caused by factor immobility and structural changes.

Development

For both cyclical and structural unemployment, Governments use **expansionary fiscal policy** to stimulate the economy, with either an increase in injections and/or a decrease in withdrawals. This includes:

- a) An increase in government spending (G) on final goods and services such as infrastructural projects. ↑ G has a direct impact on AD.
- b) An increase in government transfer payments (e.g. unemployment benefits), resulting in an indirect impact on AD by raising households' disposable income, and ↑C. A cut in personal tax will impact AD in a similar way.
- c) A cut in corporate taxes raises the expected net rate of returns on investments, increasing firms' profits as well as their willingness and ability to invest. ↑ I has a direct impact on ↑ AD.

Factors affecting the effectiveness of FP as a measure to reduce unemployment

- 1. Cause of unemployment which determines the appropriateness of Fiscal tool The use of expansionary fiscal policy (with dd-side effects) is generally useful in dealing with cyclical unemployment, where the economy could possibly be in recession or operating below full employment. The increase in G for example could help to generate an increase in production of goods and services in the economy, i.e. triggering the multiplier effect to create more employment. However, such policies will not be effective in resolving structural unemployment. However, if G is spent such that it results in an increase in labour productivity or enable workers to learn new and relevant skills (i.e. if fP focuses on ss-side effects), it could also help to resolve structural unemployment.
- 2. The size of k

Demand-management policies work their way through the multiplier process. This means that the effectiveness of such policies is dependent on the size of the multiplier. The larger the multiplier, the larger the amount of national income generated from the G; hence more jobs created to reduce cyclical unemployment.

3. Time lag

There exist three types of time lag:

- Recognition lag It takes time to recognise that there exists a macroeconomic problem. It takes months to collect and analyse economic data.
- Implementation lag¹ It takes time to change the course of the fiscal / monetary policy.
- Impact lag Once the policy change has been implemented, it takes time to work through all the steps of the multiplier process before the full effect of the policy is felt.

Implications:

- 1. Because of the time lag involved, the problem persists and may even deepen as the policy works its way through the economy. By the time the full effect of the policy kicks it, it might not be sufficient to correct the problem entirely.
- 2. Alternatively, during the time the policy works its way through the economy, the problem could have been self-corrected and the policies could end up destabilising the economy, i.e. exacerbating the business cycle trends.
- 4. Crowding out effect

When the government increases its levels of spending to boost the economy, it may have to borrow money to finance the increased expenditure. This puts the government (public sector) in direct competition with the private sector for the limited pool of funds available in the economy. The increase in demand for loanable funds, holding the supply of loanable funds constant, drives up interest rate. This raises the cost of borrowing relative to the expected rate of returns from investment. Many previously viable investments are now expected to yield negative net returns.

b) Discuss whether a government should pursue full employment at all costs.

Suggested Approach:

- Requirement: 2-sided balanced arguments considering whether government should pursue full employment at all costs
- Thesis: Explain why government should pursue full employment, highlighting the benefits of full employment or the adversities of a high unemployment rate
- Anti-thesis: Explain the possible costs resulting from government's intervention, including (i) fiscal deficit as stated in the preamble, (ii) consequences og policy measures due to conflicts with other macroeconomic objectives (stable inflation, healthy BOP), other important objectives forgone in pursue of full employment
- Judgment: Recognise the need to weigh the costs and benefits in making a rational decision. Basis for judgment depends on economic condition (severity of unemployment issue relative to other macroeconomic issues), economic priorities,

L3 (9-11)	For an answer that
	• consider both the benefits and costs of government's intervention to
	pursue full employment
L2 (6-8)	For an answer that
	 lacks in either scope or depth in coverage -
	• Unbalanced arguments – only consider whether the government should or should not pursue full employment at all costs.

	some attempt to provide examples	
L1 (1-5)	For an answer thatis largely descriptivehas severe conceptual errors	
E2 (3-4)	• For an evaluative judgment based on economic analysis focusing on costs and benefits in given context	
E1 (1-2)	For an unexplained judgment, or one that is not supported by analysis.	

