Answer to the question no: 01

1. When individuals make decisions, they face trade-offs among alternative goals.

2. The cost of any action is measured in terms of foregone opportunities.

3. Rational people make decisions by comparing marginal costs and marginal benefits.

4. People change their behavior in response to the incentives they face.

5. Trade can be mutually beneficial.

6. Markets are usually a good way of coordinating trade among people.

7. Government can potentially improve market outcomes if there is some market failure or if the market outcome is inequitable.

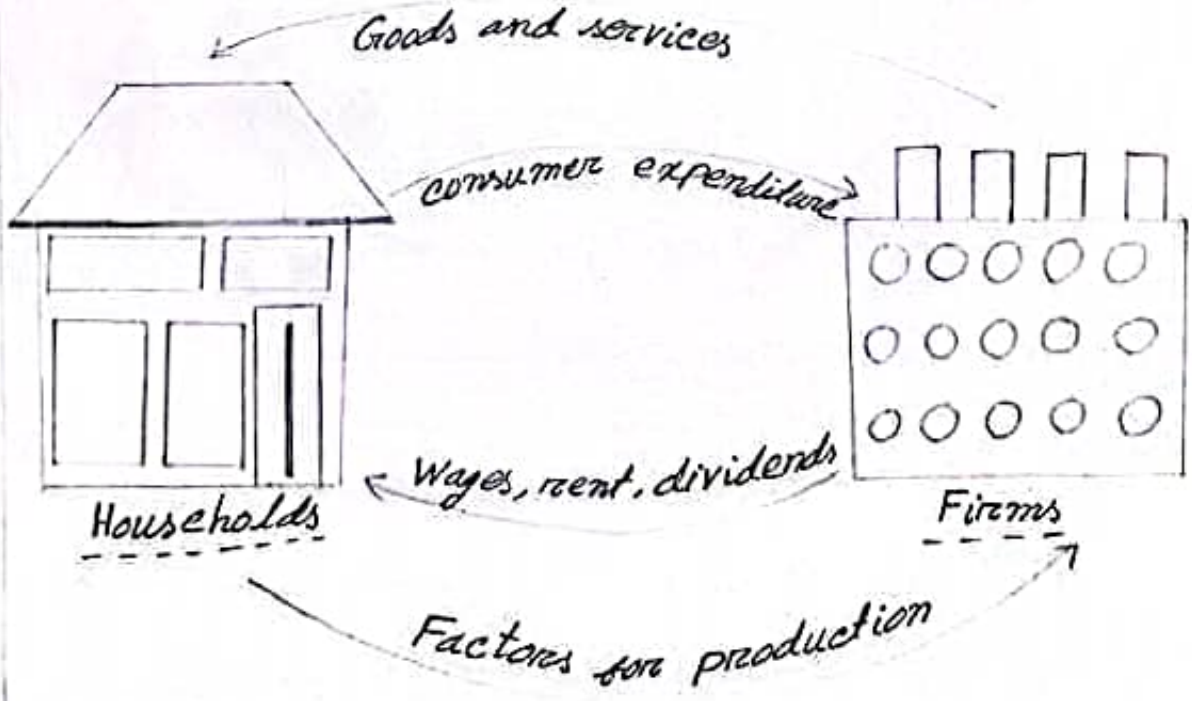
8. Productivity is the ultimate source of living standards.

