1.

# Explain "The Law of increasing Opportunity Cost". What causes opportunity costs to increase? (4 marks)

On the production possibilities curve, when you increase the production of one good by equal quantities, the quantity of the other good that you have to sacrifice (opportunity cost) will increase gradually. (01 Marks)

### An alternative answer

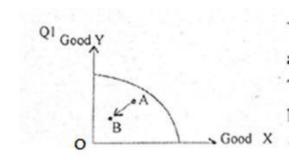
When all available resources have been fully utilized, the increase in the production of one good results in an increase in its opportunity cost or the quantity of other good that has to be sacrificed.]

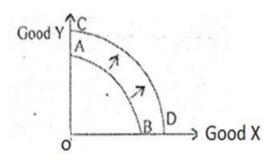
There are three causes for increasing opportunity cost.

- Resources are not homogeneous. Therefore, one type of resource is not perfectly substitutable to another. (01 Marks)
- Techniques of production used to produce different goods and services are different.
   (01 Marks)
- A resource that is more appropriate to produce a particular good or service is not so appropriate to produce another good or service. (01 Mark)

# ii) Using production possibilities curves, explain separately the impact on the economy of the rise in the unemployment rate and an increase in the working –age population. (4 marks)

- When the rate of unemployment rises, utilization of available resource in the economy further contracts. Therefore, the actual output should shift to the left or below point A as shown in the diagram. Point A should be inside the PPC. (01 mark for the correct diagram and 01 mark for the correct explanation)
- When the working-age population in the economy increases, the size of the resource endowment of the economy expands. As a result, the production capacity or the potential output of the economy increases. This can be shown in the diagram by shifting the PPC to the right. (From AB to CD) (01 mark for the correct diagram and 01 mark for the correct explanation)





### iii) State the reasons for the variety of economic systems. (04 marks)

Economic system is the way a society sets about deciding which goods to produce and in which quantities or it is the method by which countries find answers for the fundamental economic problems. There are 3 main reasons for the variety of economic systems.

- Ownership of property (resources) and rights.
   Freedom of private property and private entrepreneur, freedom of factor mobility, freedom of job selection
- Methods of solving basic economic problems.
   Price mechanism, central planning, rules and conventions
- Driving system which influence on the decision making units.
   In a market economy the main objective of the entrepreneur is to maximise profits. In a centrally planned economy, the producers act on the plans and targets provided by the government. Decision making and implementation by the central planning authority.

# iv) Outline the methods by which a government in a mixed economy could deal with the problems of income inequality. (4 marks)

- Transfer payments (Financial and non-financial subsidies)
- Imposing the progressive taxes
- Providing welfare goods / merit goods (health care and education)
- Market intervention (Minimum, maximum and guaranteed price)
- Limits on property ownership (property taxes)
- Imposing government laws and regulations

### v) Outline the advantages and disadvantages of a planned economy. (4 marks)

### Advantages

- Ensuring adequate resource allocation on the provision of public goods.
- Social welfare is the guiding factor of economic activities.
- Market forces are controlled by the society or government by means of community.
- Due attention is given on externalities in making decisions on what to produce and how to produce?
- Disparity in distribution of income is reduced.
- No exploration features that can be seen in a price system.

### Disadvantages

- It is difficult to find necessary information to implement a sound planning system.
- Lack of incentives.
- Bureaucracy.
- No proper coordination.
- Failure of quality control.
- Environment degradation.
- No freedom of choice and consumer sovereignty.
- It is difficult to introduce innovations.

2.

### i) Distinguish between normal profit and abnormal profit. (4 marks)

- Normal profit is the minimum payment that the entrepreneur expects to receive in order to keep his service available in the present use.
- Since it is a payment to be made for performing entrepreneurial functions in the organization, the normal profit is an implicit cost of the firm.
- Unless this payment is received by the entrepreneur, he would withdraw his entrepreneurship from the organization.

