

Midterm Group Assignment
Fundamentals of Economics (Section: A)
Total Marks: 20

Due date of submission: On or before 5th July 2022

(Please note that every one-day delay will incur you a 5 marks penalty. Also, if you don't write your group and its member's Name, ID, Roll, and Assignment title properly your assignment will not be graded.)

1. i) Define Economics. Differentiate between Microeconomics and Macroeconomics.
 ii) Define Production Possibility Frontier. Relate Production Possibility Frontier with concepts such as trade-off, opportunity cost, and efficiency.
2. i) Hypothetical market demand and market supply schedules for sandwich are shown in the following table.

Price (P), Tk.	Quantity demanded (Qd), thousand pieces per day	Quantity supplied (Qs), thousand pieces per day
0.0	100	0
1.0	80	0
2.0	60	20
3.0	40	40
4.0	20	60
5.0	0	80

- (a) Plot the supply and demand curves for sandwich.
- (b) Find the equilibrium price and quantity of sandwich.
- (c) How much excess supply or demand when price is Tk. 4.00?

ii) Consider a market for apartments. What will be the effect on equilibrium output and price after the following changes (other things held equal)?

Explain your answer using the supply and demand curve in each case.

- a) A rise in the income of consumers.
- b) A 20% increase in the wages of construction workers.

- 3.a) What are the determinants of demand? Differentiate between 'change in quantity demanded' and 'change in demand'.
 b) What do you understand by 'law of supply'? If the price of fertilizer rises how it would affect the Bangladesh market supply curve for Rice?

4. i) Define Price Elasticity of Demand, Income Elasticity of Demand, and Cross Price Elasticity of Demand with examples.
 ii) The following table gives the estimated price, cross and income elasticities (a) Indicate from the price elasticities whether the demand is elastic or inelastic; (b) From the cross-price elasticities whether the commodities are substitutes or complements; (c) and from the income

elasticity whether the commodity is a luxury, a necessity, or an inferior goods. Give an example of each type of goods.

Price elasticity of demand		Cross price elasticity of demand		Income elasticity of demand	
Elasticities	Types of demand elasticity	Elasticities	Types of good	Elasticities	Types of good
0.92	Inelastic	.28	not close substitute goods	0.35	necessity good
0.31	II	0.2	II	0.20	necessity good
1.20	Elastic	0.25	II	-0.42	inferior good
2.27	II	-0.28	Somewhat Complementary goods	1.58	Luxury good

iii) Explain the determinants of price elasticity of demand.

5.i) Explain the *Law of Diminishing Marginal Product*.

ii) Suppose your cousin owns a company with fixed cost of tk. 2000. The following schedule shows the variable costs:

Quantity	1	2	3	4	5	6
Variable costs (TK.)	20	40	80	160	320	640

Calculate Total cost (TC), Marginal cost (MC), Average fixed cost (AFC), Average variable Cost (AVC), Average total cost (ATC) for each quantity.

iii) Based on the above calculation draw the ATC and MC in a diagram. Explain the relationship between ATC and MC.

Good Luck!!!!

1.

(i)

Economics: Economics is the study of scarcity and how it affects the use of resources, production levels of goods and services, growth of production and welfare over time, and a great variety of other complex issues of vital concern to society.

(i) Difference between Microeconomics and Macroeconomics

Macroeconomics:

Microeconomics:

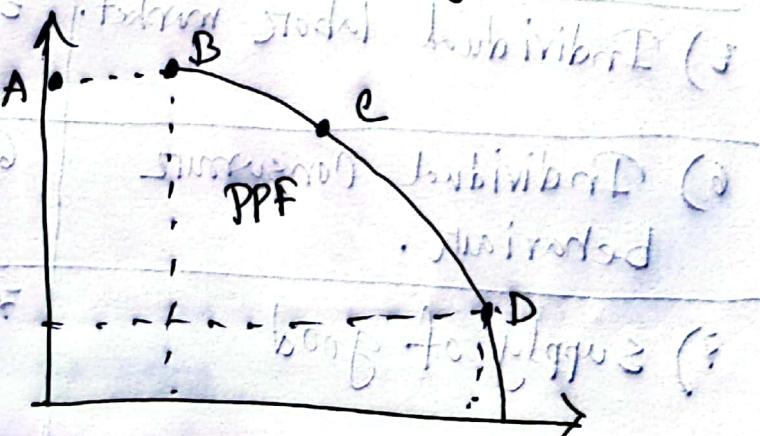
	Macro Economics
1) Maximize national income & growth	1) Maximize welfare of individual & companies
2) Wider scope	2) Narrow scope
3) Whole economy (GDP)	3) Individual Markets
4) Inflation (general price level)	4) Effect on price of a good.
5) Employment / unemployment	5) Individual labor market
6) Aggregate demand (AD)	6) Individual consumer behaviour
7) Productive capacity of economy	7) Supply of good