9. Money growth is the ultimate source of inflation.

10. Society faces a short-run trade-off between inflation and unemployment.

Answer to the question no: 02

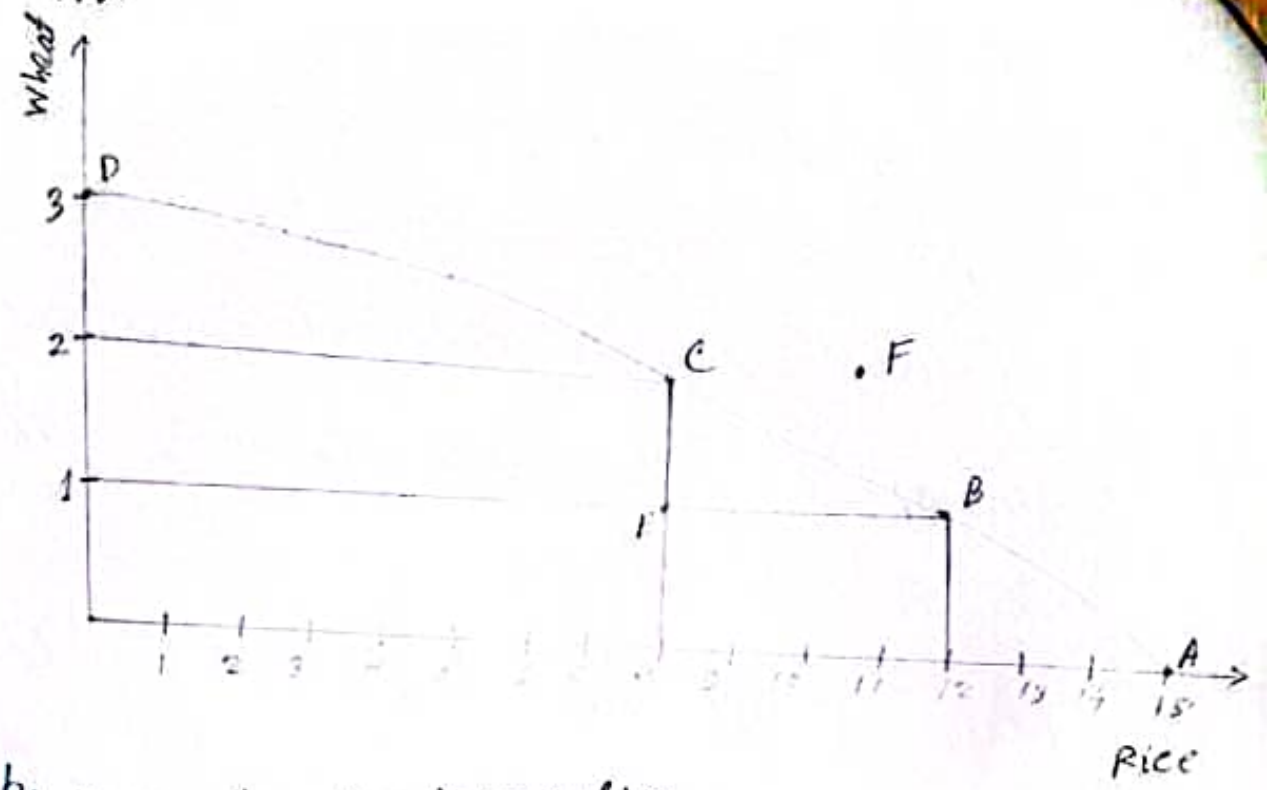
→ income diagram:



The circular flow of income is a model of the economy in which the major exchanges are represented as flows of money, goods and services, etc. between economic agents. The flows of money and goods exchanged in a closed circuit correspond in value, but run in the opposite direction. The circular flow analysis is the basis of national accounts and hence of macroeconomics.

Answer to the question no: 03

a. PPF:



b. From the given information,

Change in the quantity of rice from point B to C = 12 - 8 = 4

Again, change in the quantity of Wheat from Point B to C = 2 - 1 = 1

So. the opportunity cost of Wheat in terms of rice from point B to C is 4

c. The E Point of the PPF of the given information is an inefficient point.

Any point inside the PPF is an inefficient point. Because, we do not need to give up other good to Produce one good on that point.

d. The B and C of the PPF of the given information is an efficient point.

