Week 04 – Mock Paper

Lessons covered	Subsidy Price Ceiling Factor Market, Economic rent & transfer earnings Cost & Production theory
Time	2 hours
Instructions	Answer 5 questions only.

1.

i. **The details of market demand and supply regarding a certain good have been stated below.**

Price of a unit	Quantity demanded	Amount of excess supply
20	**2000**	**-2000**
80	**800**	**400**

(a) What is the market equilibrium price and the equilibrium quantity of the above good? (04 marks)

Equilibrium Price = Rs.70/- (01 mark)

Equilibrium Quantity = 1000 units (01 mark)

Workings

The quantity supplied at the price of Rs.20,

Excess supply = Qs – Qd

-2000 = Qs – 2000

-2000 + 2000 = Qs

0 = Qs

The quantity supplied at the price of Rs.80,

Excess supply = Qs – Qd

400 = Qs – 800

400+ 800 = Qs

1200 = Qs

QS = a + bp

Step 01

b = Δqd / Δp

b = 1200 / 60

b = 20

Step 02

Qs = a + 10p

If p = 20 then Qs = 0

0= a +20 (20)

0 - 400 = a

-400 = a

Step 03

QS = -400 + 20p (1/2 mark)

QD = A – bp

Step 01

b= Δqd / Δp

b =1200 / 60

b = 20

Step 02

QD = a – 20p

If p = 20 then Qd = 2000

2000= a –20 (20)

2000 + 400= a

2400= a

Step 03

Qd = 2400 – 5p

At Equilibrium

Qd = Qs

2400-20p = -400+20p

2400+400 = 20p + 20p

2800= 40 p

70= p

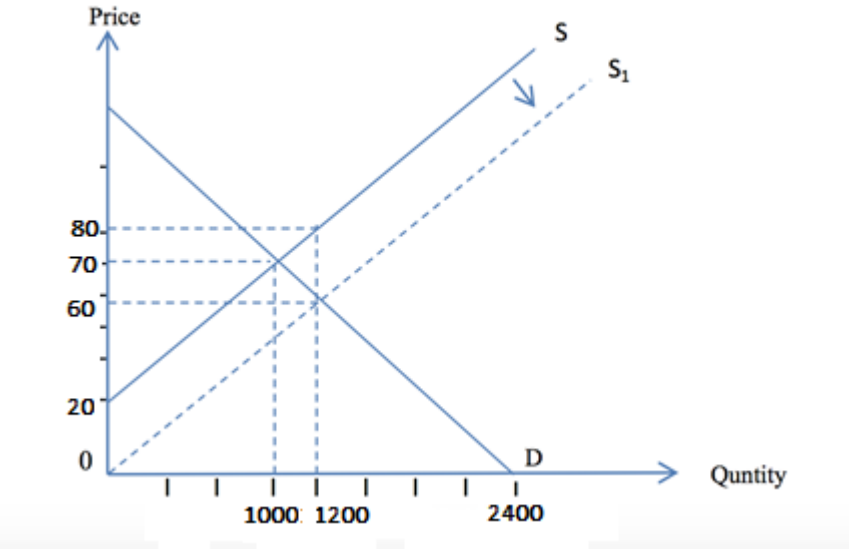
Equilibrium price is Rs.70/-

If p= 70

Qd = 2400 –20(70)

Qd = 2400– 1400

Qd = 1000 units



(b) If a specific subsidy of Rs.20/= is provided for a unit of that good by the government mention the followings.

I. New equilibrium price and the equilibrium quantity (02 marks)

The supply curve shifts to the right from S to S_1 in the amount of the subsidy.

The new equilibrium price = Rs. 60/= (01 marks)

The new equilibrium quantity = 1200 units (01 marks)

Workings

QS after Subsidy

QS = -400 + 20 (p +unit subsidy)

Qs = -400 + 20 (p -20)

Qs = -400 + 20p -400

Qs = 20p

Qd after tax

QD = 2400 – 20p

At Equilibrium

Qd = Qs

2400-20p = 20p

2400 = 20p + 20p

2400 = 40p

60= p

Equilibrium price is Rs.60/-

If p= 60

Qd = 2400 –20(60)

Qd = 2400– 1200

Qd = 1200 units

II. Consumer's surplus before and after the subsidy (02 marks)

Consumer surplus (before) $= \frac{1}{2}$ x (Max P_b –Ep) x EQ

$= \frac{1}{2}$ x (120-70) x 1000

= Rs.25000 (01 mark)

Consumer surplus (after) = $\frac{1}{2}$ x (Max P_b –Ep) x EQ

= $\frac{1}{2}$ x (120-60) x 1200

= Rs.36000 (01 mark)

III. Producer's surplus before and after the subsidy (02 marks)

Producer surplus (before) = $\frac{1}{2}$ x (Ep - Min P_s) x EQ

= $\frac{1}{2}$ x (70 - 20) x 1000

= Rs.25000 (01 mark)

Producer surplus (after) = $\frac{1}{2}$ x (New Ps - Min Ps) x EQ

= $\frac{1}{2}$ x (80-20) x 1200

= Rs.36000 (01 mark)

IV. The government expenditure on the subsidy (02 mark)

Govt. expenditure = Unit subsidy x EQ

= Rs.20 x 1200 units

= Rs.24000 (01 mark)

V. Dead weight loss due to the subsidy (02 mark)

Dead weight loss = ½ x Unit subsidy x ΔEQ

= ½ x Rs.20 x 200

=Rs.1000

ii. The equations relevant to market demand and supply curve for a particular good are given below.