(11) Production possibility frontier:

Production possibility frontier is the graph which indicates the various production possibilities of two commodities when resources are fixed. PPF is used to solve the basic problem of economics. Mainly in PPF, we can show here the maximum production. In PPF, state of technology doesn't change.

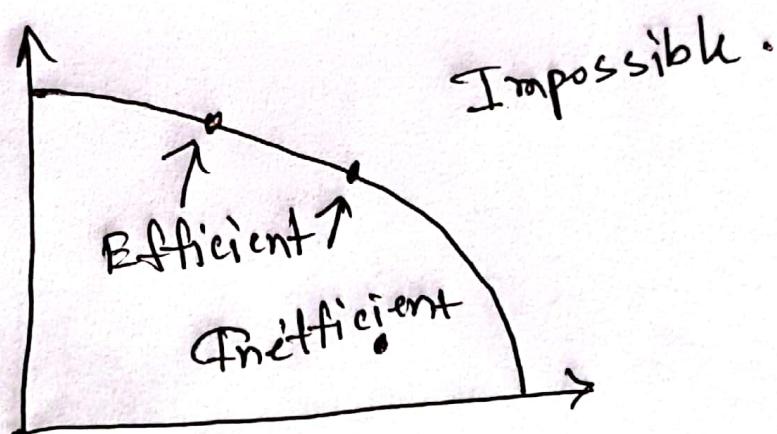
The production possibility frontier (PPF) is a model used to show the tradeoffs associated with allocating resources between the production of two goods. Mainly the PPF can be used to illustrate the concept of scarcity, opportunity cost, efficiency, economic growth and contraction.

The PPF captures the concepts of scarcity, choice and tradeoff. The PPF depends on whether there are increasing, decreasing or constant cost.



Opportunity Cost is the value of the next best alternative to any decision you make; for example: if Abby can spend her time either watching videos or studying, the opportunity cost of an hour watching videos is the hour of studying she gives up to do that.

In the efficiency is the full employment of resources in the production; efficient combination of output will always be on PPF.



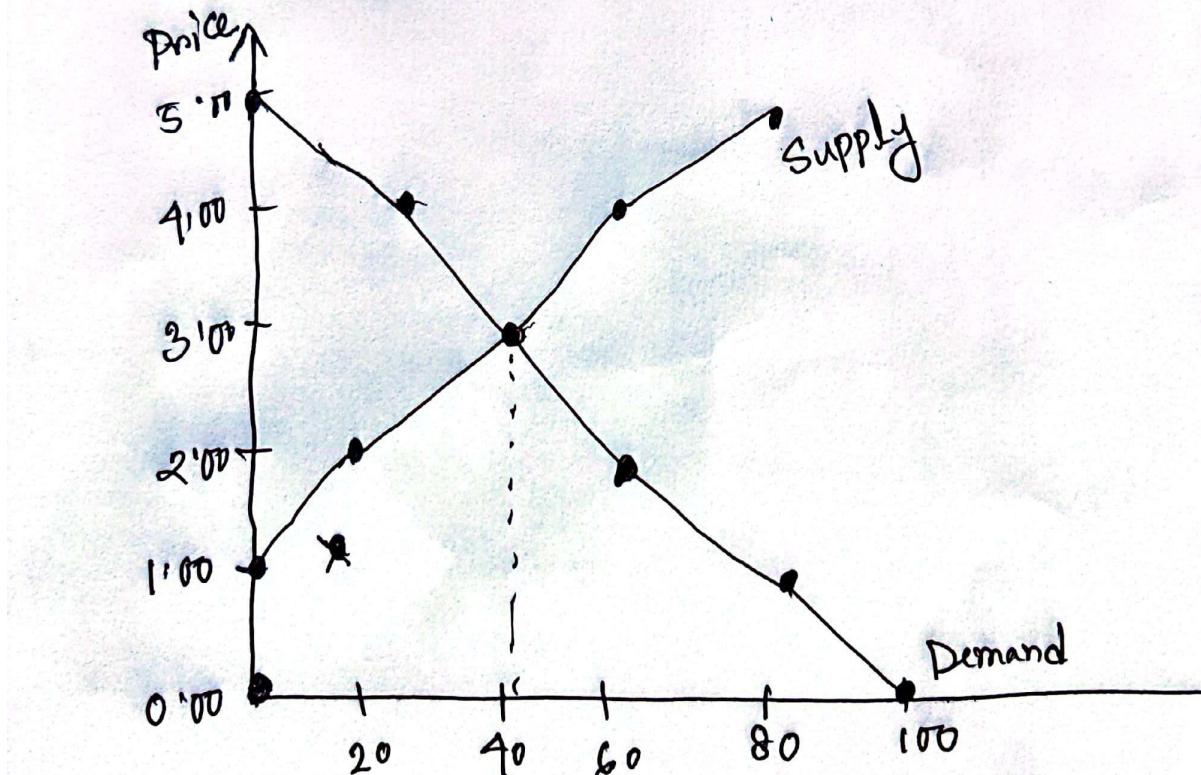
2) Draw a graph showing equilibrium with the help of demand and supply curves.