Thesis: Explain why government should pursue full employment

- Highlight the benefits of full employment or the adversities of a high unemployment rate
- Achieve Productive efficiency if full employment
- Helps in achieving other macroeconomic goals (actual economic growth)

Anti-thesis: Explain the possible costs resulting from government's intervention

- Effect on government's fiscal position and possible adverse consequences of fiscal deficits - With the government increasing its expenditure and decreasing taxes, an expansionary fiscal policy will lead to a worsening of the government's budget position. In severe cases, the government's budget balance could go into a deficit which in turn gives rise to other problems.
- Inflexibility of government expenditure Government expenditure cannot be easily reversed as a large proportion of its spending reflects longer term economic and social commitments, e.g. schools, hospitals, roads and defence. Continued large injection of government spending at a time when the other AD components are picking up pace may cause the economy to over-heat, stoking demand-pull inflation. The inflexibility of G could therefore have a destabilising effect on the economy.
- Trade-off with other macroeconomic goals Expansionary monetary and fiscal policies, by raising AD, lead to greater competition for resources (holding the supply of factors of production constant). This bids up factor prices and adds to firms' unit cost of production, part of which will be passed on to consumers in the form of higher prices of final goods and services. The inflationary pressure raises the prices of the country's exports relative to its trading partners. Assuming the demand for the country's exports to be price elastic, an increase in export prices will bring about a greater than proportionate fall in quantity demanded, reducing export revenue. Simultaneously, assuming a high degree of substitutability, domestic consumers to turn to imports as inflationary pressure at home mounts. Together, the fall in export revenue and increase in import expenditure brings about a deterioration in the current account balance. In other words, the higher growth rate and reduced unemployment are achieved at the expense of price stability and healthy BOP position.

Judgment: Recognise the need to weigh the costs and benefits in making a rational decision. Basis for judgment depends on severity of unemployment issues relative to macroeconomic issues and consequences

6. Globalisation has exacerbated global inequalities, creating prosperity in some parts of the world while claiming livelihoods in others. Overall, benefits have been unequally distributed and reforms to the global economic system are required. *Adapted from Oxfam, BBC News, January 2013.*

Globalisation may have its virtues but it favours the developed countries more than the developing countries. Discuss. [25]

Introduction

Globalisation refers to the increasing integration of national economies in terms of trade, financial flows, ideas, information and technology. It has fused individual national markets, increased the ratio of trade to GDP for many countries and caused a sustained increase in capital and labour flows between counties.

Explain the virtues of Globalisation (i.e. gains from globalisation)

Globalisation can lead to improvements in efficiency and gains in economic welfare:

- Gains from free trade as countries specialise in their areas of **comparative advantage** [elaborate on the theory of CA and the gains e.g. consumption beyond PPC]
- Domestic firms can export to a wider market. This enables producers and consumers to reap the benefits of economies of scale. Globalisation enables increased specialisation of production according to theory of CA which enables firms to reap iEOS leading to a fall in average costs. This enhances productive efficiency which can be translated in the form of lower prices for final goods and services.
- Globalisation increases competition between firms across countries. This puts pressure
 on firms to be increasingly efficient and offer better products for consumers. Competitive
 markets reduce monopoly profits and incentivize businesses to seek cost-reducing
 innovations and improvements in what they sell. There are also gains from a rapid pace
 of innovation due to greater dynamic efficiency.
- Export led growth leads to higher **economic growth rates** and higher per capita incomes thus increasing material SOL
 - The OECD Growth Project found that a 10 percentage-point increase in trade exposure for a country was associated with a 4% rise in income per capita
- Consumers have a wider choice/variety of goods and prices are likely to be lower due to the influx of cheaper imports.

Thesis: Globalisation has its virtues but the benefits accrue more to DCs than LDCs.

1. <u>Free Labour Movement → Brain Drain</u>

 Highly-skilled segments of the population in LDCs may find opportunities and wages limited in LDCs and choose to work in DCs instead. This increases the skilled labour supply of DCs and DCs enjoy an increase in quantity and quality of labour at the expense of LDCs. This not only boosts the potential growth of DCs but enables DCs to strengthen their comparative advantage in high value-added goods and services enabling them to keep one step ahead of the competition even as LDCs play catch-up and move up the value chain. Moreover with the increase in supply of foreign labour, wages are depressed. Unit cost of production falls. Furthermore, low or semi-skilled foreign workers are mostly required in industries such as construction which workers in DCs tend to avoid. With the inflow of foreign labour, important infrastructure such as roads and public transportation system can be built or upgraded and this contributes to greater productivity. Aggregate supply rises.