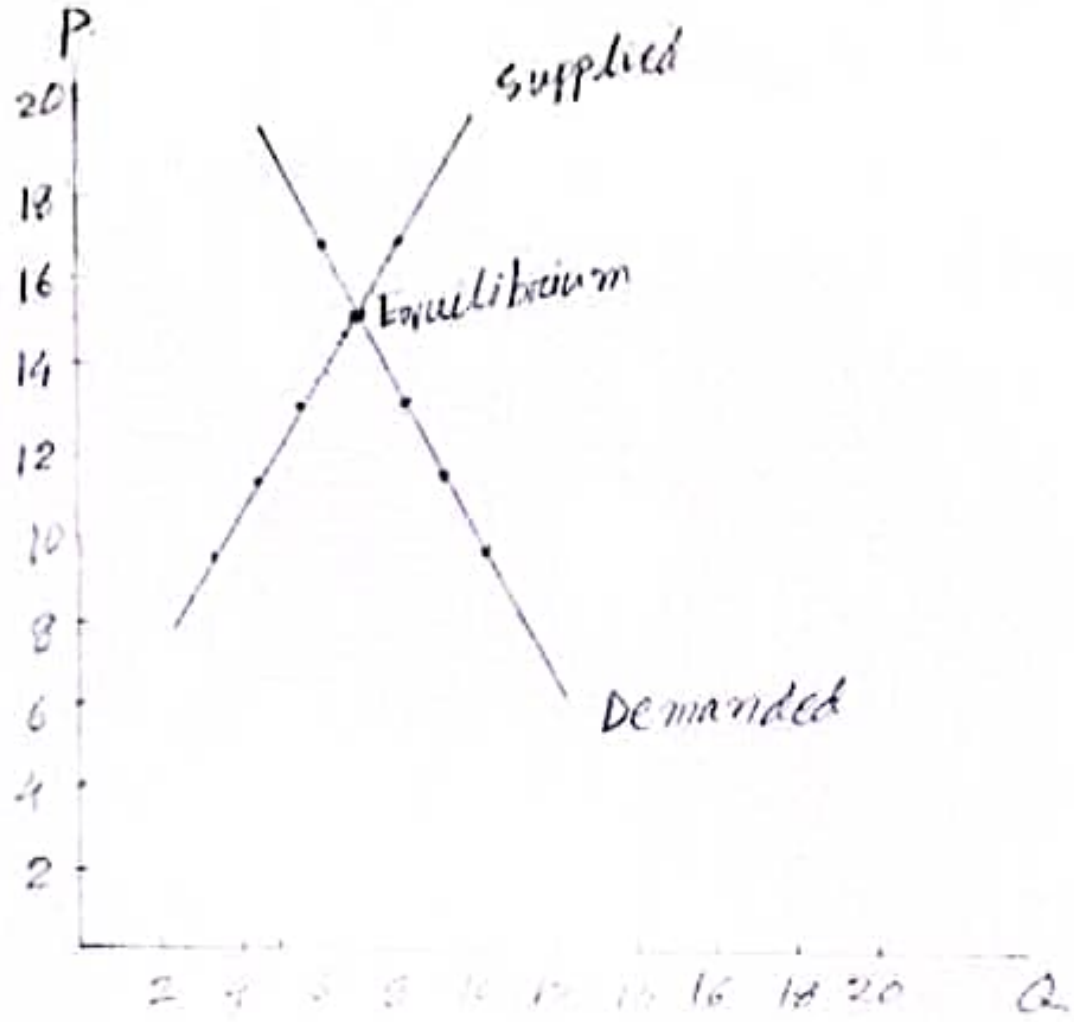
Any point on the PPF is considered as an efficient Point. Because, we have to giveup one good to produce another good on that paint.

e. The F point of the figure of PPF of the given information is an unattainable point.

Any point which is outside the PPF is considered as an unattainable point. Because it is impossible for an economy to produce any good outside the PPF.

Answer to the question no: 04

a.



b. The equilibrium price is 16 $/Kg and equilibrium quantity is 7 million Kg/year.

c. i. When price is $12

$Q_d = 9$ and $Q_S = 5$

$\therefore Q_d > Q_S$

$\therefore$ Excess demand $= 9 - 5 = 4$ million Kg/year. Ans.

ii. When price is $18

$Q_d = 16$ and $Q_S = 8$

$\therefore Q_S > Q_d$

$\therefore$ Excess supply $= 8 - 6 = 2$ million Kg/year Ans.