(a)

Price (P)

Quantity demand (Qd)
Quantity supply (Qs)

Price (P)	Quantity demand (Qd)	Quantity supply (Qs)
0.00	100	0
1.00	80	0
2.00	60	20
3.00	40	40
4.00	20	60
5.00	0	80



b) The equilibrium Price is $\frac{3.00}{4.00}$ and the quantity sandwich is 40.

(a) Price (b) Supply

(c) When price is Tk. 4.00

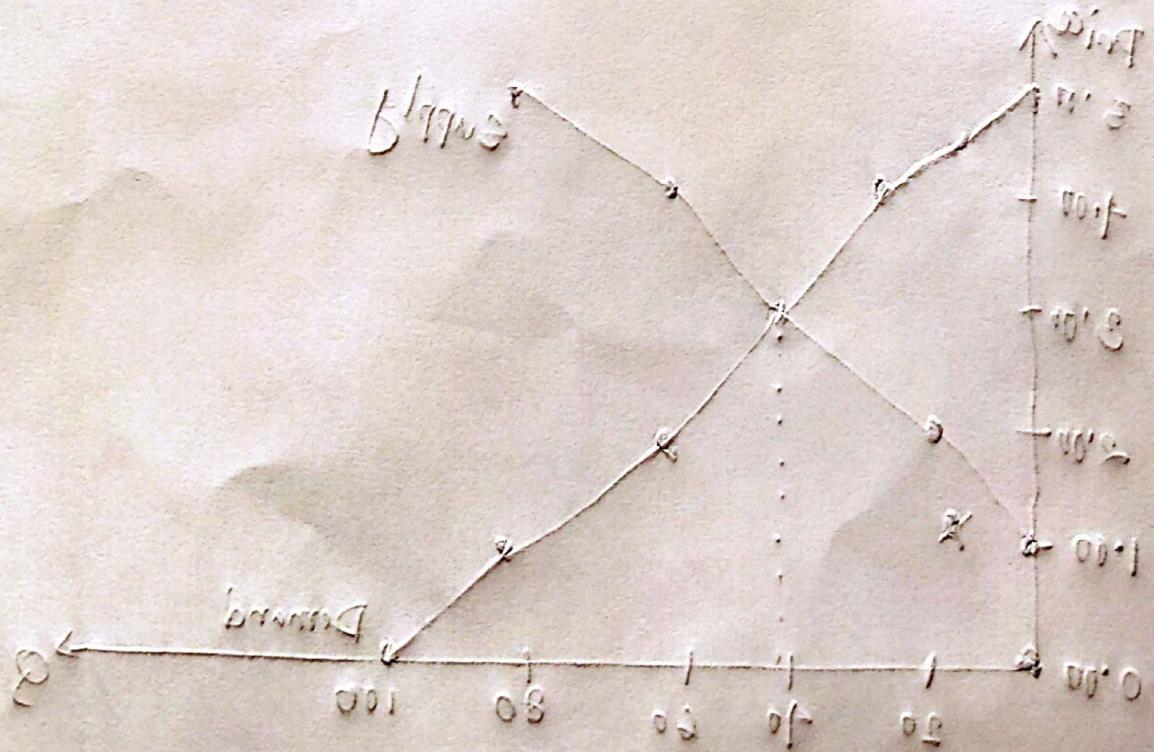
(D) Demand

$$Q_d = 20 \quad Q_s = 60$$

$$\therefore Q_d < Q_s$$

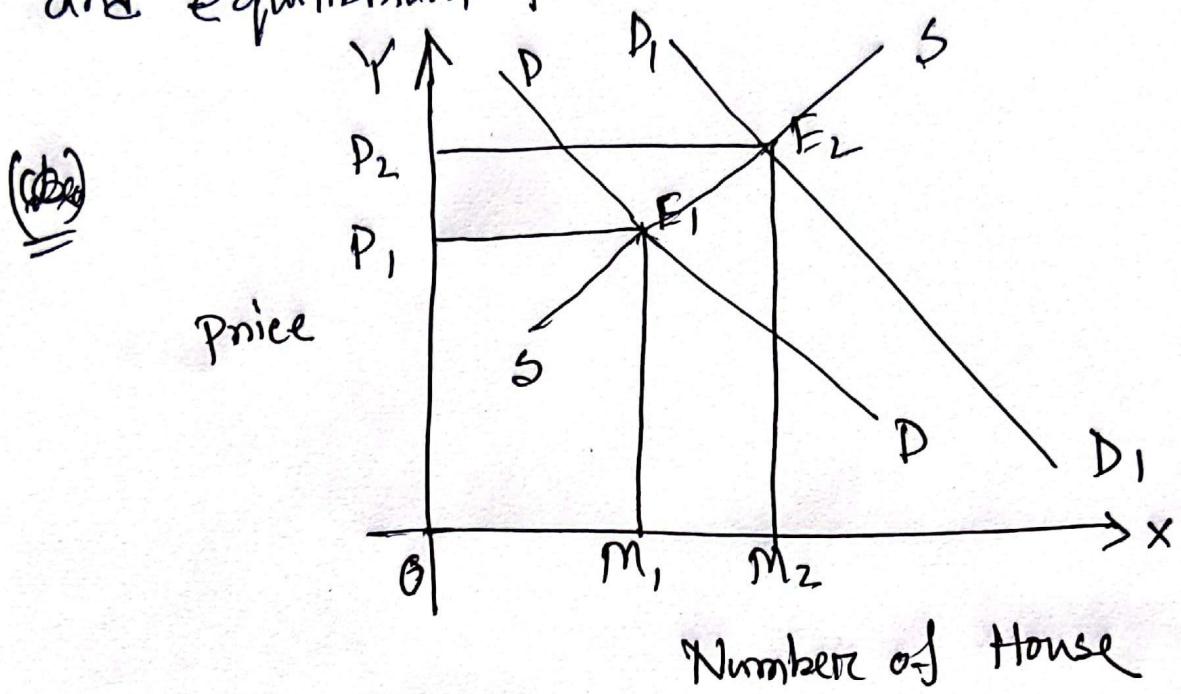
\therefore Excess demand = $(60 - 20) = 40$
The market situation is at amount of supply
Excess Supply = $60 - 20 = 40$

(A))



(11)
(a)

When the income of consumers increases, the demand for the apartments will increase. This will shift the demand curve to the right. This will lead to increase in the equilibrium output and equilibrium price too.



(b) A 20% increase in the wages of construction workers increase in wages will increase the cost of building apartments, thereby reducing this supply as prices rise.

(3) ~~and~~ ~~the~~ ~~factors~~ ~~that~~ ~~influence~~ ~~the~~ ~~level~~ ~~of~~ ~~demands~~ ~~are~~

(a) The determinants of demands are

1. Price of the Product
 2. Price of Related Goods
 3. Consumer's Income
 4. Consumer's Tastes and preference
 5. Advertisement Expenditure
 6. Consumer's expectation
 7. Demonstration Effect
 8. Population of the Country
 9. Distribution of National Income.
- Differentiate Between "Change in quantity demanded" and "Change in demand"

Demand	Quantity demand
1. demand is defined as the willingness of buyer to buy the good or service at a particular price.	1. Quantity demanded represents exact quantity (how much) of a good or service is demanded by consumers at a particular price
2) Increase or decrease in demand.	2) Expansion or contraction in demand
3) Factors other than price	3) Price