Qd = 400 – 4p

Qs = -200 + 8p

Assume that the government grants a unit subsidy of Rs.12 per unit on the production of this good.

a) What price do the buyers pay for the good after the subsidy and what is the price that produces receive after the subsidy?(04 marks)

After Subsidy

Qs = -200 + 8 (p +12)

Qs = -104 + 8p

Therefore,

At Equilibrium

Qd = Qs

400 -4p = -104 + 8p

EP = Rs.42 (1/2 marks)

Pb = Rs.42

If Ep = Rs.42

Qd = 400 – 4 (42)

Qd = 232 units

Therefore, EQ = 232 units

Before subsidy,

Qs = -200 + 8p

232 = -200 + 8(Ps)

Ps = Rs.54

b) **How much expenditure will the government have to incur for this subsidy? (02 marks)**

Govt expenditure = Unit subsidy xEQ

= Rs.12 x 232 units

= Rs. 2784

2.

i. **In a hypothetical market, suppose demand curve and supply curve are linear curves. Following data has been extracted from that market.**

	Rs.
Consumer Utility	900

Equilibrium Price	14
Consumer Surplus	60
Economic Surplus	240

a) Construct demand equation of this market (04 marks)

Working I

Consumer expenditure = Consumer Utility – Consumer Surplus

= 900 – 60

= Rs 840

Working II

Consumer Expenditure = EP X EQ

840 = 14 X EQ

EQ = 840/14

EQ = 60 units

Working III

Consumer Surplus = ½ X EQ X (Max Pb - Ep)

60 = ½ X 60 X (Max Pb - 14)

60 = 30 X (Max Pb - 14)

60/30 = (Max Pb - 14)

2 = (Max Pb - 14)

2 + 14 = Max Pb

Max Pb = 16

Working IV

P	Qd
14	60
16	0

b = ΔQd /ΔP

= 60 / 2

Working V

Qd = A – 30p

If Qd = 60 the P=14

60 = A – 30 (14)

60 = A – 420

60 + 420 = A

480 = A

Working VII

Qd = 480 – 30 P (3 Marks)

b) Construct Supply equation of this market (04 marks)

Working I

Producer Surplus = Economic Surplus – Consumer Surplus

Producer Surplus = 240 – 60

Producer Surplus = 180

Working I

Producer Surplus = ½ X EQ X (Ep – Min PS)

180 = ½ X 60 X (14 - Min PS)

180 = 30 X (14 - Min PS)

(14 - Min PS) = 180 /30

(14 - Min PS) = 6

14 – 6 = Min Ps

8 = Min Ps

Working IV

P	Qs
14	60
8	0

b = ΔQs /ΔP

= 60 /6

= 10

Working V

Qs = A + 10p

If P = 14 then Qs = 60

60 = A + 10 (14)

60 = A + 140

60 - 140 = A

-80 = A

Qd = - 80 +10 P (3 Marks)

c) If government decides to grant Rs.4/- unit subsidy to this market calculate the total subsidy benefit enjoyed by producers in this market. (04 marks)

Working I

After Subsidy

Qs = -80 + 10 (p +4)

Qs = -40 + 10p

Therefore,

At Equilibrium

Qd = Qs

480 -30p = -40 + 10p

480 +40 =10P + 30P

520 = 40P

EP = 13

If Ep = 13

Qd = 480– 30P

Qd = 480 – 30 (13)

Qd = 90

Therefore, Ed = 90

Per Unit Subsidy benefit to Producer = 3 (Only Rs.1 /- Price reduction in the market price out of 4/- unit subsidy. Thereby, rest Rs.3/- is the subsidy benefit to producer)

Producer Subsidy benefit = 90 X 3

= Rs 270 (02 marks)

ii. In a particular market demand and supply equations have been given as follows:

Qd = 150 - 2p

Qs = -100 + 3p

a. If government grant Rs.5/- unit subsidy, calculate consumer surplus? (02 Mark)

Working I

Max Pb = (150/-2) X -1

= 75

Working II

Qs after unit subsidy

Qs = -100 + 3 (P +5)

Qs = -100 + 3P +15

Qs = -85 +3P

Working III

At Equilibrium (After Subsidy)

Qd = Qs

150 - 2p = -85 + 3p

150 +85 = 3P + 2P

235 = 5P

47 = P

Working IV

At Equilibrium (After Subsidy)

If P =47

Qd =150 -2P

Qd = 150 – 2 (47)

Qd = 150 – 94

Qd = 56

Working V

Consumer Surplus (After Subsidy)

= ½ X (EQ after subsidy) X (Max Pb – EP after subsidy)

= ½ X 56 X (75 -47)

= 28 X 28

= Rs. 784/- (02 Marks)

b. If government grant Rs.5/- unit subsidy, calculate dead weight loss? (02 Mark)

Equilibrium Quantity (Before subsidy)

Qd = Qs

150 -2p = -100 +3p

150 + 100 = 3p + 2p

250 = 5p

250/5 = p

50 =P (½ marks)

Dead weight loss =

½ X Unit Subsidy X (EQ after subsidy – EQ before subsidy)

=½ X 5 X (56 -50)

= Rs . 15/- (2 marks)

c. If government grant Rs.5/- unit subsidy, calculate total subsidy benefit on consumer? (02 Mark)

Working I

Unit subsidy benefit on consumer = EP before subsidy - EP after subsidy

= 50 – 47

= 3

Working II

Total subsidy benefit on consumer =

Unit subsidy benefit on consumer X EQ after subsidy

= 3 X 56

= Rs. 168/- (01 Marks)

d. If government grant Rs.5/- unit subsidy, calculate total subsidy benefit on producer? (02 Mark)

