

**A2 – ECONOMICS (9708)**

**TOPICAL MCQS BOOK**

**PAPER 3**

**[2008-2019]**

## PREFACE

Hey young learners, I hope you are all doing well through your amazing journey of A-Levels after which life is supposed to get easier. I know the pressure on you is significant and that is where this book comes in. This book is specifically designed to help students who believe in working smart (not hard). The book contains actual past exam questions along with their detailed answers split into further subtopics so that students can practice progress through the CAIE A2 / Level Economics (9708) syllabus. This book differs with its detailed solutions, key concepts and common mistakes section. The data was recorded when lectures were being taught in class and areas that students usually found to be difficult were given extra importance in this book. This book is also useful for teachers who are looking for a simple guide towards teaching Paper 3 for the advanced level. So now that you know that all the hard work is already done for you, it's time to get that A\* that you always deserved.

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# TABLE OF CONTENTS

## MICRO

- Topic 1: Utility and Consumer Choice
- Topic 2: Production, Costs, Revenues and Profits
- Topic 3: Market Structures
- Topic 4: Economic Efficiency and Market Failure
- Topic 5: Labor Market

## MACRO

- Topic 1: Economic Growth and Development
- Topic 2: Keynesian Approach to Macroeconomic Equilibrium
- Topic 3: Money and the Economy
- Topic 4: Unemployment and Phillips Curve
- Topic 5: Govt. Macroeconomic intervention

Answers: All detailed solutions are at the end of the book.

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A2 – ECONOMICS (9708)

MICRO

CHAPTER 1

Utility and Consumer Choice

**Q1 [M/J 2008/Q2]**

The table shows the total utility that an individual derives from consuming different quantities of a good

quantity of good (units)	total utility (units)
1	24
2	45
3	63
4	78
5	90
6	99

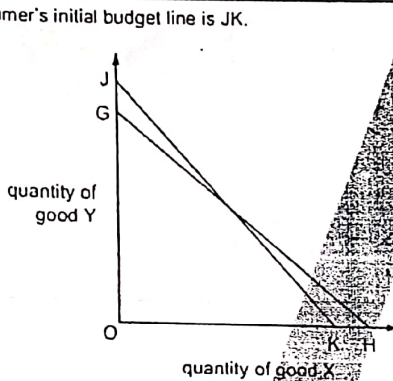
The individual's marginal utility of money is \$1 = 2 units of utility.

What is the maximum quantity of the good that the individual will buy when its price is \$6?

- A 2 units      B 3 units      C 4 units      D 5 units

**Q2 [M/J 2008/Q3]**

In the diagram a consumer's initial budget line is JK.

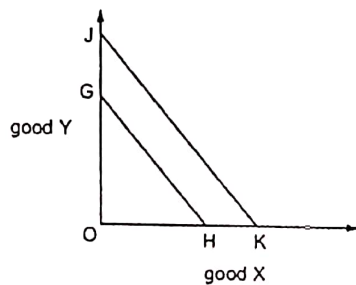


Assuming no change in the price of Y, what could explain a shift in the consumer's budget line to GH?

	price of good X	consumer's money income
A	decrease	decrease
B	decrease	increase
C	increase	decrease
D	increase	increase

**Q3 [O/N 2008/Q3]**

In the diagram a consumer's budget line shifts from GH to JK.



Regardless of any other changes that might occur, what must be correct?

- A There has been an equal proportionate increase in the price of X and Y.  
 B There has been an equal proportionate decrease in the price of X and Y.  
 C There has been an increase in the consumer's money income.  
 D There has been an increase in the consumer's real income.

**Q4 [M/J 2009/Q2]**

The table shows the marginal utility derived by a consumer who devotes the whole of his weekly income of \$42 to two goods X and Y, whose unit prices are \$3 and \$6 respectively.

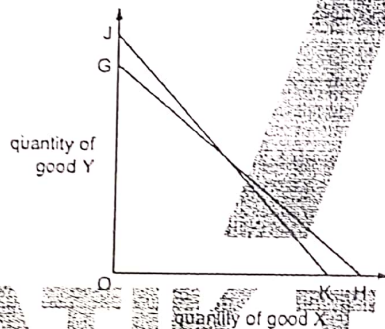
unit	marginal utility of X (units)	marginal utility of Y (units)
1	12	34
2	11	30
3	10	26
4	9	22
5	8	18
6	7	14
7	6	10
8	5	6

In order to maximise his utility, which quantities of X and Y should the consumer purchase?

	X	Y
A	2	6
B	4	5
C	6	4
D	8	3

**Q5 [M/J 2009/Q3]**

In the diagram a consumer's budget line shifts from JK to GH.



Which statement must be correct?

- A There has been an increase in the consumer's money income.
- B There has been a decrease in the consumer's real income.
- C Good Y has become relatively more expensive.
- D The price of good X has increased.

**Q6 [O/N 2009/Q1]**

The schedule shows the total utility derived by a consumer of a good X at different levels of consumption.

quantity of X consumed	1	2	3	4	5	6	7	8
total utility (units)	28	40	50	58	64	68	71	73

The consumer obtains two units of satisfaction from the last cent she spends on each good that she purchases.

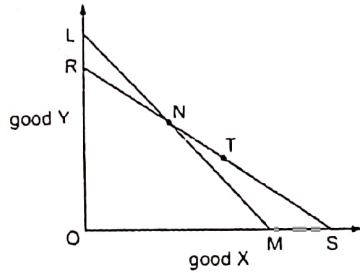
What is the maximum number of units of X that she will consume if the price of X is 6 cents?

- A 2
- B 5
- C 7
- D 8

**Q7 [O/N 2009/Q2]**

In the diagram, an individual initially chooses combination N on budget line LM

An increase in his money income accompanied by an increase in the price of good Y causes his budget line to shift to RS, and he now chooses combination T.