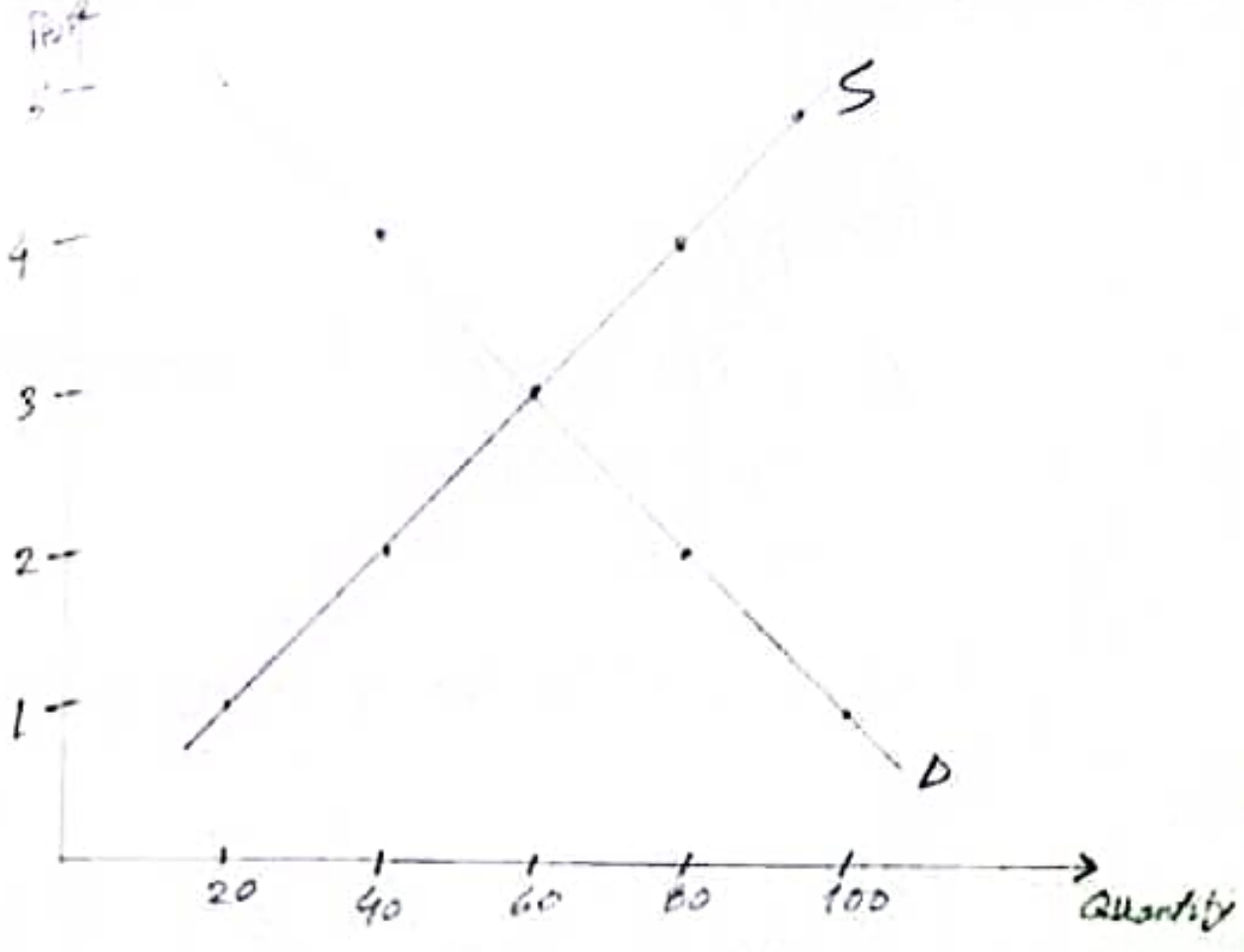
d. If chicken price goes up, the demand of beef will increase. as chicken is a substitute good of beef. As a result, the demand curve will shift right. So, equilibrium ~~price and~~ quantity will increase.

Answer to the question no: 05

a. Market demand and supply schedule:

	Price	Quantity demand $Q_{dx} = 120 - 20P_x$	Quantity supply $Q_{Sx} = 20P_x$
A	P = 5	20	100
B	P = 4	40	80
C	P = 3	60	60
D	P = 2	80	40
E	P = 1	100	20

b



c. Given,

$Q_d = 120 - 20P$

$Q_s = 20P$

We know, $Q_d = Q_s = Q^*$

Here, $120 - 20P^* = 20P^*$

$\Rightarrow 40P^* = 120$

$\Rightarrow P^* = 3$

$\therefore P^* = 3$

Again, $Q^* = 120 - 20 \times 3$

$= 120 - 60$

$= 60$

$\therefore$ Equilibrium price is 3 and quantity is 60.

d. Given, price = 2

From the demand and supply shedule

$Q_d = 80$, $Q_s = 40$

$\therefore Q_d > Q_s$

$\therefore$ The market situation is at amount of shortage

e.

Given. price = 3

From the demand and supply schedul.

$Q_d = 60$, $Q_s = 60$

$\therefore Q_d = Q_s$

$\therefore$ The market economy is at equilibrium condition.

f. Given. price = 4

From the demand and supply schedule.

$Q_d = 40$; $Q_s = 80$

$Q_d < Q_s$

$\therefore$ The market situation is at amount of surplus.