(02 marks)

- Abnormal profits or supernormal profits are the profits earned by the entrepreneur in excess of normal profits which form a part of the cost of production.
- It is a surplus after the deduction of total opportunity cost of all resources used in the production from the total revenue of the firm.
  - Therefore, it is not a cost to the firm.
- Abnormal profits arise due to risks and uncertainty bearing in the business. It also arises because of monopoly advantage and chance factors.

(02 marks)

### Alternative answer

A firm can earn normal profit, even when total revenue (TR) equals to total cost (TC). But a firm can earn abnormal profits only when total revenue exceeds total cost.

## ii) What happens to the difference between average total cost and average variable cost as a firm's output expands in the short run? Explain. (4 marks)

- Average variable cost curve and average total cost curve get closer to each other as a firm expands its output in the short run.
- The difference between average total cost and average variable cost is the average fixed cost.
- Average total cost gets closer to average variable cost because the average fixed cost becomes less significant as you produce more.
- What happen is that, the fixed cost becomes negligible because most of the costs has become variable costs.
- There will always be a gap, but the gap will be closing ever more slightly with each additional unit produced.

## iii) How does the Law of Diminishing Returns relate to the shape of the firm's short run cost curves? (4 marks)

- The law of diminishing returns states that as a firm uses more of a variable input, with a
  given quantity of fixed inputs, the marginal product and the average product of the
  variable input eventually diminish. (02 marks)
- The cost function and production function are matched to each other. The cost function can be derived from the production function.
- MC and AVC curves are U-shaped, while the MP and AP curves are inverted U-shapes.
   AP equals MP when AP at its maximum. However, AVC equals MC when AVC at its maximum.
- When MP is at its maximum, MC is at its minimum point.
- As variable input increases further, MP diminishes and MC increases. But AP continues
  to rise, and AVC continue to fall. AP increases to maximum and then declines. AVC
  decreases to the minimum and then increases.
- MP rises and then falls. MP intersects with AP at its maximum, and continues to decline faster than AP. MC falls and then rises. MC intersects with AVC at its maximum, and continues to rise faster than AVC.

(01 mark each for any two relationships; total 02 marks)

# iv) Why will a firm in a perfectly competitive industry choose not to charge a price either above or below the market price? (04 marks)

Firms in a perfectly competitive industry are price takers. A price taker is a firm that cannot influence the market price and that set its own price as the market price.

The key reason why a perfectly competitive firm is a price taker is that it produces a tiny portion of the total output of a particular good and the buyers are well informed about the prices of other firms.

If a firm tries to charge a price above the market price, no one will buy from that firm because the buyers are well informed that the same product is available at the market price with other firms.

If a firm charges a price below the market price, he will have more buyers but it will not increase his profits as he can sell his entire output at the market price. He can do no better than sell for the market price – he is a price taker.

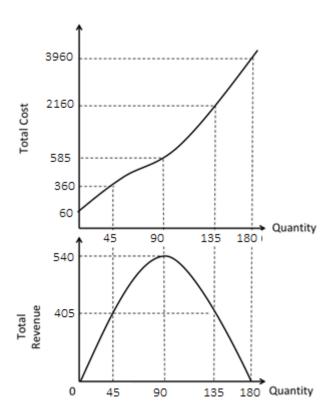
### v) What are economies of scale? How do they arise? (06 marks)

These occur when mass-producing a good results in lower average cost. i.e. benefits enjoyed by the firm due to large scale production.

How do they arise?

- Technical economics made in the actual production of the good.
- Managerial economics made in the administration of a large firm by splitting up management jobs and employing specialist accountants.
- Marketing economics made by spreading the high cost of advertising on television and in national newspapers, across a large level of output.
- Financial economics made by borrowing money at lower rates of interest than smaller firms.
- Commercial economics made when buying supplies in bulk and therefore gaining a larger discount.

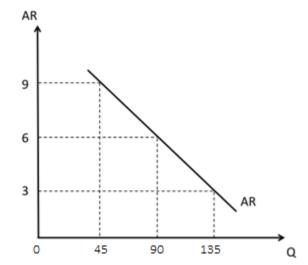
3.