Working I

Unit subsidy benefit on producer = Unit Subsidy - Unit subsidy benefit on consumer

= 5 – 3

= 2

Working II

Total subsidy benefit on producer =

Unit subsidy benefit on producer X EQ after subsidy

= 2 X 56

= Rs. 112/- (01 Marks)

3.

i. **Suppose in a hypothetical market demand and supply equations are provided below.**

Qd = 640 -6p

Qs = -50 +4p

If Government set a floor price at Rs 90/-

a. What are the economic consequences of government setting up a floor price? (04 marks)

- Market experiences an excess demand (scarcity in the market)
- A black market price emerges in the market.
- Alternative mechanism has to be established to ration available supply.
- Consumers face various difficulties
- Investments are getting discouraged due to price celling.
- Society experiences a dead weight loss.

b. Calculate the total government expenditure if government implement a price support system that purchase excess stocks to support the floor price of Rs.90/- (02 marks)

Working I

Qd when P = 90

Qd = 640 – 6 (90)

Qd = 100 units

(1/2 marks)

Working II

Qs when P = 90

Qs = - 50 + 4 (90)

Qs = 310units

(1/2 marks)

Working III

Excess Supply = Qs – Qd

= 310 – 100

= 210 units

(1/2 marks)

Working III

Government Expenditure = 210 X 90 = Rs. 18,900/- (1/2 marks)

c. Calculate the total government expenditure if government implement a price support system by paying a deficiency payment to support the floor price of Rs.100/- (03 marks)

Working I

New Market Price

If Qd = 310

310 = 640 -6p

6p = 640-310

6p = 330

p =Rs.55

(1/2 marks)

Working II

Per unit deficiency Payment

= 90 -55

= Rs.35

(1/2 marks)

Working III

Total deficiency Payment

= 35 X 310

= Rs.10850 (01 mark)

d. Calculate the producer surplus of this market after government implement a deficiency payment system to support the floor price of Rs.90/- (02 marks)

Producer Surplus = ½ X 310 X (90 – 12.5)

= Rs 12012.50/= (02 marks)

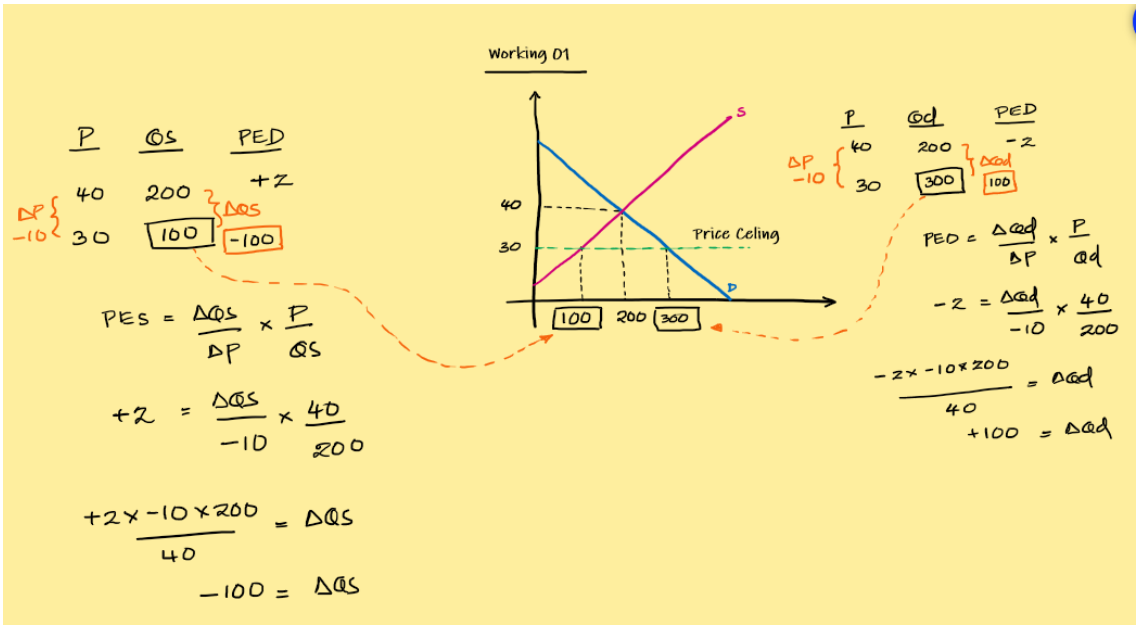
e. Calculate the dead weight loss of this market after government implement a deficiency payment system to support the floor price of Rs.90/- (02 marks)

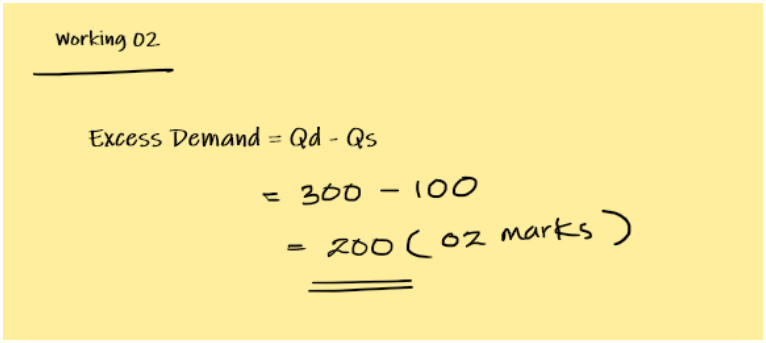
Dead Weight loss = ½ X (90 -69) X (310 – 100)