- Conversely, the outflow of skilled labour from LDCs leads to a fall in the quantity and quality of resources within LDCs, resulting in a loss of productive capacity. A loss in talents in particular, would lead to a fall in potential growth, along with a fall in AS. This loss of talented skilled labour might impede their ability to progress to higher-value-added production in future. Moreover, over time, the lack of skilled workforce in LDCs may lose their comparative advantage in low-end labour intensive production, driving investors to relocate their production to other low cost countries. If the country has a skilled / educated labour workforce, some foreign investors may still choose to stay in the country and tap on this pool of skilled workers to explore new niche areas that could potentially develop into comparative advantage of the country in future. In contrast, if the LDC has a severe lack in skilled workforce, a significant amount of FDI is likely to flow out of the economy, which would reduce actual growth and impede potential growth of the economy as well as lead to a rise in unemployment rates.
- 2. Firms in LDCs May Struggle to Compete i.e. Infant Industry Argument \rightarrow globalisation may permanently stiffen the growth of certain industries in the LR
- If a LDC wishes to develop a new manufacturing industry, it may find it difficult to compete against DCs as it faces higher costs than advanced industries in the DCs, who will benefit from years of experience and economies of scale. With globalisation, infant industries which could become competitive in global markets and (1) generate economic growth, (2) reduce unemployment through job creation and (3) earn foreign exchange and improve C/A balance may be driven out of competition.
- Some infant industries have potential CA that requires time to become developed. E.g. In South Korea, the government protected its fledgling electronics industry in the past as it had <u>latent comparative advantage</u> that could be reaped. However foreign competition from MNCs in DCs may prevent these infant industries in LDCs from realising their potential CA in a few ways:
 - Divert consumption to foreign produced electronic goods → prevents domestic firms from expanding their scale of production to reap iEOS (explain one significant source of iEOS in the electronics industry) + eEOS (explain one significant source of eEOS in the electronics industry) → rise in unit COP
 - foreign competition → firms do not have the capacity to engage in R&D and innovation endeavours → unable to improve quality of exports over time
- Influx of MNCs into LDCs might result in crowding out of their domestic firms. With the
 entrance of MNCs into a LDC, it is also possible that they might undercut domestic firms'
 prices, due to their much larger size and greater ability to reap IEOS. Eventually the
 (smaller) domestic firms in LDCs cannot compete and will exit the industry. When local
 retailers in LDCs are forced out by MNCs in DCs, this leads to less variety and choice for
 consumers.

3. Problems with over-reliance on MNCs

- Globalisation means LDC's are exposed to external economic forces over which they have little control. This makes macroeconomic management by domestic governments difficult. Globalisation may strengthen the position of the DCs that are better able to take advantage of free trade.
 - E.g. LDCs ability to raise corporation taxation is declining as Transnational Companies (TNCs) from DCs may relocate if corporate taxes are raised.

- If the economic structure of developing economies becomes one that is dominated by MNCs, this would be undesirable to LDCs as this would make them more vulnerable to the footloose nature of MNCs. E.g. MNCs might pull out of LDCs in the event of global recessions or when other countries offer better investment conditions.
- Greater unpredictability of long-term capital flows, greater inability of developing countries to control BOP financial a/c. Without strong support of domestic industries, developing countries also face greater difficulty in cushioning the ↓NY with outflow of FDI.
- Minimal technological transfer from FDI as most FDI outsource only the low-skilled and low value-added part of their production processes (e.g. assembly line production) in order to leverage on the abundance of low-skilled labour in LDCs. R&D, marketing etc. are headquartered back in the economies of the DCs. This makes it difficult for LDCs to move up the value-added chain which will impede potential growth.
- 4. Difficult for LDCs to Develop Other Higher Value-added Areas of CA
- With greater emergence of low-cost rivals, LDCs might devote a large proportion of its labour resources to maintain their CA in labour-intensive industries thus most resources are locked in low valued-added production. Thus, the ability of LDCs to move up the value chain and to develop other higher value-added areas of CA might be severely impacted.
- 5. Protectionist measures adopted by DCs against agricultural imports from LDCs.
- EU's Common Agricultural Programme sees the EU levying high tariffs on agricultural imports from Africa. The EU is often accused of following very protectionist trade policies in agriculture, where developing countries have most of their comparative advantage. Commodity imports, such as sugar, dairy products or beef, face a very high level of protection. LDCs will seldom be able to export these products to the EU.
- Moreover LDCs are mostly commodity-dependent countries which are vulnerable to commodity price fluctuations due to the volatile nature of these goods.

6. Increased global integration means greater macroeconomic instability for LDCs

- The 2008 financial crises generated in DCs and the contagion that spread across the world showed that LDCs are not immune to the 'contagion effect'. LDCs have suffered a fall in external demand and lower prices for their exports, higher volatility in capital flows and lower remittances.
 - With globalization, the share of industrial production as a proportion of GDP in LDCs (e.g. China) has been rising - indeed more and more industrial production takes place in emerging markets. When demand for new cars, iPods and other electronic goods falls from the DCs who are undergoing recessions, LDCs experience a fall in export revenue. LDCs reliant on exporting commodities to DCs will also suffer a fall in demand for their output.
 - However, in the wake of the recent global financial crisis and consequent recession, international demand for Eastern exports has declined. In India, weakening global demand, especially in the EU and US led to a 14.8% decline in exports in July 2012.
- LDCs are vulnerable to volatile capital movements. The inflow and outflow of hot money can lead to macroeconomic instability.