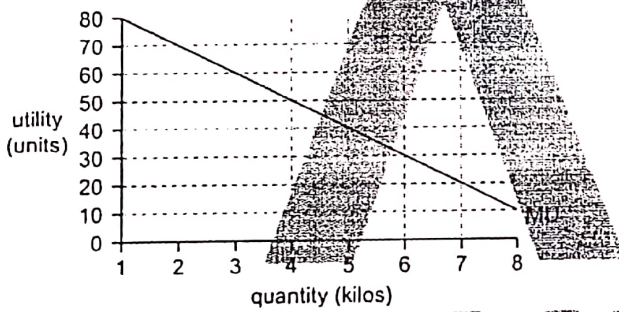


How does this affect his economic welfare?

- A He is definitely better off because his money income has increased.
- B He is definitely worse off because he has to pay more for good Y.
- C He is better off since combination T, which he now chooses, was not previously available to him.
- D He is worse off since combinations of X and Y along LN are no longer available to him.

**Q8 [M/J 2010/Q1]**

The diagram shows the marginal utility (MU) that an individual derives from a good at different levels of consumption.



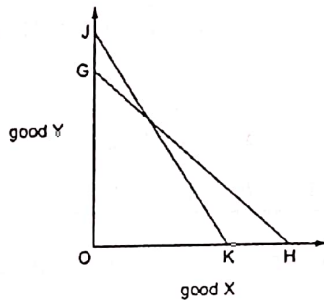
The utility he derives from the last \$1 he spends on every good is 3 units.

Assuming the marginal utility of money is constant, which quantity will he purchase if the price of the good is \$10?

- A 4 kilos
- B 5 kilos
- C 6 kilos
- D 7 kilos

**Q9 [M/J 2010/Q2]**

In the diagram a consumer's budget line shifts from GH to JK.



Which statement must be correct?

- A The price of good X has increased relative to the price of good Y.
- B The prices of both goods have fallen.
- C There has been an increase in the consumer's real income.
- D There has been an increase in the consumer's money income.

**Q10** [O/N 2010/Q2]

The schedule shows the total utility derived by a consumer of a good X at different levels of consumption.

quantity of X consumed	1	2	3	4	5	6	7
total utility (units)	30	50	65	75	80	83	84

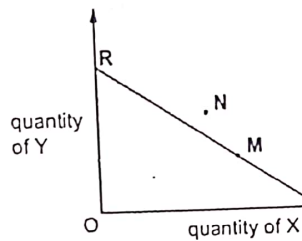
The consumer obtains three units of utility from the last \$ she spends on each good that she purchases.

What is the maximum number of units of X that she will consume if the price of X is \$5?

- A 3                      B 4                      C 5                      D 6

**Q11** [O/N 2010/Q3]

The line RS in the diagram shows the different combinations of goods X and Y that a consumer can afford with his present income.



The consumer's original equilibrium is at M.

What could explain a change in his equilibrium position to N?

- A a change in his tastes  
 B a decrease in the price of X and a bigger percentage increase in the price of Y  
 C an increase in the price of X and an increase in his income  
 D equal percentage increases in his income and in both prices

**Q12** [M/J 2011/Q1]

A consumer seeks to maximise his utility.

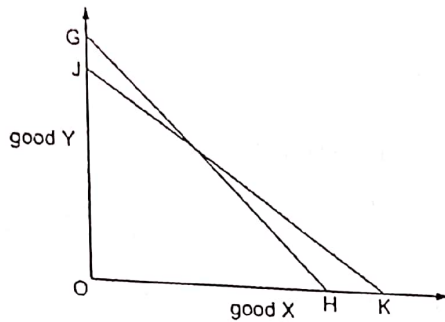
Up to what point should he continue to consume each good?

- A until the marginal utility per dollar from each good is the same  
 B until the marginal utility from each good is the same  
 C until the marginal utility from each good reaches a maximum  
 D until the marginal utility from each good is zero



Q13 [M/J 2011/Q2]

In the diagram, a consumer's initial budget line is JK.



Assuming no change in the price of X, what could explain a shift in the consumer's budget line to GH?

	price of good Y	consumer's money income
A	decrease	decrease
B	decrease	increase
C	increase	decrease
D	increase	increase

Q14 [O/N 2011/Q1]

Why does a normal demand curve for a product slope downwards from left to right?

- A Buyers' additional satisfaction declines as consumption rises.
- B Consumers are faced with choices between competing products.
- C Sellers are willing to accept lower prices on larger orders.
- D The average cost of production falls as the scale of production increases.

Q15 [O/N 2011/Q4]

For the purposes of measuring the income effect of a change in the price of a good, what is not held constant?

- A consumer preferences
- B relative prices
- C the consumer's money income
- D the consumer's real income

Q16 [M/J 2012/Q2]

The table shows the total utility that an individual obtains from consuming different quantities of a good.

quantity of good (units)	total utility (units)
1	20
2	36
3	50
4	62
5	72
6	80

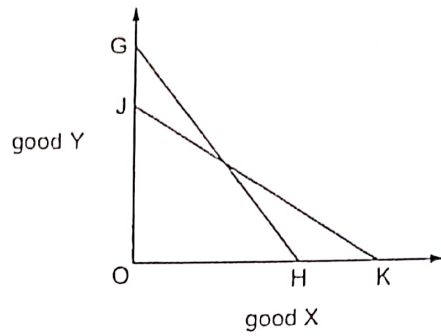
The individual's marginal utility of money is  $S1 = 3$  units of utility.

What is the maximum quantity of the good that the individual will buy when its price is  $S4$ ?

- A 2 units
- B 3 units
- C 4 units
- D 5 units

**Q17** [M/J 2012/Q3]

The curve GH in the diagram is a consumer's initial budget line.