= Rs 2205/= (02 marks)

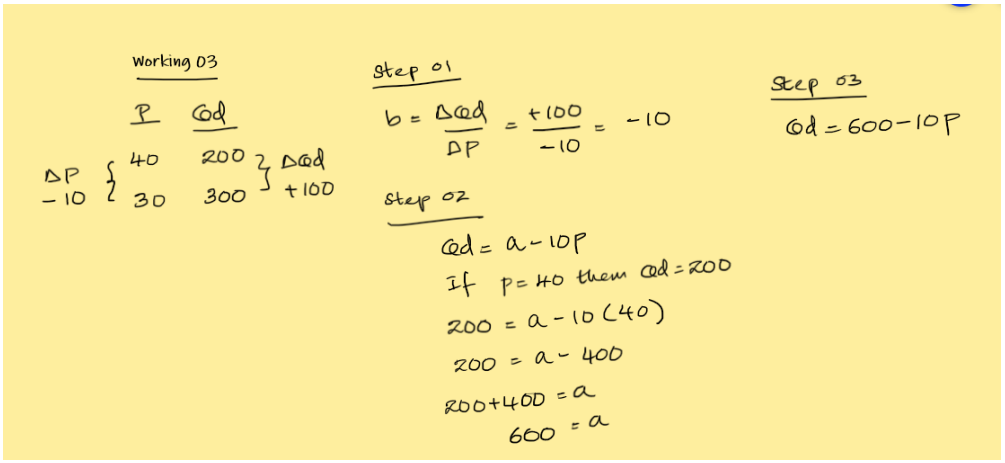
f. Suppose at Rs.40 the excess demand reaches zero and quantity demand equals 200 units. Further at Rs.40/-, PED was -2 and the PES was +2. The demand curve is linear downward sloping whereas and supply curve is linear upward sloping. Suppose government decided to have a price ceiling of Rs.30. Calculate the following;

A. Excess demand at price ceiling (03 Marks)





B. Consumer surplus at price ceiling (03 Marks)



Working 04

Maximum Demand Price $= \frac{a}{b} \times -1$

$= \frac{600}{-10} \times -1$

$= \frac{-600}{-10}$

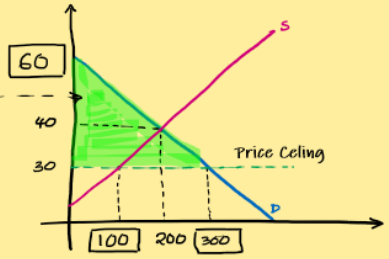
$= +60$

Consumer Surplus $= \frac{1}{2} \times 300 \times [60-30]$

$= \frac{1}{2} \times 300 \times 30$

$=$ Rs 4500 /-

(02 marks)



C. Producer surplus at price ceiling (03 Marks)

Working 05

P	Qs	
40	200	ΔQs
30	100	-100

ΔP = -10

Step 01

$b = \frac{\Delta Qs}{\Delta P}$

$= \frac{-100}{-10}$

$= +10$

Step 02

$Qs = a + bP$

If P = 40 then Qs = 200

$200 = a + 10P$

$200 = a + 10(40)$

$200 = a + 400$

$200 - 400 = a$

$-200 = a$

Step 03

$Qs = -200 + 10P$

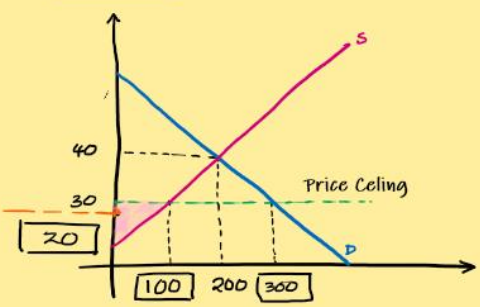
Working 06

Minimum Supply Price $= \frac{a}{b} \times -1$

$= \frac{-200}{10} \times -1$

$= +20$

Working 01



Producer Surplus $= \frac{1}{2} \times 100 \times [30-20]$

$= \frac{1}{2} \times 100 \times 10$

$=$ Rs 50 (02 marks)

4.

i. **Why do economists regard normal profit as a cost? (04 marks)**

- Normal profit is the minimum expect profit (return) by an entrepreneur as the factor return for the entrepreneurship that he has supplied for the firm (1/2 mark)
- In other words, if he does not receive at least a return equals to normal profit he will opt out from the current business and may involve with some other more profitable business opportunity. (1/2 Marks)
- Thereby, normal profit is the minimum incentive expected by an entrepreneur for the risk he has taken in starting the business and to justify staying in the current business. (1/2 Mark)

- Thereby as the same way rent, wages, interests are considered as costs since they are the cost of obtaining land, labour and capital, normal profits should also be considered a cost since it is the cost of obtaining entrepreneurship (1/2 Mark)
- However, it is an implicit cost but not an explicit cost (1/2 Marks)

ii. Explain how the law of diminishing returns and the law of returns to scale affect a firm's cost of production. (04 marks)

Note; - Graphs are not necessary for the explanation. No marks if only graphs are shown with explanation.