7. Environmental Costs

LDCs utilise lax environmental standards to court MNCs, especially with the emergence
of more low-cost rivals. Hence, LDCs are more likely to face environmental degradation
(e.g. "Cancer Villages" in China) as compared to DCs which impose stringent
environmental regulations (e.g. Carbon taxes) leading to a fall in non-material standard
of living. Environmental pollution is a form of negative externalities which results in
deadweight loss to society and a lack of allocative efficiency (overproduction).

Anti-Thesis: The virtues of globalisation can be exploited by LDCs and in fact LDCs can be better placed than DCs to exploit the gains from globalisation

1. <u>Greater free trade has created more export markets for LDCs and helped reduce</u> <u>absolute poverty levels in LDCs</u>

- Globalisation has helped many of the world's poorest countries to achieve higher rates of growth by enabling their primary products to be sold around the globe. Given that many LDCs are agrarian societies, globalisation has increased the scope for export earnings from agriculture. This reduces the number of people living in extreme poverty. Moreover, this has increased the foreign currency earnings of LDCs, allowing them to import capital which can boost potential growth.
- In contrast, DCs face rising structural unemployment arising from economic restructuring brought about by free trade. Free trade subjects DCs to global competition. Some industries with higher opportunity cost of production, given by higher unit cost of production, will find demand for their products falling as consumers will switch to consuming cheaper imported substitute goods and services from LDCs. This loss of CA will cause the industry to decline.
 - E.g. The EU textile industry has, lost its CA and is declining as European consumers are switching to consuming imported shoes and clothes from India and China who now possess CA in producing such land and labour intensive goods and services.

As demand for goods and services decline, firms cut down on production. Demand for fops including L as derived demand falls. The workers who lose their jobs in these declining industries (also known as sunset industries) may not possess the right qualifications and skills to take on jobs in expanding sectors where CA is present and growing, and hence become structurally unemployed due to their occupational immobility.

• E.g. In Europe, many textile workers are unable to transit into banking, finance and service sector jobs where CA is present and hence remain unemployed, despite them willing and able to work at existing wage rates.

2. Free movement of long-term capital inflows i.e. FDI have paved the way for sustainable development for LDCs.

• Globalisation has encouraged firms to relocate their production to other countries particularly where wage costs and hence unit labour costs are lower. Developing economies may gain through foreign direct investment from MNCs and technology transfer. This creates employment opportunities and boosts economic growth in LDCs.

• In contrast, as investment and jobs in DCs drain away to LDCs, DCs face higher levels of structural unemployment, putting huge pressures on government budgets due to the distribution of unemployment benefits.

3. Free labour movement plays a vital role in the development of LDCs

- Cross-border migration generates hard-currency remittances that raise living standards and capital investment in LDCs, promotes greater trade and investment ties between destination and origin countries, and raises a country's stock of human and physical capital when migrants return with new skills and investment funds.
- Moreover, as more low-skilled jobs are outsourced from DCs to LDCs, demand for lowerincome workers would increase in LDCs, as would their wages. In contrast, the wages of lower-skilled workers in LDCs will fall due to a fall in demand for low-skilled workers in DCs. This can widen income inequality in DCs as migrants compete for low-end jobs with native workers.
- Conversely, the migration of labour from LDCs into DCs tend to depress the wages of workers in DCs. This reduces their purchasing power and hence ability to consume goods and services. Material SOL falls..

Knowledge, Application, Understanding, Analysis				
L1	-	Lacks use of economics framework/concepts in analysis	1 – 9	
	-	Lacks scope and depth of coverage		
	-	Irrelevant answer		
	-	Superficial answer		
	-	Glaring conceptual errors		
L2	-	Use of appropriate framework/concepts in analysis	10 - 14	
	-	Sufficient scope of coverage		
	-	Sufficient depth of analysis		
	-	Some errors in analysis		
L3	-	Good use of appropriate framework/concepts in analysis	15 - 21	
	-	Sufficient scope of coverage		
	-	Good depth of analysis		
	-	No / minor errors in analysis		
Evaluation				
E1	-	An unexplained judgement, one that is not supported by analysis.	1 - 2	
E2	-	Evaluative assessment supported by economic analysis	3 - 4	