Which combination could cause the budget line to shift to JK?

	price of good X	consumers' money income
A	decrease	decrease
B	decrease	increase
C	increase	decrease
D	increase	increase

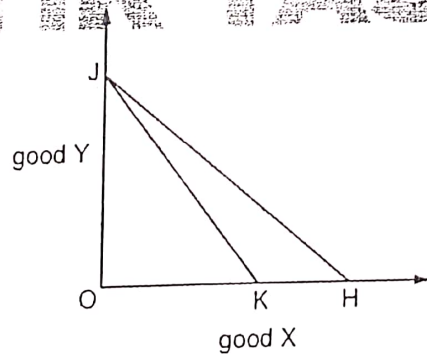
**Q18** [O/N 2012/Q2]

A consumer who aims to maximise his utility will arrange his consumption so that

- A the total utility obtained from each commodity is the same
- B the total utility per \$ spent on each commodity is the same
- C the same utility is obtained from the last unit of each commodity.
- D the same utility is obtained from the last unit of expenditure on each commodity.

**Q19** [O/N 2012/Q3]

In the diagram a consumer's budget line shifts from JK to JH.



What can definitely be concluded from the diagram?

- A There has been a decrease in the price of good Y.
- B There has been a decrease in the consumer's money income.
- C There has been an increase in the consumer's real income.
- D There has been no change in the price of good X.

**Q20** [M/J 2013/Q2]

The table shows the total utility that an individual derives from consuming different quantities of a good.

quantity of good (units)	total utility (units)
1	20
2	36
3	50
4	62
5	72
6	80

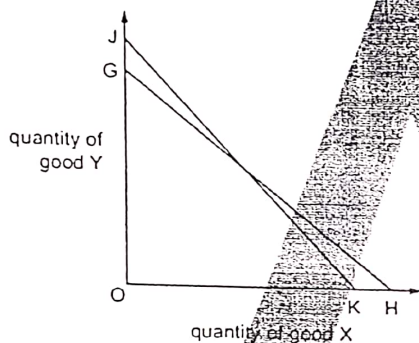
The individual's marginal utility of money is \$1 = 2 units of utility.

What is the maximum quantity of the good that the individual will buy when its price is \$6?

- A 2 units      B 3 units      C 4 units      D 5 units

**Q21** [M/J 2013/Q3]

In the diagram a consumer's budget line shifts from GH to JK.



Which statement must be correct?

- A The price of good Y has fallen relative to the price of good X.  
 B There has been a decrease in the price of good Y.  
 C There has been an increase in the price of good X.  
 D There has been an increase in the consumer's real income.

**Q22** [O/N 2013/Q2]

The table shows the total utility that an individual derives from consuming different quantities of a good.

quantity of good (units)	total utility (units)
1	24
2	45
3	63
4	78
5	90
6	99

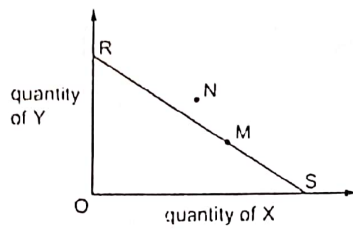
The individual's marginal utility of money is \$1 = 2 units of utility.

What is the maximum quantity of the good that the individual will buy when its price is \$6?

- A 2 units      B 3 units      C 4 units      D 5 units

**Q23** [O/N 2013/Q3]

The line RS in the diagram shows the different combinations of goods X and Y that a consumer can afford with her present income.



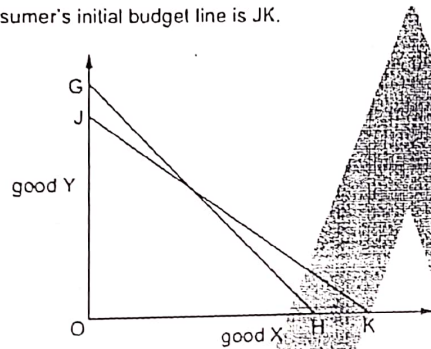
The consumer's original equilibrium is at M.

What could explain a subsequent change in her equilibrium position to N?

- A a change in her tastes
- B an increase in the price of X and a fall in the price of Y
- C an increase in the price of X and a smaller percentage increase in the price of Y
- D equal percentage increases in her income and in both prices

**Q24** [M/J 2014/Q2]

In the diagram, a consumer's initial budget line is JK.



Assuming no change in the price of X, what could explain a shift in the consumer's budget line to GH?

	price of good Y	consumer's money income
A	decrease	decrease
B	decrease	increase
C	increase	decrease
D	increase	increase

**Q25** [O/N 2014/Q2]

A household makes the following purchases of fruit.

fruit	quantity purchased (kg)	price per kg (\$)
bananas	5	1.00
apples	10	0.50

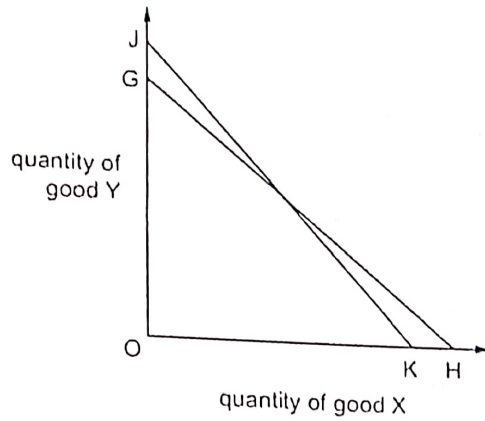
The household derives twice as much utility from the tenth kg of apples as from the fifth kg of bananas.

What should the household do to maximise utility from the purchase of these fruits?

	purchase of bananas	purchase of apples
A	decrease	increase
B	increase	decrease
C	increase	increase
D	no change	no change

**Q26** [O/N 2014/Q2]

In the diagram a consumer's budget line shifts from GH to JK.



Which statement must be correct?

- A There has been an increase in the consumer's real income.
- B There has been a decrease in the consumer's real income.
- C Good Y has become relatively more expensive.
- D Good X has become relatively more expensive.

**Q27** [M/J 2015/Q2]

A utility-maximising consumer spends the whole of his disposable income of \$40 on food and clothing.

The table shows the price of food, the quantity purchased by the consumer, and the marginal utility he derives from food consumption.

food	
price per unit	\$5
quantity demanded	5
marginal utility (units)	40

His marginal utility from clothing is 2 units.