Law of diminishing returns

- Cost of production of a manufacturing firm depends on the technology used by that firm.
- According to law of diminishing returns in the short run when variable inputs are increased by holding fixed input constant, up to a particular output level both marginal and average output rises while marginal & average cost falls. (1/2 mark)
- When marginal product is highest marginal cost becomes the lowest. However, up to a certain output level beyond the lowest marginal product output level average product rises (and Average cost falls) even though marginal product falls. (1/2 marks)
- When average product is highest average cost becomes the lowest. (1/2 marks)
- If output is increased further, both marginal and average output falls while marginal & average cost rises. (1/2 marks)

Law of returns to scale

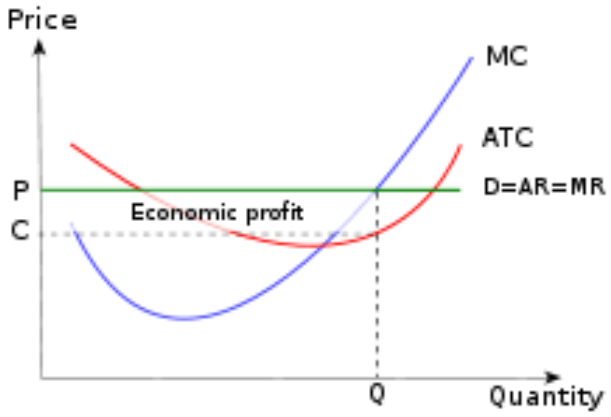
- Long run of a manufacturing firm operates with returns to scale
- Due to economies of scale and diseconomies of scale, average cost curve take the shape of 'U'. (1/2 marks)
- Due to the increasing returns to scale long run average cost curve falls. (1/2 marks)
- Due to the constant returns to scale long run average cost curve remain constant. (1/2 marks)
- Due to the decreasing returns to scale long run average cost curve rises. (1/2 marks)

iii. In the short run, both variable costs curve and total cost curve rise slowly at lower level of output and rises fast at higher level of output. Explain the reason behind this phenomenon. (04 Marks)

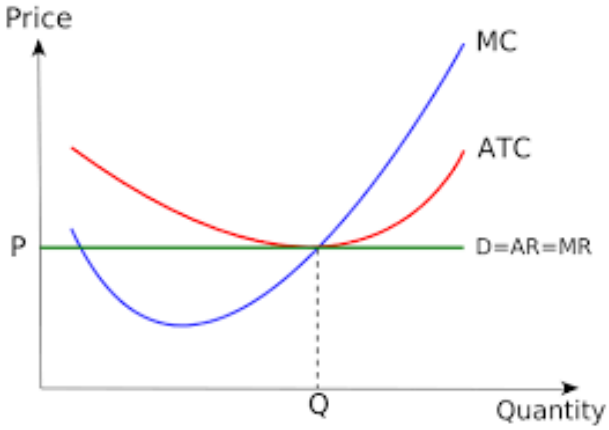
- Main reason for this nature of cost behavior is Law of diminishing marginal returns and law of increasing marginal returns. (1Marks)
- During the lower level of output, short run manufacturing firm will experience an increasing marginal return. Thereby, both variable cost curve and total cost curve rise slowly at lower level of output. (1Marks)
- On the other hand, after a particular level of output short run manufacturing firm would experience diminishing marginal returns. (1Marks)
- Thus, at higher level of output both variable cost curve and total cost curve rise faster at higher level of output. (1Marks)

iv. Using an appropriate diagram explain the following situations. (02 marks each)

a) Economic profits earned by an individual firm in perfect competition



b) Normal profits earned by an individual firm in perfect competition



c) Economic losses experienced by an individual firm in perfect competition

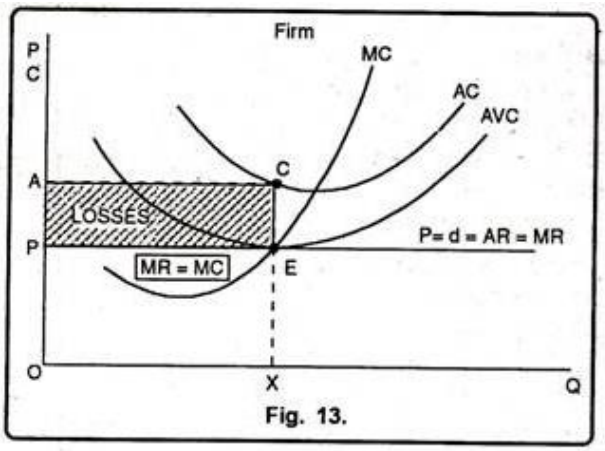


Fig. 13.

d) Economic losses experienced by an individual firm in perfect competition and shut down its operation