4) Shift in demand

Curve

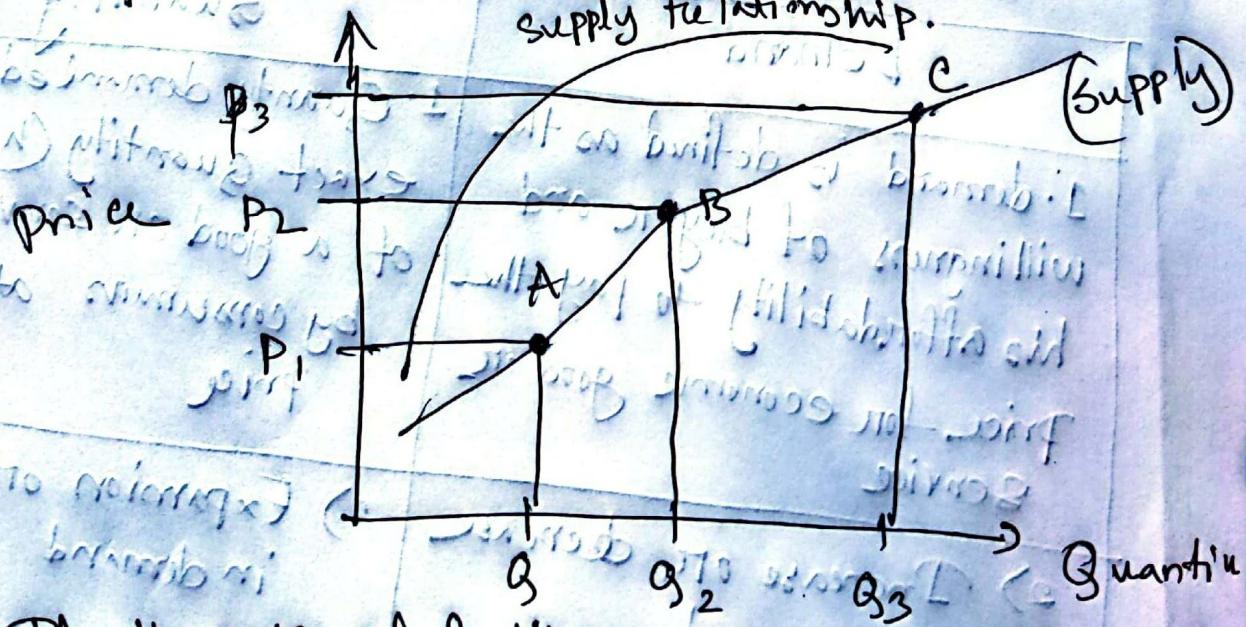
4) Movement along demand

5) No change in demand

5) Change in quantity demanded

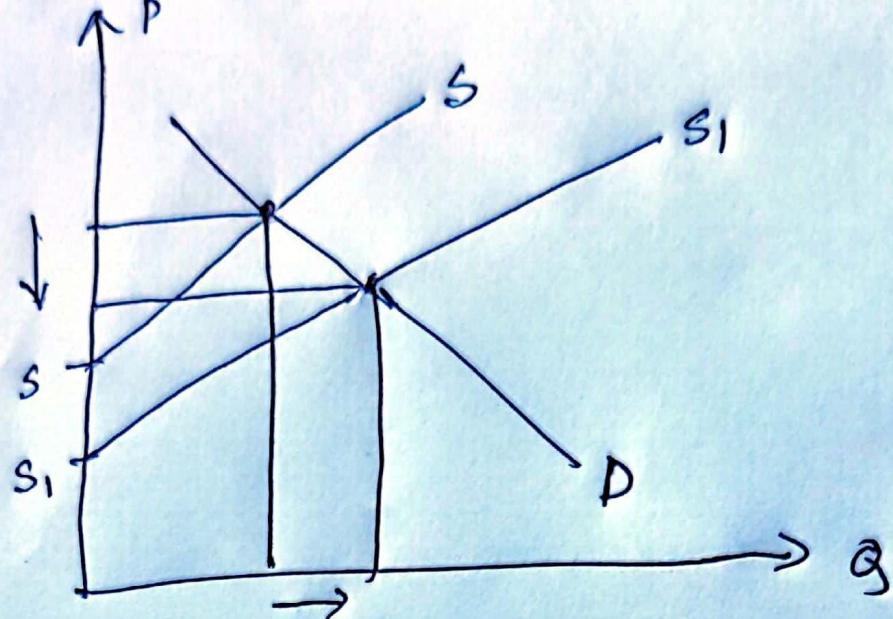
(b) Law of supply

The law of supply is the microeconomics law that states that, all other factors being equal, as the price of a good or service increases, the quantity of good or service that suppliers offer will increase, and vice versa.