Answer to the question no: 06

a. Price elasticity of demand is a measure of how much the quantity demanded of a good responds to a change in the price of that good.

$$\text{Price elasticity of demand} = \frac{\text{Percentage change in quantity demanded.}}{\text{Percentage change in price.}}$$

- $E_{D \times P_x} > 1$; elastic demand;
- $E_{D \times P_x} < 1$; inelastic demand, $E_{D \times P_x} = \dfrac{\% \Delta Q}{\% \Delta P}$
- $E_{D \times P_x} = 1$; Unit elastic demand; $= \dfrac{\frac{\Delta Q}{Q}}{\frac{\Delta P}{P}}$

$$= \frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q} = \frac{\frac{Q_2 - Q_1}{Q_1} \times 100}{\frac{P_2 - P_1}{P_1} \times 100}$$

b. Price elasticity of supply is a measure of how much the quantity supplied of a good responds to a change in the price of that good.

$$E_{S \times P_x} = \frac{\% \Delta Q_S}{\% \Delta P}$$

$$= \frac{\Delta Q_S}{Q_S} / \frac{\Delta P}{P}$$

$$= \frac{\Delta Q_S}{\Delta P} \cdot \frac{P}{Q_S}$$

C. Income elasticity ... much the quantity demanded of a good responds to a change in consumer's income.

$$E_{D\times I} = \frac{\%\,\Delta Q_x}{\%\,\Delta I}$$

$$\Rightarrow E_{D\times I} = \frac{\Delta Q_x}{Q_x} \Big/ \frac{\Delta I}{I}$$

$$\Rightarrow E_{D\times I} = \frac{\Delta Q_x}{\Delta I} \cdot \frac{I}{Q_x}$$

- $E_{D\times I} > 1$; income elastic.
- $E_{D\times I} < I > 0$ normal and income inelastic.
- $E_{D\times I} < 0$ inferior good.

D. Cross-Price elasticity of demand measures the responsiveness of the quantity demanded for a good to change in the price of another good.

$$E_{D\times Py} = \frac{\%\,\Delta Qx}{\%\,\Delta P_y}$$

$$= \frac{\frac{\Delta Q_x}{Qx}}{\frac{\Delta P_y}{P_y}}$$

$$= \frac{\Delta Q_x}{\Delta P_y} \cdot \frac{P_y}{Q_x}$$

Answer to the question no: 07

a. Point A to point B:

$$PED = \frac{\%\Delta Q}{\%\Delta P} = \frac{\frac{Q_2 - Q_1}{Q_1} \times 100}{\frac{P_2 - P_1}{P_1} \times 100}$$

$$= \frac{\frac{150 - 200}{200} \times 100}{\frac{15 - 10}{10} \times 100}$$

$$= \frac{-25\%}{50\%}$$

$$= -.5$$

$$= .5 \text{ [always positive]}$$

$\therefore .5 < 1$; so it is inelastic.

Here,

$Q_1 = 200$

$Q_2 = 150$

$P_1 = 10$

$P_2 = 15$

b. Point B to Point A:

$$PED = \frac{\%\Delta Q}{\%\Delta P} = \frac{\frac{Q_2 - Q_1}{Q_1} \times 100}{\frac{P_2 - P_1}{P_1} \times 100}$$

$$= \frac{\frac{200 - 150}{150} \times 100}{\frac{10 - 15}{15} \times 100}$$

$$= \frac{33.33\%}{-33.33\%}$$

$$= -1$$

$$= 1$$

PED = 1 ; so it is Unit elastic demand.

Here

$P_1 = 15$

$P_2 = 10$

$Q_1 = 150$

$Q_2 = 200$

c. Midpoint method:

$$PED = \frac{\frac{Q_2 - Q_1}{(Q_2 + Q_1)/2}}{\frac{P_2 - P_1}{(P_2 + P_1)/2}}$$