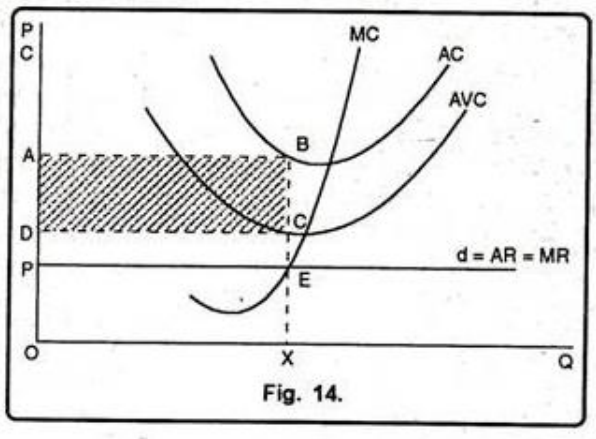
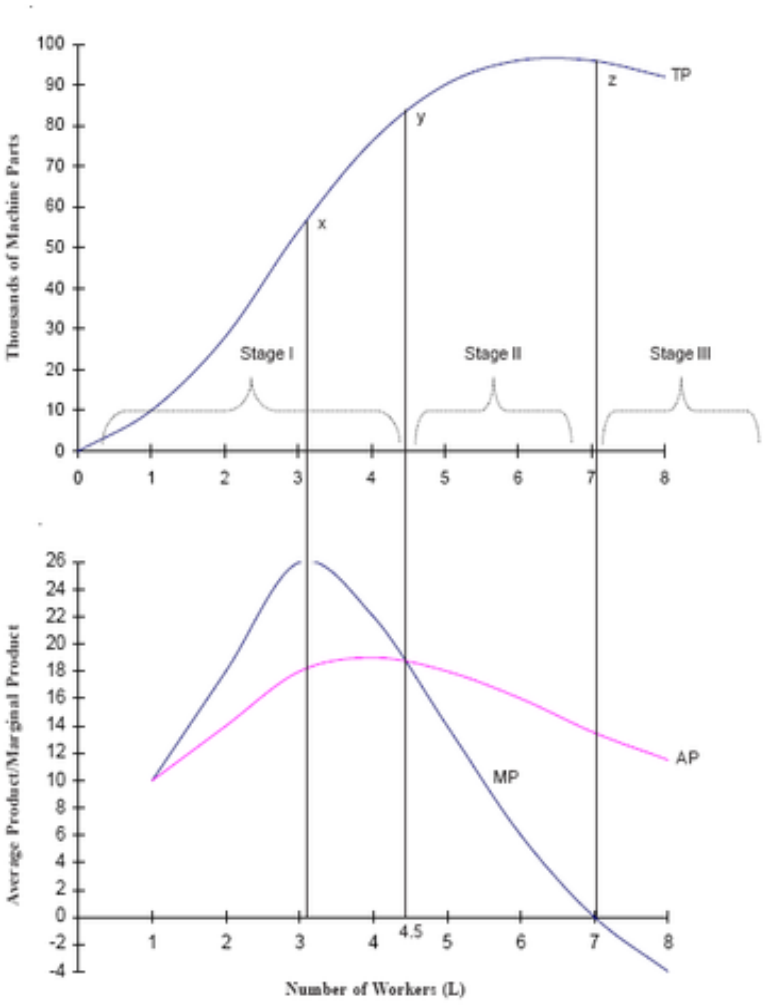


Fig. 14.

5.

i. Using an appropriate diagram, explain the relationship between average production, marginal production and total production curves. (04 marks)



- At first, TP increases at an increasing rate where MP is also increasing. (1/2 mark)
- Then, the MP starts to decrease, but still postive, and in this stage TP increases at a decreasing rate. (1/2 mark)
- When MP is zero, TP becomes highest, and if production is further increased MP will become negative where TP will start to decrease. (1/2 mark)
- AP will increase as long as MP>AP. (1/2 mark)
- AP will reach its maximum when AP = MP. (1/2 mark)
- AP will decrease when AP> MP. (1/2 mark) (01 mark for the correct diagram)

ii. Why does MC curve intersect ATC curve and AVC curve at the lowest point of the respective curves? (04 marks)

- When ATC is falling, MC will be below ATC, whereas when ATC is rising MC will be above ATC. MC will be equal to ATC at the lowest point of ATC.(2 marks)
- When AVC is falling, MC will be below AVC, whereas when AVC is rising MC will be above AVC. MC will be equal to AVC at the lowest point of AVC. (2 marks)

(Diagram is not necessary. If the diagram is drawn without the explanation, no marks)

iii. "The demand for factors of production considered as an indirect demand." Do you agree? Explain. (4 marks)

- Yes, do agree(01 Mark)

- The demand for factors of production is derived from the demand for final goods and services since factor of production is only demand (or required) if there is a demand for the final goods and services produced using those factors of production. (01 Mark)
- For example demand for labour is derived (or depends on) from the demand of final goods such as clothing, food etc., to which labour is used as an input. Demand for land is derived from the demand of final goods such as agricultural crops, houses, playgrounds, where land is used as an input. (01 Mark)
- Thereby, factors of production have an indirect demand where they can be used to produce goods and services which give consumers direct satisfaction.

iv. Explain how would an indirect cost occur when a firm uses its own capital items in to production ?(04 Marks)

- There are main two ways indirect cost would occur when a firm uses its own capital items.
  a. Economic depreciation (01 Mark)

     Economic depreciation is the reduction in value of the capital goods during a particular year. (1Mark)
  b. Interest income foregone (01 Mark)

     If expenditure made to purchase capital goods, has an opportunity cost since if it was invested in any other investment option such as government securities, an interest could have been made. This is known as foregone interest income. (1Mark)

v. 'Accounting profit can either be higher or equal to economic profit but it can never be lower than economic profit' do you agree with this statement? Explain. (04 marks)

- Yes, I agree(01 mark)
- Accounting profit is the difference between revenue and explicit cost. (1/2 Mark)
- Economic profit is the difference between revenue and economic cost which is the summation of both explicit and implicit costs.(1/2 Marks)
- There by the difference between accounting profit and economic profit will equal to implicit cost. (1/2 Marks)
- Thereby, if implicit cost is positive accounting profit will be greater than economic profit (1/2 Marks)
- If implicit cost is zero accounting profit be equals to economic profit (1/2 Marks)

However, accounting profit can never be lower than economic profit since there can have no situation where implicit cost is negative (1/2 Marks)

6.