 Suppose above two diagrams extracted from a firm operates in a monopolistic competitive market.

### a. Construct AR (average revenue) curve of this firm (02 marks)

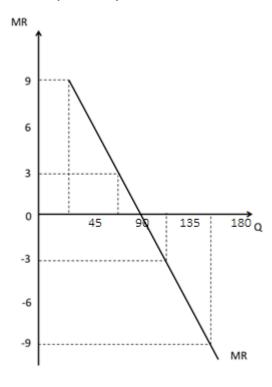
Q	TR	AR
45	405	9
90	540	6
135	405	3
180	0	0



(01 Marks for the table and 01 for the graph)

### b. Construct MR (Marginal revenue) curve of this firm (02 marks)

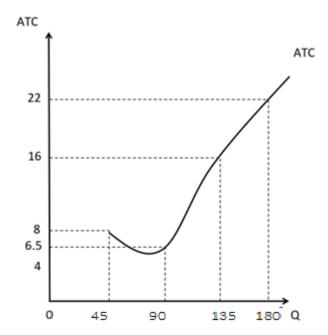
Q	TR	ΜR =ΔTR/ΔQ
0	0	
45	405	9
90	540	3
135	405	-3
180	0	-9



(01 Marks for the table and 01 for the graph)

### c. Construct ATC (Average Total cost) curve this firm (02 marks)

Q	TC	ATC = TC/Q
0	60	
45	360	8
90	585	6.5
135	2160	16
180	3960	22



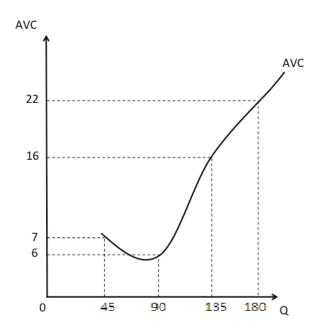
(01 Marks for the graph and 01 marks for the table)

d. Construct AVC (Average Variable cost) curve this firm. (Draw it to the nearest full

number)(02 marks)

ď	TC	FC	TVC	AVC = TVC/Q
0	60	60	0	
45	360	60	300	7
90	585	60	525	6
135	2160	60	2100	16
180	3960	60	3900	22

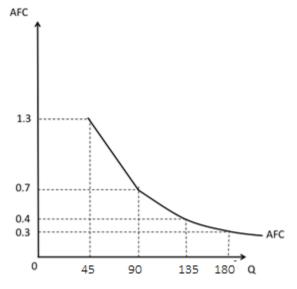
(01 Marks for the graph and 01 marks for the table)



# e. Construct AFC (Average fixed cost) curve this firm (Draw it to the nearest one decimal) (02 marks)

Q	FC	AFC
0	60	
45	60	1.3
90	60	0.7
135	60	0.4
180	60	0.3

(01 Marks for the graph and 01 marks for the table)



### f. In which output range this firm will get its profit maximization (02 marks)

Q	TC	TR	MR =ΔTR/ΔQ	$MC = \Delta TC/\Delta Q$
0	60	0		
45	360	405	9	1.7
90	585	540	3	5
135	2160	405	-3	35
180	3960	0	-9	40

(Table 01 mark)

Profit Maximization (MC= MR) takes place between the output ranges 45-90. (1 marks)
 (If table is not shown only 01 mark)

### g. In which output ranges this firm will get its break even points (02 marks)

Q	TC	TR	Profit
0	60	0	-60
45	360	405	45
90	585	540	-45
135	2160	405	-1755
180	3960	0	-3960

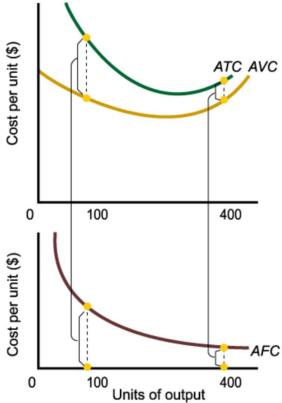
• There are two break-even points

1<sup>st</sup> breakeven point – output range 0 - 45 (01 mark)