Here,

$P_1 = 10$

$P_2 = 15$

$Q_1 = 200$

$Q_2 = 150$

$$= \frac{\frac{150 - 200}{(150 + 200)/2}}{\frac{15 - 10}{(15 + 10)/2}}$$

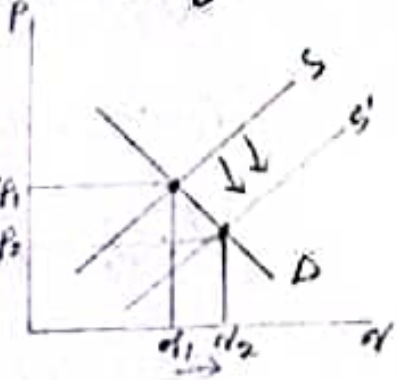
$$= \frac{-0.28\ \%}{0.4\ \%}$$

$$= 0.7$$

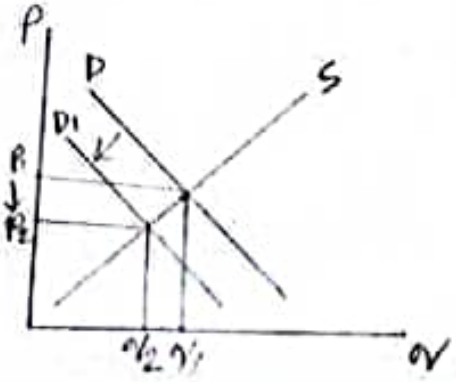
$\therefore$ $0.7 < 1$; so it is inelastic

Answer to the question no: 08

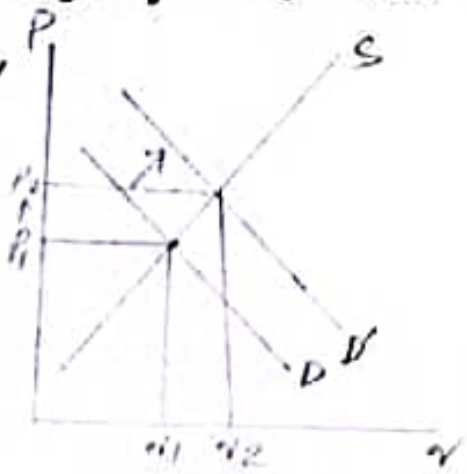
a. The grain is an input for beef. If the price of grain falls, then supply of beef will increase. So, supply curve will shift downward along demand curve. So evilibriam price will decrease and equilibrium quantity will increase in the market of beef.



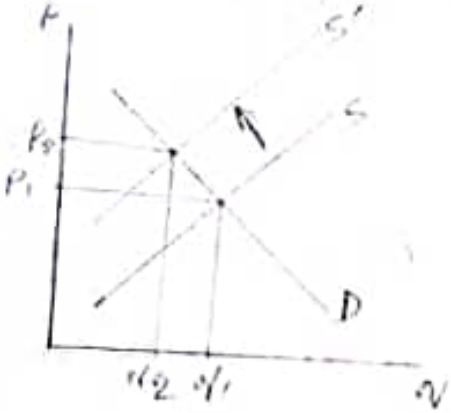
b. If the price of chicken falls the demand of beef will decrees as beef is substitute of chicken. So, demond curve will shift in left along supply curve. So equilibrium Price and quantity both will decrise in beef market.



8.c. According to the study that indicates eating beef is good for health the popularity of beef will increase. so demand beef will increase. So. demand curve will shift in right. So equilibrium price and quantity both will rise



d. If number of beef producing firms falls. then beef supply will decrease. So. Supply curve will shift in leftward. So, equilibrium price will rise and equilibrium quantity will fall in the beef market

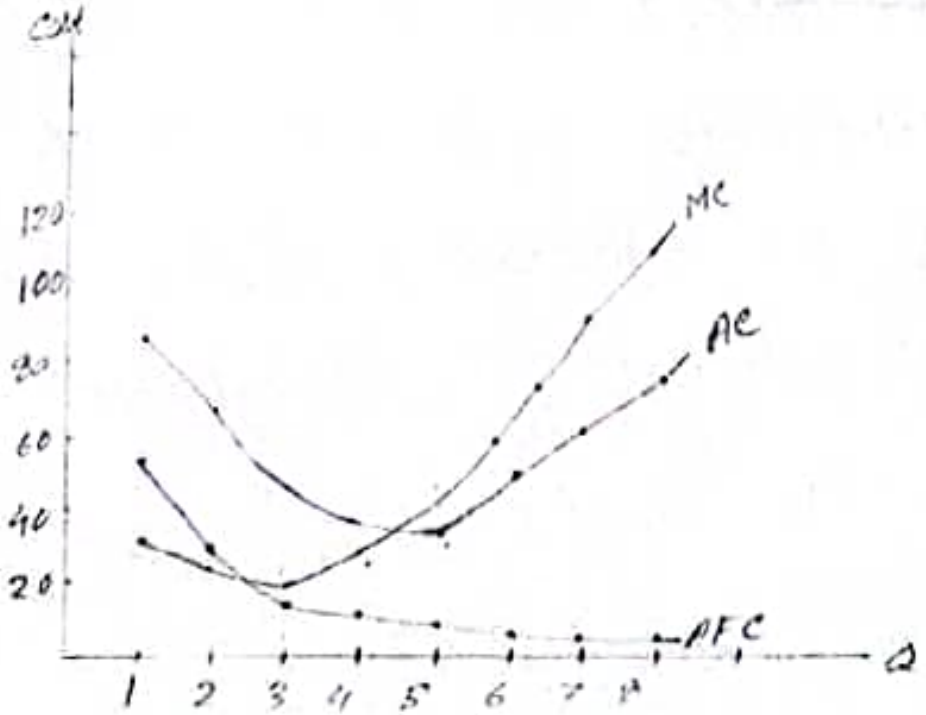


Answer to the question no: 09

a.