If the price of fertilizer rises then affect of Bangladesh supply is also increase.

Then the supply curve look like



Shot on OnePlus
By Pracchad

(4)

(i) ~~to grasp outcome to start without errors~~

Price Elasticity of Demand:

Price elasticity of demand is a measure of change in the quantity purchased of a product in relation to a change in its price.

$$e_p = \frac{dQ/Q}{dP/P}$$

Hence, e_p = price elasticity

Q = quantity of the demanded good

P = price of demanded good.

Income Elasticity of Demand:

The income elasticity of demand is the responsiveness of the quantity demanded for a good to a change in consumer income.

$$e_d = \frac{\Delta D/D}{\Delta I/I}$$

Hence,

e_d = income elasticity of demand

$\Delta D/D$ = change in quantity demanded

$\Delta I/I$ = change in income

Cross Price Elasticity of Demand: The cross

price elasticity of demand or cross price elasticity of demand measures the percentage (%) of

the quantity demanded for a good to the percentage change in the price of another good; ~~exist~~)

^(P) Product B's elasticity of demand

$\rightarrow \text{XED} = \frac{\% \text{ change in demand of product A}}{\% \text{ change in price of product B}}$

it is used to know ^{Price} changing product B's price
- going off all expenses is not realistic.

Whole part (ii) is about Elasticity

Price elasticity of demand		Cross price elasticity of demand		Income elasticity of demand	
Elasticity	Type of demand	Elasticities	Type of goods	Elasticity	Type of goods
0.92	Inelastic demand	0.28	not close substitutes	0.35	Necessity good
0.31	II	0.2	II	0.20	II
1.20	Elastic Demand	0.25	II with +0.42	+0.42	Inferior good
2.27	II	-0.28	Somewhat Complementary goods	1.58	Luxury good.

cross esp is based to products using cross effects

effects using cross esp to products using cross effects

to (i) getting all answers based to

(iii) The determinants of price elasticity of demand:

The determinants of price elasticity of demands
are :

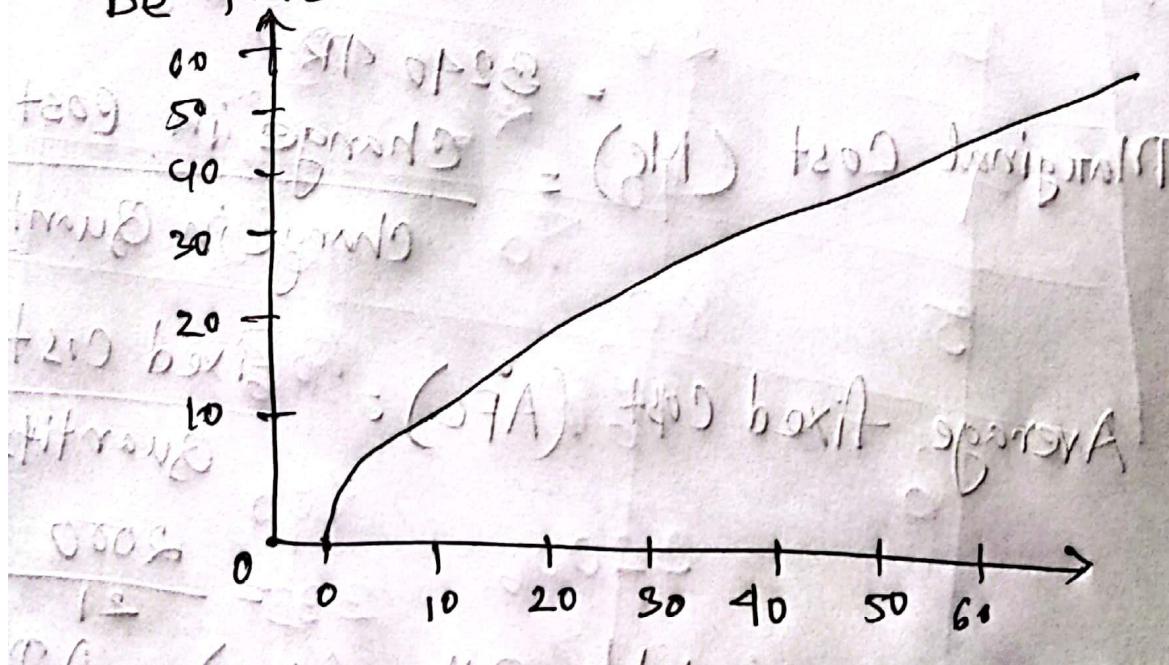
1. Availability of substitute
2. Nature of commodity
3. Proportion of income spent
4. The number of uses of a commodity
5. Time factor
6. Price range
7. Habit of consumer .