What is the price of clothing per unit and the quantity purchased by the consumer?

	clothing	
	price (\$)	quantity (units)
A	0.5	30
B	1.0	15
C	3.0	5
D	5.0	3

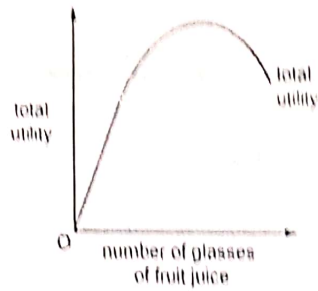
**Q28** [M/J 2015/Q3]

For the purposes of measuring the income effect of a change in the price of a good, what is not held constant?

- A consumer preferences
- B relative prices
- C the consumer's money income
- D the consumer's real income

**Q29** [O/N 2015/Q2]

The diagram shows an individual's total utility from consuming glasses of fruit juice

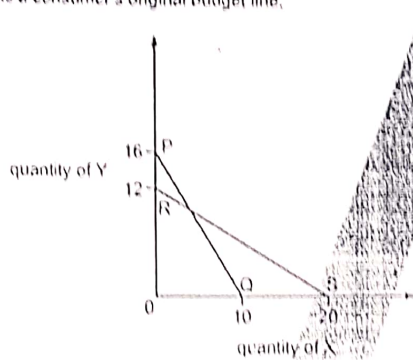


How can this information help to derive the individual's demand curve for fruit juice?

- A by revealing the individual's marginal utility curve
- B by revealing the money value of marginal utility
- C by showing how total utility is maximised
- D by showing the relationship between utility and expenditure

**Q30** [O/N 2015/Q3]

In the diagram, PQ is a consumer's original budget line.



The consumer's income increases from \$80 to \$120 and, at the same time, the prices of X and Y change.

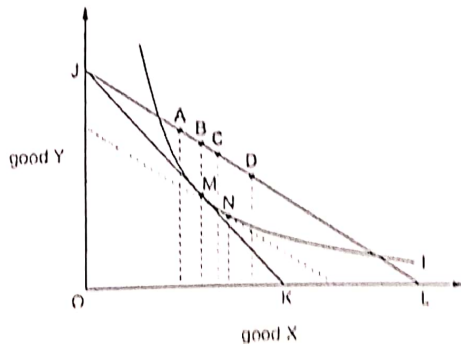
If the consumer's budget line is now RS, what are the new prices of X and Y?

	price of X (\$)	price of Y (\$)
A	4	12
B	6	10
C	10	8
D	12	6

**Q31** [M/J 2016/Q4]

In the indifference curve diagram point M is the consumer's initial equilibrium and MN is the substitution effect of a fall in the price of good X.

If good X is a Giffen good which point will be the consumer's new equilibrium point after the fall in the price of good X?



Q32 [M/J 2016/Q5]

To maximise the satisfaction he derives from a given level of expenditure on two goods, X and Y, a consumer should allocate his expenditure between the two goods so that

- A marginal utility of X = price of X and marginal utility of Y = price of Y.
- B marginal utility of X plus marginal utility of Y is maximised.
- C marginal utility of X = marginal utility of Y.
- D  $\frac{\text{marginal utility of X}}{\text{marginal utility of Y}} = \frac{\text{price of X}}{\text{price of Y}}$ .

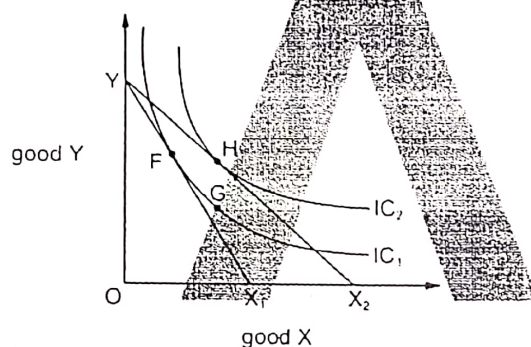
Q33 [O/N 2016/Q4]

What will happen if, in response to a fall in its price, a consumer buys more of a good?

- A a fall in the total utility derived from consuming the good
- B a movement along the consumer's demand curve
- C a rise in the marginal utility derived from consuming the good
- D a shift in the consumer's demand curve

Q34 [O/N 2016/Q5]

The diagram shows two indifference curves and two budget lines for goods X and Y.



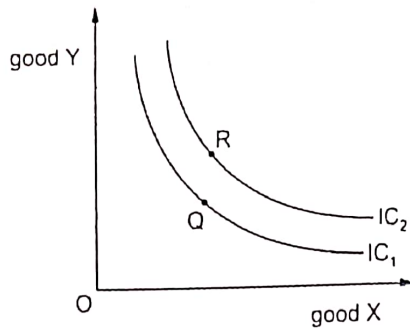
The consumer's initial position is at point F. The consumer's preferred final position becomes point H.

What does the movement from F to G represent?

- A the income effect of a price fall for X
- B the price effect of a price change for X
- C the substitution effect of a price fall for X
- D the substitution effect of a price rise for X

**Q35** [M/J 2017/Q4]

The diagram shows two indifference curves for a consumer.



What can be concluded if the consumer's equilibrium moves from Q to R?

- A The consumer is acting rationally.
- B The consumer's money income is unchanged.
- C The opportunity cost of good Y is constant.
- D The price of good X has risen.

**Q36** [M/J 2017/Q5]

When the price of a good falls the effect on the quantity demanded is the result of an income effect and a substitution effect.

Which statement about these effects is correct?

- A For inferior goods the income effect and the substitution effect work in the same direction.
- B For inferior, but not Giffen, goods the income effect outweighs the substitution effect.
- C For normal goods the income effect and substitution effect work in the same direction.
- D For normal goods the income effect outweighs the substitution effect.

**Q37** [O/N 2017/Q4]

In the UK in 2015 there were two methods of charging for water supply.