Q	FC	VC	TC	MC	AC	AFC	AVC
0	55	---	55	---	---	---	---
1	55	30	85	30	85	55	30
2	55	55	110	25	55	27.5	27.5
3	55	75	130	20	43.3	18.3	25
4	55	105	160	30	40	13.7	26.25
5	55	155	210	50	42	11	31
6	55	225	280	70	46.6	9.16	37.5
7	55	315	370	90	52.8	7.85	45
8	55	425	480	110	60	6.87	53.12

b.



c. The relationship between the MC and AC is the same as that between any other marginal - average quantities. When MC is less then AC, AC falls and When MC is ~~get~~ greater than AC, AC rises.

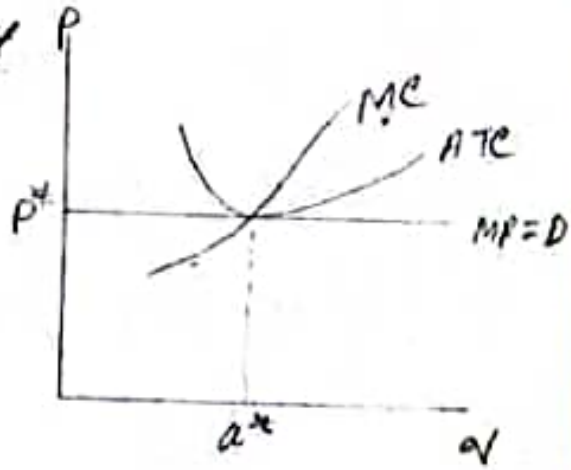
d. If any firm tries to raise output after that point by increasing the quantities of variable factors the fixed factors like machines would be worked beyond their capacity. This would lead to diseconomics of production and diminishing returns. The Average costs will start rising rapidly. Hence, due to the operation of law of Variable proportions the short run as well as long-run Average cost curve is 'U' Shaped.

Answer to the question no: 10

a. The properties of perfectly competitive market:

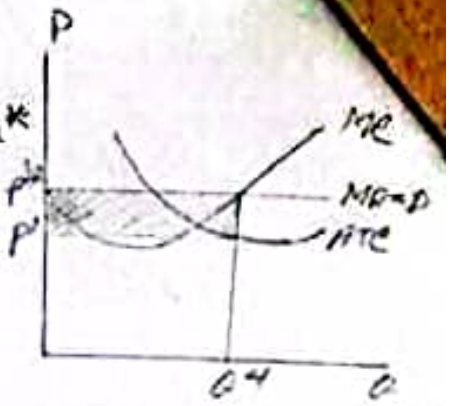
- Large number of buyers and sellers.
- Sellers offer a standardized product
- Perfect information.
- Sellers can easily enter into or exit from market
- Each buys or sells only a tiny fracting of the total quantity in the market.
- All firms are price takers - they cannot control the market price of their product.

b. Normal profit: Here: ATC curve intersect at equilibrium point that means $P^* = ATC$. So, it's normal profit

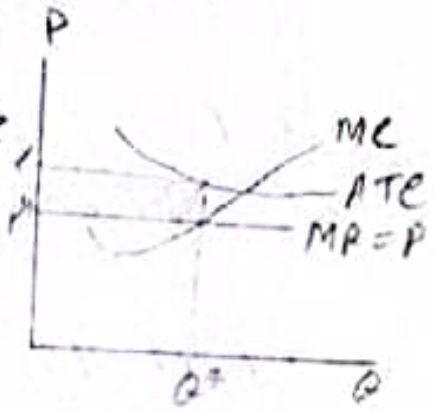


Positive profit:

Here, $P^* > ATC$. So There $(P-ATC)\times Q^*$ is positive profit.