2<sup>nd</sup> breakeven point – output range 45 - 90 (01 mark)

(Even if table is not given provide 02 marks if both answers are correct)

- II. 'Even though vertical distance between average variable cost curve and average total cost curve reduces when output rises, they never interest each other'. Do you agree with this statement? Explain your answer with appropriate diagram (04 marks)
  - Agree with the statement (1/2 Marks)
  - The vertical distance between average variable cost (AVC) curve and average total cost curve (ATC) curve represents average fixed cost (AFC). (1/2 Marks)
  - AFC reduces as output rises and there by the vertical distance between ATC and AVC reduces as output rises. (1/2 marks)
  - However, AFC can never become zero due to the fact that always there will be a fixed cost in the short run. Thus, even though vertical distance reduces as output rises ATC curve and AVC curve can never intersects each other.(1/2 Marks)
     (Correct diagram 02 Marks)



### 4. .

- State whether the following are included/ not included in Household Final Consumption.
   (10 marks)
  - 1. Value of goods and services acquired through the barter system Included
  - Value of goods and services produced and consumed by households themselves Included
  - 3. Expenditure incurred to build or purchase a new house Not included
  - 4. Imputed rent for living in one's own residence Included
  - 5. Expenditure incurred to acquire valuables such as paintings, pearls, gems Not included
  - 6. Expenditure incurred to purchase consumer durables such as motor vehicles, furniture and electric equipment for business purposes Not included
  - 7. Gifts received by households from the rest of the world Included

- 8. Value of second hand goods purchased by households— Not included
- 9. Expenditure incurred by a person who has gone abroad for business purpose Not included
- 10. Expenditure incurred by households to buy products in foreign countries Included
- II. What do you mean by changes in inventory? Why are changes in inventories included as part of investment spending? (03 Marks)
  - Change in inventory refers to the <u>difference between opening stock and closing stock</u>
     of (1/2 mark)
    - ✓ Raw material stocks and intermediate goods stocks (1/2 mark)
    - ✓ Working progress stocks (unfinished goods stocks) (1/2 mark)
    - ✓ Finished but unsold stocks (finished but not yet distributed goods stock) (1/2 mark)
  - In gross domestic product (GDP), total value of the output generated within a particular country pertaining to a particular year is reflected.
  - Thus, if GDP is to reflect true output value generated within a year it should <u>include</u> all productive output those are not sold within the year as well. (1/2 mark)
  - Thus, using <u>expenditure approach</u> when GDP is calculated, <u>change in inventory has</u>
     to be considered as investment expenditure. (1/2 mark)
- III. If a particular country spend more than their national income that country should experience a deficit in balance of trade. Comment on this statement.(3 marks)
  - National Income(Y) = C+I+G+(X-M) (1/2 mark)
  - Domestic expenditure (E) = C+I+G (1/2 mark)
  - Difference between national income and domestic expenditure is the trade and service account balance(X-M). (01 mark)
  - If national income is lower than domestic expenditure, net exports should be a negative value at the equilibrium. (1/2 mark)
  - If net exports are negative that could mean a trade deficit. (1/2 mark)
- IV. Following macro-economic details are regarding a particular economy. G13- Econ 2 -2019 July-Term test-Musaeus (figures changed)

 a) Calculate the value of Multiplier for this economy? (01 mark)

b) Government is planning to impose an autonomous tax of Rs Billion 100 and to use that money to pay salaries of public servants. Explain the impact of the above policy on equilibrium output? (3 marks)

Increase in tax

Tax multiplier = -b/ 1-MPC  
= 
$$-0.8 / 1-0.8$$
  
= $-0.8/0.2$   
= $-4 \text{ times}$   
Change in Y = change in A<sub>0</sub> x K  
Change in Y =  $100 \times 4$   
Change in Y =  $100 \times 4$   
(01 mark)

Increase in Govt. Expenditure

Expenditure Multiplier = 1/1-MPC

=1/1-0.8

=5 times

Change in Y = change in  $A_0 \times K$ Change in Y = 100 x5 Change in Y = Rs.500 billion (01 mark) This will increase the Y by Rs.100 billion. (500 - 400) (01 mark)

5.