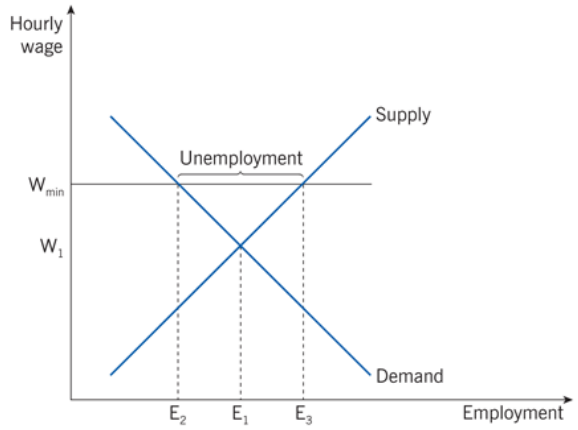
i. What is the reason for the fixed cost curve to become a horizontal straight line whereas total variable cost curve to become a curve with an upward sloping curve?(04 marks)

- In the short run, total fixed cost will not change with the level of output. It will remain constant, irrespective of the level of output. Thereby it becomes a straight line parallel to the horizontal axis. (1 Mark)
- In the short run, total variable cost will change with the level of output. When the level of output increases TVC will increase. Initially, TVC will increase at a decreasing rate due to increasing marginal returns, whereas TVC will increase at a higher rate after a particular point due to diminishing marginal returns. (1 Mark)
- When the slope of TVC curve at each quantity is plotted in to graph, it is equal to the marginal cost curve. TVC will have a positive slope (upward slope), as marginal cost is always positive. (1 Mark)

ii. What is the purpose of implementing minimum wage laws, If the imposition of minimum wage scale laws increase unemployment among unskilled workers?(4 marks)

- There are several purposes of establishing minimum wage laws.
    a. In order to establish minimum living standard of the economy (1/2 Marks)
    b. In order to reduce income disparity and promote income redistribution (1/2 Marks)
    c. In order to protect workers from unfair bargaining that employees can make due to any unfavorable conditions for workers (ex;- inelastic labour demand) (1/2 Marks)
    d. In order to develop social equality between different worker categories to promote social equity and social respect for all worker grades. (1/2 Marks)

Figure 1. Imposing a minimum wage lowers employment and raises unemployment



Source: Author's illustration.

I Z A World of Labor

- When minimum wage level is imposed it automatically creates an excess supply in the labour market. (01 Mark)
- Due to this, unemployment will rise, and it will specially impact unskilled workers, since employers fill the available jobs with skilled workers by leaving unskilled workers. (01 Mark)

iii. Total revenue of a firm is equal to opportunity cost plus economic profit? Do you agree explain (04 Marks)

- Agree with this statement (1Marks)
- Opportunity cost of a firm is equal to the total economic cost. Thereby, it is the summation of both direct and indirect cost. (1Mark)

  Opportunity cost = Economic cost = Direct cost + Indirect cost

- Economic profit is the difference between total revenue of a firm and economic cost (opportunity cost). (1 Marks)

  Economic profit = Total Revenue – opportunity cost

- Thus, when economic profit is added to opportunity cost total revenue can be obtained (1 Mark)

  Economic profit + opportunity cost = Total Revenue

iv. What are the 2 cost types included under opportunity cost of production? Explain(4 marks)

- Opportunity cost of production includes both,
  1. Explicit cost/ Direct cost (1 Marks)
  2. Implicit cost/Indirect Cost (1 Marks)

Explicit cost	Implicit cost

• Opportunity cost of economic resources acquired from external sources. An expenditure should be made for explicit costs.(1/2 mark) • Example: Wages, Expenditure on raw materials(1/2 mark)	• Opportunity cost of economic resources owned by the firm and used in current production. An expenditure should not be made for implicit costs.(1/2 mark) • Example: Normal profit, Foregone salary of owner(1/2 mark)

v. 'Total economic cost of a production ideally should be equal to social cost of production' By describing the economic concepts related to this statement explain the meaning of this statement. (04 Marks)

- Total economic cost refers to the total monetary value of all resources scarified for a particular production (1/2 Marks)
- Thereby, total economic cost should reflect the total opportunity cost of a production process. Thus, whenever production uses resources those have alternative uses, an opportunity cost incurs and it will be a part of economic cost irrespective of whether firm makes a payment for such resources or not. (1/2 Marks)
- Thus, normally total economic cost is known as the summation of direct cost and indirect cost. (1/2 Marks)

  Economic cost = Direct cost + Indirect cost
- If a production has no external costs then both direct cost and indirect cost will be a part of private cost. In other words, in that case economic cost only comprises of opportunity cost of all resources used in the production by the producer irrespective of whether the producer have to pay to an external party or not. (1/2 Marks)
- However, if there are unrelated third parties are also get affected by a production when opportunity cost of production is calculated, cost incurred by unrelated third parties should also be considered as a part of opportunity cost and should be included in to indirect cost. (1/2 Marks)
- For example if neighboring village kids are getting sick and they have to spend money for medicine due to air pollution that is done by a factory, that external cost should be considered as a part of opportunity cost of production. (1/2 Marks)
- Thus, total economic cost includes both private cost and external cost of production to reflect the true opportunity cost of production. Summation of private cost and external cost is equals to the social cost. (total cost to the society due a production) (1/2 Marks)

- Thereby, total economic cost of a production ideally should be equal to social cost (private cost + external cost) of production. (1/2 Marks)

  Special Note :- Market system mostly fails in resource distribution due to the fact that external cost and benefits are not considered in their cost calculations. Thereby ideally economic cost should capture total social cost rather than private cost.