- 1 a fixed charge giving the consumer the right to consume water at zero price per litre
- 2 a price per litre of water used

It has been observed that the amount of water consumed is markedly lower when method 2 is used.

What is implied by this observation?

- A Water in the UK is not a scarce good.
- B Water is a free good of nature and no charge should be levied.
- C Water is a necessity, the use of which should not be restricted by unit prices.
- D Water is subject to the law of diminishing marginal utility.



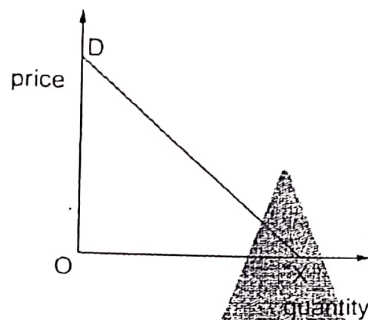
**Q38 [M/J 2018/Q5]**

What would **not** affect the budget line of an individual consumer?

- A the individual's preference for various goods
- B the level of income tax
- C the money prices of goods
- D the wages earned by the individual

**Q39 [M/J 2018/Q6]**

The diagram shows the demand curve for a product.

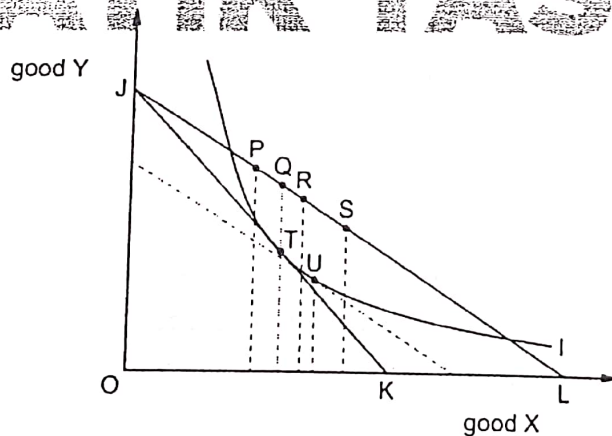


What is maximised at X?

- A marginal revenue
- B total revenue
- C marginal utility
- D total utility

**Q40 [O/N 2018/Q4]**

The diagram shows budget lines and an indifference curve. The consumer's initial position is T. The price of good X then falls.

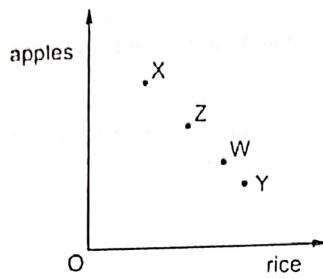


Which combination of statements about the movements in this diagram is correct?

- A T to Q represents perfect elasticity; T to P represents a Giffen good
- B T to R represents an income effect; R to S represents a substitution effect
- C T to U represents a substitution effect; T to Q represents a normal good
- D T to U represents a substitution effect; U to P represents an income effect

**Q41 [O/N 2018/Q5]**

The diagram shows various combinations of apples and rice which are potentially available to a consumer.



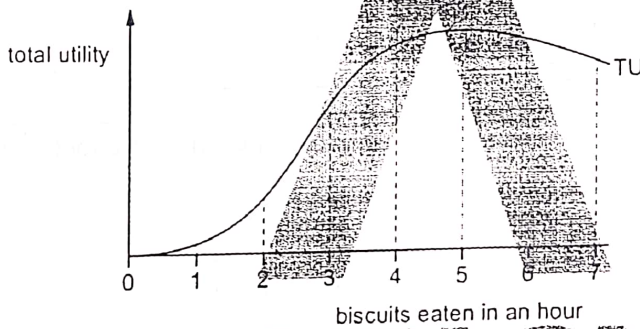
If standard indifference curves were added to the diagram they would show that the consumer is indifferent between combination X and combination W.

What can be concluded?

- A The consumer is indifferent between combination Y and combination Z.
- B The consumer is indifferent between combination Z and combination W.
- C The consumer prefers combination Y to combination X.
- D The consumer prefers combination Z to combination W.

**Q42 [M/J 2019/Q4]**

The graph shows the total utility (TU) obtained by a consumer from eating biscuits over a period of one hour.

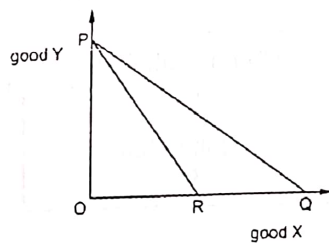


After eating how many biscuits does the consumer's marginal utility begin to diminish?

- A 3
- B 4
- C 5
- D 6

**Q43 [M/J 2019/Q5]**

The diagram shows budget lines for normal goods X and Y.



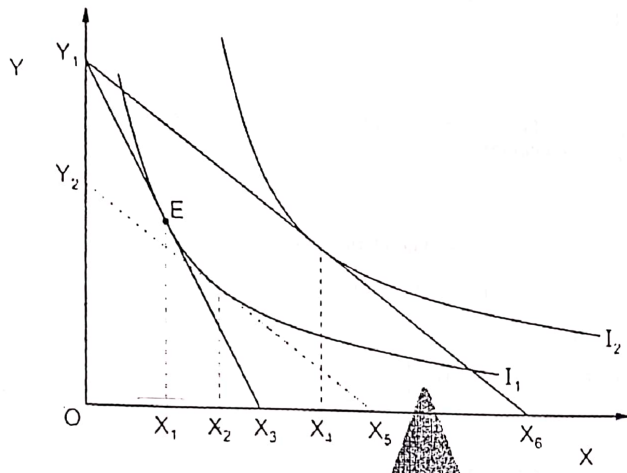
What could cause a budget line to shift from PQ to PR?

	price of X	price of Y	level of consumer incomes
A	fall	rise	fall
B	no change	rise	no change
C	rise	no change	no change
D	rise	no change	rise

**Q44** [M/J 2019/Q6]

A consumer spends all of their income on two goods, Y and X, and is at position E. The price of X falls and the price of Y remains constant.