- I. State whether there is a positive or a negative relationship between the following factors and Transactionary demand for money? (03 marks) (smq)
  - Price level Positive relationship
  - Interest rate- Negative relationship
  - Innovations in the financial system- Negative relationship
- II. What is the effect of the Open market Operations on the money market? (03 marks) (moc 2019, 09)
  - There is a close relationship between open market operations and money market Through
    open market operations CBSL can control the <u>interest rates and the quantity of money</u> that
    is circulated in money market.
  - Through open market operations central bank can control reserve level of the banking system thereby can make an impact to short term funds transacted in money market. (01 mark)
  - If CBSL sells securities reserves of commercial banking system falls and credit creation reduces. As a result <u>quantity of money</u> available in money market <u>falls</u>. (01 mark)
  - If CBSL purchase securities reserves of commercial banking system rises and credit creation increases. As a result <u>quantity of money</u> available in money market <u>rises</u>. (01 mark)
  - Further, through repurchase agreements & reverse repurchase agreements also CBSL can carry out the same impact. (01 mark)
- III. What are the target variables chosen by the Central Bank of Sri Lanka in the implementation of the monetary policy at preset? (03 marks) (2019,MOC 13)
  - Average Weighted Call Money Rate Operating target (01 Mark)
  - Broad Money Supply indicative intermediate variable (01 Mark)
  - Economic and Price Stability Final objective (01 Mark)
- IV. What is 'inflation expectation' and what are the main methods of measuring 'inflation expectation' (03 marks) (moc 2019, 12)

- An inflation expectation is defined as economic agents' beliefs or perceptions about inflation in the future. (01 Mark)
- The two commonly used methods of measuring inflation expectations are
  - a) Survey-based (01 Mark) and
  - b) Market-implied measures. (01 Mark)

### Study Purpose;

- a. Survey based measures gauge **people's expectations of inflation by simply asking them** what they expect inflation to be in the short, medium and long term.
- b. Market-implied measures are derived from observed prices of certain financial instruments, with the payoffs linked closely to future expected inflation outcomes.
   The most often used market-implied measures are based on <u>prices of index-linked</u> <u>financial securities.</u>
- V. What are the main categories of financial intermediaries? (03 marks) (Quick fire revision)
  - 1. Institutions authorized to accept deposits and do banking activities.
  - 2. Provident funds and pension funds
  - 3. Insurance companies
  - 4. Investment companies
  - 5. Unit trusts
  - 6. Leasing companies

(1/2 mark each)

# VI. Following data has been extracted from a hypothetical economy. (moc 2019, 12 – figures changed)

	Rs. Millions
Currency held by general public	6000
Deposits held by the commercial banking System	15000
Statutory reserve ratio	10%
Excess reserves held by the commercial banking System	1500

a. Calculate the money multiplier of this economy (02 Mark)

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Working I
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Statutory reserves = Deposits X SRR

= 15000 X 10%

= Rs.1500 million

Working IV

Money Supply = Cp + DD

= 6000 + 15000

= Rs. 21000 million (1/2 Mark)

Working II

Actual Reserves = Statutory reserves + Excess

reserves

= 1500 + 1500

= Rs.3000 million

Working III

High-powered money =  $C_P + AR$ 

= 6000 + 3000

=Rs. 9000 million (1/2 mark)

Working V

Money Multiplier

= Money Supply / high-powered money

= 21000/9000

= 2.33 (1 Mark)

 Suppose this economy generate enough credit demand for the banking system to create credit to its full capacity. When the commercial banking system reaches its full capacity of credit what would be the new money supply. (02 Marks)

Working I

Additional deposits that can be generated

by the banking system

= Excess Reserves X 1/ SRR

= 1500 X (1/10%)

= Rs. 15000 million (1/2 Mark)

New Money Supply = Cp + DD

= 6000 + 30,000

= Rs. 36,000 million (1 mark)