7.

i. A particular firm is producing shoes. Following cost details are given. (2 marks each)

Purchase of raw materials	**Rs 60,000**
Forgone salary of the shoe manufacturer	**Rs.35,000**
Payment to workers	**Rs100,000**
Water and electricity	**Rs 20,000**
Salary of the CEO	**Rs.40, 000**
Interest payments	**Rs 8, 000**
Rent of the shoe factory	**Rs.15, 000**
Economic depreciation	**Rs 20, 000**
Interest income sacrificed	**Rs.25, 000**
Economic Profit	**Rs.30, 000**
Normal profit	**Rs.45, 000**

(a) Calculate direct cost.

Purchase of raw materials	Rs 60,000
Payment to workers	Rs 100,000
Water and electricity	Rs 20,000
Salary of the CEO	Rs.40, 000
Interest payments	Rs 8, 000
Rent of the shoe factory	Rs.15, 000
	Rs.243, 000(02 Marks)

(b) Calculate indirect cost.

Forgone salary of the shoe manufacturer	Rs 35,000
Interest income sacrificed	Rs.25,000
Economic depreciation	Rs 20, 000
Normal profits	Rs 45,000
Total Indirect cost	Rs.125,000(02 Marks)

(c) Calculate total revenue.

TR =Direct cost+ Indirect cost + Economic profit

TR = Rs.243, 000 + Rs.125, 000 + Rs.30000

TR = Rs.398, 000(02 Marks)

d) Calculate accounting profit.

Accounting profit = Economic profit + Indirect cost

Accounting profit =Rs.30,000 + Rs.125,000

Accounting profit =Rs.155 ,000(02 Marks)

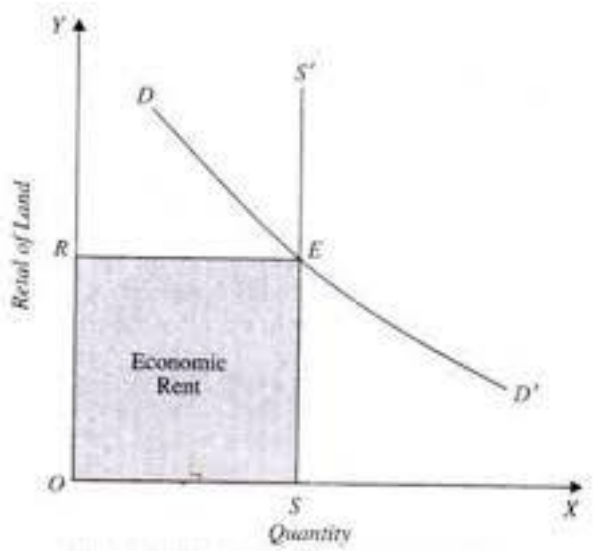
Or

Accounting profit = Total revenue – Explicit cost

Accounting profit =Rs.398,000 - Rs.243,000

Accounting profit =Rs.155 ,000(02 Marks)

ii. For a particular factor of production, in which situation the total factor earnings will consist of only with economic rent? Explain your answer with use of a diagram (4 marks)



- Economic rent is the return that the factor owner receives over and above the minimum expected return required to provide a factor of production for a particular economic activity. (1/2 Mark)
- In other words, extra return received on top of expected return by the factor owner to continue the supply of a particular factor of production into a particular economic activity. (1/2 Mark)
- It is the difference between the actual earing and the transfer earning.
- For a particular factor of production the total factor earnings will consist of only with economic rent when the supply of factor is perfectly inelastic. (01 Mark)
- correct Graph: (01 Mark)

iii. What is meant by economic profits and what are the sources of economic profits? (4 marks)

- Economic Profit is the difference between total revenue and total economic cost. Economic cost includes both implicit and explicit costs. Further, economic cost includes both fixed and variable cost. (01 Mark)

  Economic Profit = Total Revenue – Economic cost

  Economic Profit = Total Revenue – (Explicit cost + Implicit Cost)

  Economic Profit = Total Revenue – (Fixed cost + Variable Cost)

- Sources of economic profits are,
  - Accepting risks when taking business decisions in an uncertain and dynamic environment. (01 Mark)
  - Introducing innovations in an uncertain and dynamic environment. (01 Mark)

iv. 'Economies of scale can mostly be able to obtain by the large scale businesses'. Briefly explain main factors contribute to create economies of scale and how large scale businesses receive advantage of economies of scale rather than small businesses. (04 Marks)

a. Indivisibility nature of inputs (Inputs are indivisible with output) (1/2 Mark)

   Some of the input (such as machines) cannot be adjusted based on the level of output. For example production capacities of the machines are fixed and it cannot be adjusted based on level of output. Thus, economies of scale takes place when machines have large capacities are used in to production. However, if such machine is used in to small production there will be huge resources wastage since large part of machine capacity remain unutilized. (1/2 Mark)

b. Ability to create specialization through division of labour (1/2 Mark)

   Division of labour makes production efficient by increasing labour productivity. This helps to use more capital goods at each production process and reduce time consumed for production significantly. However, this benefit of division of labour can mostly be obtained by the large businesses only. For small businesses division of labour is not appropriate and probably through division of labour there can have resource wastage in small businesses. (1/2 Marks)

c. Ability to use machinery (1/2 Marks)

   Due to division of labour large businesses will be able to introduce specific machinery (capital equipment) to each stage of production in order to improve productivity in production. However, this advantage will mostly be with the large businesses but not with the small businesses. (1/2 Marks)

d. Existence of one-time costs (1/2 Marks)

   Expenditure such as research and development cost, advertising and promotional cost are one-time costs. These costs become productive if these costs help to increase sales and production of the business. Thereby, mostly large organizations will be able to spend large sums on their research and development cost, advertising and promotion etc. to improve their sales significantly and reduce unit cost greatly. Thereby, through these kinds of costs most of the time benefit is delivered to large organizations only.