The graph shows indifference curves and budget lines which are used to determine the price, income and substitution effects that are related to this price change.



Which distance gives the income effect of this price change?

- A  $X_1X_2$
- B  $X_1X_4$
- C  $X_2X_4$
- D  $X_5X_6$

**Q45** [O/N 2019/Q4]

What is it called when a consumer's marginal utility is greater than the price paid for the good?

- A a Giffen good
- B an inferior good
- C consumer surplus
- D producer surplus

**Q46** [O/N 2019/Q5]

A consumer has \$3 to spend each day on chocolate bars or toffee bars, which all cost \$1 each.

The table below shows the units of additional satisfaction she gets from consuming each bar.

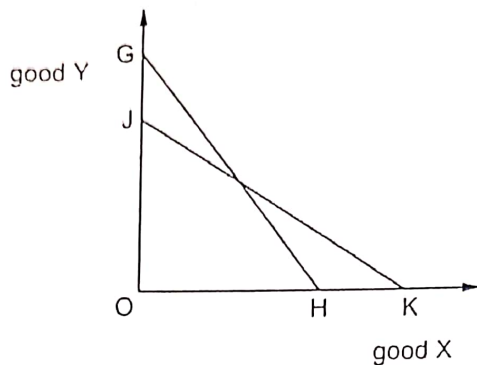
1 <sup>st</sup> chocolate bar 16	2 <sup>nd</sup> chocolate bar 13	3 <sup>rd</sup> chocolate bar 10
1 <sup>st</sup> toffee bar 14	2 <sup>nd</sup> toffee bar 12	3 <sup>rd</sup> toffee bar 9

What should she buy to maximise her total utility?

- A 1 chocolate bar and 2 toffee bars
- B 2 chocolate bars and 1 toffee bar
- C 3 chocolate bars
- D 3 toffee bars

Q47 [O/N 2019/Q6]

The curve JK in the diagram is a consumer's initial budget line.

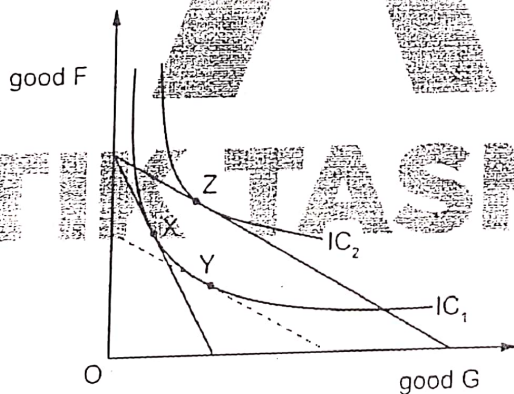


Which combination could cause the budget line to shift to GH?

	price of good X	consumer's money income
A	increase	increase
B	decrease	decrease
C	increase	decrease
D	decrease	increase

Q48 [O/N 2019/Q7]

The diagram shows a consumer's indifference curves (IC) for goods F and G together with the consumer's budget lines.



What could explain the movement from X to Z on the diagram?

- A a fall in the price of G when G is an inferior good
- B a fall in the price of G when F is a Giffen good
- C a fall in the price of G when G is a normal good
- D a fall in the price of G when G is a Giffen good

# A2 – ECONOMICS (9708)

**MICRO**

**CHAPTER 1**

**Utility and Consumer Choice**

**ANSWERS**

## TOPIC 1: UTILITY AND CONSUMER CHOICE

Q1 | D

A rational consumer is in equilibrium when he spends his fixed income on different goods with given prices in such a way that MU of the last unit of money spent on each good is equal.

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$$

**STEP 1:** Equate the marginal utility of money and find the missing marginal utility

$$2 = \frac{MU_y}{6}$$

$$MU_y = 12$$

**STEP 2:** Look from the table on which quantity is the marginal utility 12. It should be noted that the difference in total is the marginal.

Quantity of Good	Total Utility	Marginal Utility
1	24	24
2	45	21
3	63	18
4	78	15
5	90	12
6	99	9

Hence the answer is 5 units of the good.

**Key Point:** Whenever the words "marginal utility of money" or "marginal utility of the last dollar spent" is given. Always use this equation  $\left[ \frac{MU_x}{P_x} = \frac{MU_y}{P_y} \right]$  to solve the question.

[M/J 2008/Q2]

Q2 | A

1. Quantity of X increased hence price of X decreased.
2. Consumers money income decreased because since the price was the same he is now consuming less amount of good Y.

**Key Point:**

1. "Price" causes a pivotal shift in the budget line. It shifts out for the good for which the price goes down.
2. "Income" causes a parallel shift in the budget line.

[M/J 2008/Q3]

Q3 | D

The budget line shifted outward which means that consumers can purchase larger quantities of both X & Y hence this is due to rise in consumers real income. Option A would shift the budget line inwards and hence is incorrect. Option B & C would finally result in an increase in real income.

**Common Mistake:** Some students got confused between real and money income. Money income increase is only showing that income went up without taking inflation into account, whereas real income takes inflation into account. Hence it should always be taken in the answer.

[O/N 2008/Q3]

**Q4 | B**

This question is a plug in question. We need to calculate the marginal utilities for the given answer choices. The ones that will become equal would be the answer.

Option A:  $\frac{11}{3} \neq \frac{14}{6} \mid 3.67 \neq 2.33$

Option B:  $\frac{9}{3} = \frac{18}{6} \mid 3 = 3$

Option C:  $\frac{7}{3} \neq \frac{22}{6} \mid 2.33 \neq 3.67$

Option D:  $\frac{5}{3} \neq \frac{26}{6} \mid 1.67 \neq 4.33$

[M/J 2009/Q2]

**Q5 | C**

An inward shift on y-axis suggests that  $P_y$  has increased, making Y relatively expensive and an outward shift on x-axis indicates that good X has become relatively cheaper.

**Key Point:** When the answer choice states relative that means one value is increasing and the other is decreasing.

[M/J 2009/Q3]

**Q6 | A**

A rational consumer is in equilibrium when he spends his fixed income on different goods with given prices in such a way that MU of the last unit of money spent on each good is equal.