Working II

New deposits = 15000 + 15000

= Rs. 30,000 million (1/2 Mark)

c. When the situation described in 'part b' takes place what would be the new money multiplier (01 mark)

**New Money Multiplier** 

= Money Supply / high-powered money

= 36,000/9000

= 4 (01 Mark)

## i. State whether the following goods and services can be considered as pure public goods. Give reasons for your answer

### a. Lighthouses

- Pure public good
- Lighthouses are non –rivalrous and non excludable in consumption

#### b. Ocean fish

- Not a pure public good. It is a common resource.
- There is no ability to exclude a person/s from the consumption of a good (non-excludable), but one additional person's consumption will deplete the benefit of existing consumers.

### c. The internet

- Not a public good.
- A person can be excluded from consumption but one person's consumption will not deplete the benefit of the other consumers.

### ii. Name two merit goods and explain why they are considered as merit goods.

- Merit goods Health care, Education, Vaccination programs, Public libraries, Training programs.
- Merit goods are goods that society values and judges that everyone should have irrespective
  of whether the individual wants them or not and whether the individuals can afford them or
  not since they create broad social merits.

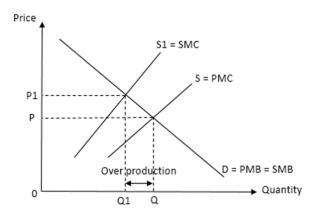
### iii. Distinguish between 'appropriation bill' and 'vote on account'.

- Appropriation bill In order to spend money to the parliament in the forthcoming year
  government requires a necessary legal authority (legislature). An appropriation bill or
  running bill is a legislative motion (bill) that authorizes the government to spend money. It is
  a bill that sets money aside for specific spending of government.
- Vote on account This is a resolution submitted to the parliament by the ruling party to
  obtain the financial provision of the ongoing commitments of the government for a
  particular period, usually for a period of three or four months, when generally there is not
  enough time to present an annual budget. This only includes expenditure of the
  government.

### iv. What are the non-tax revenue sources of the government of Sri Lanka in the recent years?

- Profits and dividends
- Fees and charges
- Interest income
- Rent
- National lotteries board
- License fees

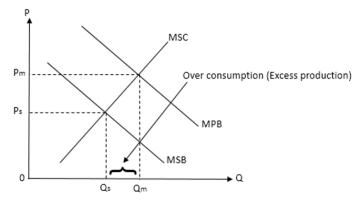
- v. Why does a free market overproduce a good with negative externalities? Illustrate your answer with a diagram.
  - When there are negative externalities in production, social cost exceeds private cost.
     Therefore, at the free market equilibrium market output (Q) exceeds the socially optimum output (Q1). There will be an over production of the good by Q Q1. (02 marks)
  - This situation is further explained by the following diagram:



Free market equilibrium output = Q Socially optimum output = Q1 Excess production = Q - Q1

(Correct diagram 02 marks)

- When there are externalities in consumption, private benefits (MOB) exceed the social benefits (MSB). The market output (Qm) exceeds the socially optimum output (Qs).
   There will be an over production of the good by quantity (Qm Qs). (02 marks)
- This situation can be further explained by the following diagram:



Free market equilibrium demand = Qm

Socially optimum demand = Qs

Over consumption = Qm - Qs

- vi. What is meant by the 'primary balance' of the government budget? Why is it considered to be important to have a surplus in the primary balance?
  - The primary balance of the government budget is the difference between total government revenue including grants and total government expenditure less interest payments (current + capital + lending minus repayment).
  - Alternatively, it can be defined as the difference between overall budget deficit and the interest payments.
  - The primary budget balance, defined as the budget balance net of interest payments, is a key determinant of government debt dynamics.
  - Stabilizing the government debt-to- GDP ratio and subsequently putting it on a
    declining path towards the reference value requires a sufficiently large primary surplus
    to be generated over an extended period of time if the interest rate-growth differential
    is positive, as conventionally assumed.
  - Primary deficit shows the borrowing requirements of the government including interest payment for meeting expenditure. Thus, if primary deficit is zero, then fiscal deficit is equal to interest payment. Then it is not adding to the existing loan.
  - Primary balance is generally used as a basic measure of fiscal irresponsibility. It can be said to provide an indicator of current fiscal effort, since interest payments are predetermined by the size of previous deficits.
  - For countries with a large outstanding public debt relative to GDP, achieving a primary surplus is normally viewed as important, being usually necessary (though not sufficient) for a reduction in the debt/GDP ratio.