(50) MDM Two Inputs Capital (1)

(1)

The Law of Diminishing Marginal Product:

The Law of Diminishing marginal product is the economic concept which shows increasing one production variable while keeping everything else the same will initially increase overall production but will generate less output the more that variable is increased. In other words, increasing one factor of production while keeping everything else the same will not be productive past a certain point.



PA = (VA) Total Product / Input

- (GPA) Total Output / Input

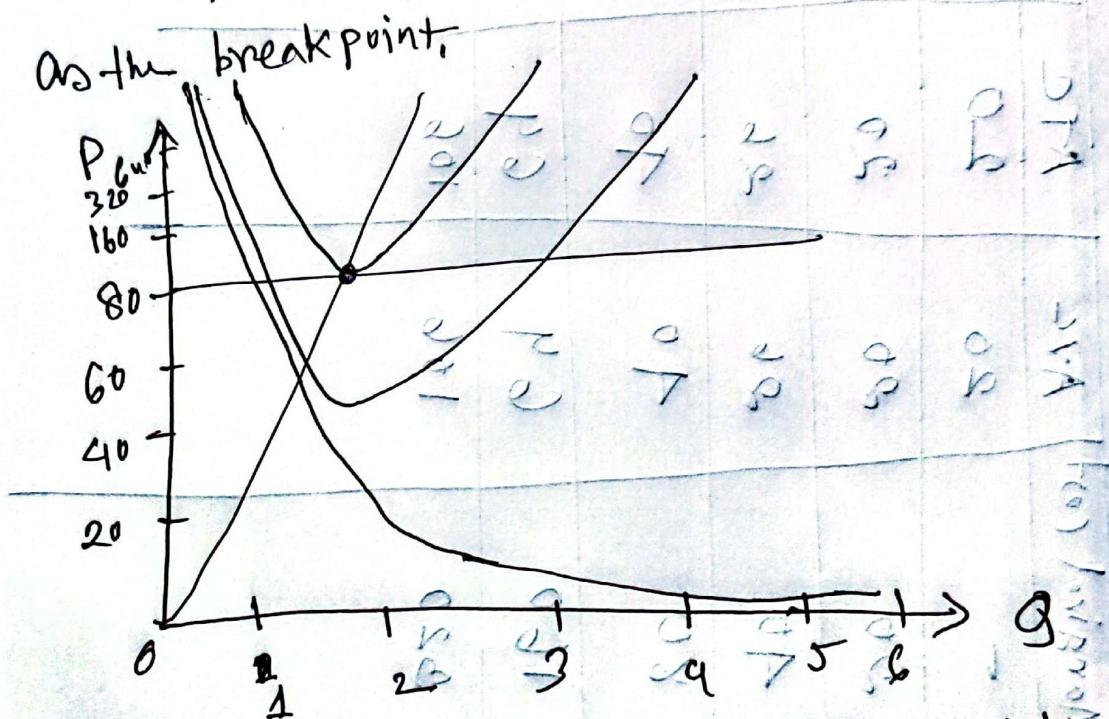
(11)

(12)

Quantity	Variable Cost	Marginal Cost	Ave	ATC	AFC
1	20	2000	-	20	2000
2	40	2000	20	20	1000
3	80	2000	40	26	666
4	160	2000	80	40	500
5	320	2000	160	64	400
6	640	2000	320	106	333
Total Variable Cost	1600				
Contribution Margin	1600				

total revenue is likely to change if fixed cost
increases. Total revenue will increase if
fixed cost decreases. Total revenue will
decrease if fixed cost increases.

(iii) The only possible point at which marginal cost equals average variable or average total cost is the minimum point. The point at which marginal cost is the minimum point. The point at which marginal cost equals average total cost ($MC = ATC$) is known as the break point.



Whenever MC is less than ATC , ATC is falling, whenever MC is greater than ATC , ATC is rising, when ATC reaches its minimum point $MC = ATC$. Relation between short-run

long-run Average Total Cost.

(Ans)