**STEP 1:** Equate the marginal utility of money and find the missing marginal utility

$$2 = \frac{MU_x}{6}$$

$$MU_x = 12$$

**STEP 2:** Look from the table on which quantity is the marginal utility 12. It should be noted that the difference in total is the marginal.

Quantity of Good	Total Utility	Marginal Utility
1	28	28
2	40	12
3	50	10
4	58	8
5	64	6
6	68	4
7	71	3
8	73	2

Hence the answer is 2 units of the good.

**Key Point:** Whenever the words "marginal utility of money" or "marginal utility of the last dollar spent" is given. Always use this equation  $\left[ \frac{MU_x}{P_x} = \frac{MU_y}{P_y} \right]$  to solve the question.

[O/N 2009/Q1]

**Q7 | C**

Combination T is only attainable after the changes and since this was not previously available this will lead to consumers getting better off. Option A is incorrect because changes in prices of both the products have altered consumers real income. Option B & D are incorrect because at new prices, consumers prefer more X than Y.

[O/N 2009/Q2]

**Q8** | **C**

There is no different from the previous ones. Here the Marginal utility is just shown as a diagram and not as a table. The rest of the steps is the same.

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$$

**STEP 1:** Equate the marginal utility of money and find the missing marginal utility

$$3 = \frac{MU_x}{10}$$

$$MU_x = 30$$

**STEP 2:** Look from the graph on which quantity is the marginal utility 30. Hence the answer is 6 units of the good.

**Key Point:** Whenever the words "marginal utility of money" or "marginal utility of the last dollar spent" is given. Always use this equation  $[\frac{MU_x}{P_x} = \frac{MU_y}{P_y}]$  to solve the question.

[M/J 2010/Q1]

**Q9** | **A**

A shift from GH to JK shows that a lower quantity of X is being consumed because increase in price of X and a larger quantity of Y is being consumed due to decrease in price of Y. Option B is incorrect because price for only Y fell. Option C & D cannot be concluded as we don't know the relative price change.

[M/J 2010/Q2]

**Q10** | **A**

**STEP 1:** Equate the marginal utility of money and find the missing marginal utility

$$3 = \frac{MU_x}{5}$$

$$MU_x = 15$$

**STEP 2:** Look from the table on which quantity is the marginal utility 15. It should be noted that the difference in total is the marginal.

Quantity of Good	Total Utility	Marginal Utility
1	30	30
2	50	20
3	65	15
4	75	10
5	80	5
6	83	3
7	84	1

Hence the answer is 3 units of the good.

**Key Point:** Whenever the words "marginal utility of money" or "marginal utility of the last dollar spent" is given. Always use this equation  $[\frac{MU_x}{P_x} = \frac{MU_y}{P_y}]$  to solve the question.

[O/N 2010/Q2]

**Q11** | **C**

Increase in price of X with no change in Price of Y would shift budget line pivotal inward on x axis and an increase in income would shift the budget line pivotal upward on y-axis. Both Option A & D would not shift the budget line hence point N remains unattainable. Option B is incorrect because a decrease in  $P_x$  and increase  $P_y$  would result in an increase in quantity of X consumed.

[O/N 2010/Q3]



**Q12 | A**  
 A consumer reaches maximum satisfaction from his expenditure if he purchases the goods up to the point where utility from the last money unit spent on each good becomes equal.  

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$$
  
**Common Mistake:** Some students chose option D thinking that a point where the marginal utility is zero the total would be maximized. This reasons this answer is incorrect is because it assumes that there is only one good, however a consumer chooses multiple goods from the given income and there the law of equi-marginal utility will decide the equilibrium.  
 [M/J 2011/Q1]

**Q13 | A**  
 A decrease in money income with no change in price of good X would shift the budget line inward on X-axis. A simultaneous reduction in the price of good Y, which is more than the fall in money income, would cause a pivotal outward shift in the budget line on y-axis.  
 [M/J 2011/Q2]

**Q14 | A**  
 A normal demand curve takes the shape of the marginal utility curve for a good. When the consumption increases the utility declines. A normal demand curve shows that consumer is willing to pay a lower price for every next unit because each additional unit represents lower satisfaction. Option B is incorrect because choices of products refer to PED. Option C & D are not related to the demand curve.  
 [O/N 2011/Q1]

**Q15 | D**  
 Income effect of a price change is measured in terms of a change in real income, hence everything other than real income can vary.  
 [O/N 2011/Q4]

**Q16 | C**  
**STEP 1:** Equate the marginal utility of money and find the missing marginal utility  

$$3 = \frac{MU_x}{4}$$

$$MU_x = 12$$
  
**STEP 2:** Look from the table on which quantity is the marginal utility 12. It should be noted that the difference in total is the marginal.  

Quantity of Good	Total Utility	Marginal Utility
1	20	20
2	36	16
3	50	14
4	62	12
5	72	10
6	80	8

  
 Hence the answer is 4 units of the good.  
**Key Point:** Whenever the words "marginal utility of money" or "marginal utility of the last dollar spent" is given. Always use this equation  $[\frac{MU_x}{P_x} = \frac{MU_y}{P_y}]$  to solve the question.  
 [M/J 2012/Q2]

**Q17 | A**  
 An outward shift on x-axis suggests decrease in the price of X while an inward shift on y-axis can be attributed to a fall in money income.  
 [M/J 2012/Q3]

**Q18 | D**  
 A consumer reaches maximum satisfaction from his expenditure if he purchases the goods up to the point where utility from the last money unit spent on each good becomes equal.  

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$$
  
 [O/N 2012/Q2]

**Q19 | C**

A large quantity of good X suggests that increase in real income, this happens the price of good X fell. If it was real income the curve would have taken a parallel shift. [O/N 2012/Q3]

**Q20 | C**

**STEP 1:** Equate the marginal utility of money and find the missing marginal utility

$$2 = \frac{MU_x}{6}$$

$$MU_x = 12$$

**STEP 2:** Look from the table on which quantity is the marginal utility 12. It should be noted that the difference in total is the marginal.