(01 mark each for any two reasons; total marks 02)

7.

i) Let country A's endowment of labour equal 200 units and country B's endowment of labour equal 200 units. The labour requirement for the production of one unit of good X and good Y in each country is given in the Table below.

Country A		Country B	
Good Labour units		Good	Labour units
X 5		Х	4
Y 4		Υ	8

- a) Which country has an absolute advantage in which good? Explain your answer. (2 marks)
  - Country A has absolute advantage in the production of good Y because it's cost of production is lower than the country B.
  - Country B has absolute advantage in the production of good X because it's cost of production is lower than he country A.

- b) Which country has a comparative advantage in which good? Explain your answer. (2 marks)
  - Country A has a comparative advantage in the production of good Y, because the opportunity of producing good Y is lower than the opportunity cost of producing good X.

Opportunity cost of producing good X 5/4 = 1.25Opportunity cost of producing good Y 4/5 = 0.8

 Country B has a comparative advantage in the production of good X, because the opportunity of producing good X is lower than the opportunity cost of producing good Y.

> Opportunity cost of producing good X 4/8 = 0.5Opportunity cost of producing good Y 8/4 = 2.0

- ii) "The competitiveness of Sri Lanka's manufacturing sector has declined in recent years"

  Outline the factors which might have affected the decline in international competitiveness of

  Sri Lankan goods. (4 marks)
  - Bad or inefficient management in firms
     (Weak quality control system, marketing, employee training and motivation)
  - Power, tele communication services and auxiliary services changes are relatively at a high level
  - Inadequate research and development
  - Poor infrastructure facilities (Frequent power failures, fluctuating voltage, etc)
  - Macroeconomic instability
  - Unfavourable trade union actions
  - Ineffective financial intermediation (Eg: Higher interest rates)
  - Restrictive regulations for existing competition
  - Legal framework
- iii) What measures could be taken to increase Sri Lanka's international Competitiveness? (4 marks)
  - Establishing macroeconomic stability in the country.
  - Improving infrastructure facilities.
  - Reducing interest rates.

- Increasing the investment in education and training.
- Good governance and effective public service.
- Supply side policies to increase the production efficiency. (Eg: Privatization, Restructuring etc)
- Expanding export opportunities by forming trade agreements.
- Providing subsidies to promote research and development.
- Tax relieves and concessions to promote technology.

# iv) Explain the difference between depreciation and devaluation of the external value of a currency? (4 marks)

Depreciation is a decrease in the value of a currency as measured by the amount of another foreign currency it can buy. If units of domestic currency needed to purchase a unit of foreign currency goes up or units of foreign currency that should be paid per unit of domestic currency falls, external value of a currency has been depreciated.

Devaluation of a currency means, reduction of official price or per value of a unit of domestic currency by the monetary authority. This can be seen under fixed exchange rate regime.

# v) "Supporters of globalization suggest that developed and developing economies can benefit from globalization". Do you agree? Give reasons for your answer. (4 marks)

- Economies of countries that engage with the international economy have consistently grown much faster than those countries that try to protect themselves.
- Improved technology has dramatically reduced costs and prices changing the way the world communicates, learns, does business and threats illnesses.
- International migration has led to greater recognition of diversity and respect for cultural identities which is improving democracy and access to human rights.
- Increased global income and reduced investment barriers have led to an increase in foreign direct investment which has accelerated growth in many countries.
- Improved wealth through the economic gains of globalization has led to improved access to health care and clean water which has increased life expectancy.
- Improved environmental awareness and accountability.