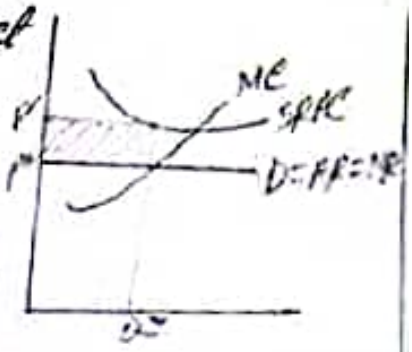
economic loss: Here, $P^* < ATC$. So The area $(P-ATC)\times Q^*$ is economic loss.



C.

A perfectly competitive firm ~~can~~ can stop producing only when revenue just cove variable cost or when losses are equal to fixed cost But in short-run market supply curve is obtained from the aggregation of individual firm's supply curve. Summing quantities of output supplied by all firms in market at each price. Fixed inputs of each firm

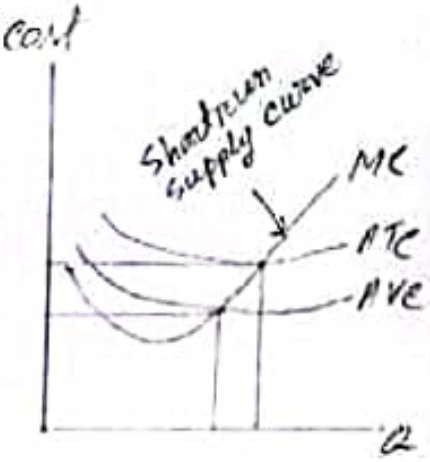
and number affirms in the market are constant. So, that firm will produce even if it made losses in the short-RUN



The firm have to minimise its losses. So, it will produce again even if losses.

d.

A parfectly competitive firms short run supply curve is that portion of MC curve which is above AVC curve of a firm in perfect competition is precisely its MC curve for all rates of output equal to or greater than the rate of output associated with minimum average variable cost.



Principles of Economics: Assignment 1

Syed Afroz Keramat

1. Discuss briefly the ten principles of Economics.
2. Consider the following information:

	A	B	C	D
Wheat	0	1	2	3
Rice	15	12	8	0

a.)Draw the PPF from the above following data.
b.)What is the opportunity cost of Wheat in terms of rice from point B to point C?
c) Indicate an inefficient point. Why those points inside the PPF are inefficient?
d) Indicate an efficient point. Why points on the PPF are efficient?
e) Indicate an unattainable point. Explain why points outside the frontier are unattainable.

3. The following is the hypothetical supply and demand schedule for butter:

Price (Tk.)	Quantity demanded (Kg)	Quantity Supplied (Kg)
14	100	20
18	80	40
22	60	60
26	40	80
30	20	100

a) Plot the demand and supply curve for butter.
b) Find the equilibrium price and quantity of butter.
c) How much is the shortage or surplus when price is Tk. 30?
d) How much is the shortage or surplus when price is Tk. 18?
e) What will happen to equilibrium price and quantity if incomes of the consumers of butter are increased?

4. The demand function for commodity X is $Qd_x = 120-20P_x$ and supply function is $Qs_x = 20P_x$. Assume the values of p are 1, 2, 3, 4, and 5. On the basis of this information answer the following questions-
   a) Find the market demand and supply schedule?
   b) Draw an appropriate figure on the basis of the market demand and supply schedule?
   c) Show the Equilibrium point mathematically?

e) What is the market situation (amount of Surplus or shortage) When Price is 3?
f) What is the market situation (amount of Surplus or shortage) When Price is 4?

5. Discuss the following concepts properly along with the formula for calculation.
   A) Price Elasticity of Demand
   B) Price Elasticity of Supply
   C) Income Elasticity of Demand
   D) Cross-Price Elasticity of Demand

6. Answer the following questions on the basis of the following table? Explain the value of the price elasticity of demand.

Point	Price	Quantity Demand
A	10	200
B	15	150

a) Calculate price elasticity of Demand using normal method when price moves from point A to Point B?
b) Calculate price elasticity of Demand using normal method when price moves from point B to Point A?
c) Calculate price elasticity of Demand using Mid Point method? Also explain the value you get.

7. Using a supply and demand graph and assuming competitive markets, show and explain the effect on equilibrium price and quantity of the following:
   (a) An increase of the price of beef on the market for chicken.
   (b) A decrease of the price of lemon on the market for tea.
   (c) An increase of the price of milk and sugar on the market for ice cream cones.
   (d) An Incidence of bird flu on the market for chicken.