Quantity of Good	Total Utility	Marginal Utility
1	20	20
2	36	16
3	50	14
4	62	12
5	72	10
6	80	8

Hence the answer is 4 units of the good.

**Key Point:** Whenever the words "marginal utility of money" or "marginal utility of the last dollar spent" is given. Always use this equation  $\left[ \frac{MU_x}{P_x} = \frac{MU_y}{P_y} \right]$  to solve the question.

[M/J 2013/Q2]

**Q21 | A**

Since Y is cheap and X is expensive that is why the curve shifted in a way that there has been an increase in consumption of Y and reduction of X. Option B & C indicate cause of pivotal shift only for one side. While D cannot be concluded since one price is rising and the other one is decreasing.

**Key Point:** Always remember whenever in the answer the word relative is written it means that if price of one good is increasing then the price of the other good is decreasing.

[M/J 2013/Q3]

**Q22 | D**

**STEP 1:** Equate the marginal utility of money and find the missing marginal utility

$$2 = \frac{MU_x}{6}$$

$$MU_x = 12$$

**STEP 2:** Look from the table on which quantity is the marginal utility 12. It should be noted that the difference in total is the marginal.

Quantity of Good	Total Utility	Marginal Utility
1	24	24
2	45	21
3	63	18
4	78	15
5	90	12
6	99	9

Hence the answer is 5 units of the good.

**Key Point:** Whenever the words "marginal utility of money" or "marginal utility of the last dollar spent" is given. Always use this equation  $\left[ \frac{MU_x}{P_x} = \frac{MU_y}{P_y} \right]$  to solve the question.

[O/N 2013/Q2]

**Q23 | B**

A change in equilibrium to point N suggests a pivotal outward shift on x-axis, possibly due to a fall in price of Y and a simultaneous rise in price of X.

[O/N 2013/Q3]

**Q24 | A**

A decrease in price for good Y will lead to a pivotal upward shift of the y-axis. While a decrease in income shifts the curve inwards. This is because Price of Good X cannot change.

[M/J 2014/Q2]

**Q25 | A**

We simply put the values into the equation to see which good the consumption should be increase and which one the consumption should be decreased.

$$\frac{MUB}{PB} = \frac{MUA}{PA}$$

$$\frac{1}{1} < \frac{2}{0.50}$$

Hence by consuming more apples and reducing the consumption of bananas the consumer would be in equilibrium.

**Key Point:** Consumer strategy to maximize utility

Situation 1	Situation 2	Situation 3
$\frac{MU_x}{P_x} > \frac{MU_y}{P_y}$ - Consumer More X - Consumer Less Y	$\frac{MU_x}{P_x} < \frac{MU_y}{P_y}$ - Consumer More Y - Consumer Less X	$\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$ - Quantity X unchanged - Quantity Y unchanged

[O/N 2014/Q2]

**Q26 | D**

Since now the consume is consuming more of Y and less of X this shows that X is expensive and Y is cheap. Option A & B cannot be concluded since prices are moving in the opposite direction. Option C is incorrect because Y is cheaper not expensive.

**Key Point:** Always remember whenever in the answer the word relative is written it means that if price of one good is increasing then the price of the other good is decreasing.

[O/N 2014/Q2]

**Q27 | B**

We simply needed to put the values in the equation of consumer equilibrium to find Price as the missing variable.

$$\frac{MUF}{PF} = \frac{MUC}{PC}$$

$$\frac{10}{5} = \frac{2}{PC}$$

We find price as the missing variable. Price of clothing is \$1 and quantity 15 units would be consumed.

[M/J 2015/Q2]

**Q28 | D**

Income effect of a price change is measured in terms of a change in real income, hence everything other than real income can vary.

[M/J 2015/Q3]

**Q29 | A**

The demand curve can be derived through the individual demand curve. Hence that rate of change of Total utility curve measures MU that can be used to derive an individual's demand curve.

[O/N 2015/Q2]

**Q30 | B**

We simply need to equate the values in the budget line equation. First assuming quantity of Y to be zero and then assuming X to be zero.

Quantity of Y to (0) → To find Price of X	Quantity of X to (0) → To find Price of Y
$P_x(Q_x) + P_y(Q_y) = 120$ $P_x(20) = 120$ $P_x = 6$	$P_x(Q_x) + P_y(Q_y) = 120$ $P_y(12) = 120$ $P_y = 10$

Answer A is the correct choice.

[O/N 2015/Q3]

**Q31 | A**

Always remember for a Giffen good the substitution effect is completely outweighed by the income effect. Hence option A.

**Key Point:** Following is a quick guide to identifying the effect on indifference curve.

Good Type	Change
1. Normal Good	$a \rightarrow b$ [Substitution effect] $b \rightarrow c$ [Income effect]. The new point c is always ahead in the same direction of b.
2. Inferior Good	$a \rightarrow b$ [Substitution effect] $b \rightarrow c$ [Income effect]. The new point c is always going to be between point a — <del>b</del> .
3. Giffen Good	$a \rightarrow b$ [Substitution effect] $b \rightarrow c$ [Income effect]. The new point c is always going to be before point a.

- A movement on the indifference curve is the substitution effect
- A shift to the new budget line is the income effect

[M/J 2016/Q4]

**Q32 | D**

The standard formulae for consumer equilibrium. It is just cross multiplied and rearranged in the answer.

$\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$  can be arranged as  $\frac{MU_x}{MU_y} = \frac{P_x}{P_y}$  after cross multiplication.

[M/J 2016/Q5]

**Q33 | B**

According to the theory a change in price causes a movement along the demand curve. Option A & C are incorrect because higher consumption causes MU to fall but TU to rise to a certain point. Option D is incorrect because shift occurs due to non-price factors not price.

[O/N 2016/Q4]

**Q34 | C**

Since it is a movement in the indifference curve it is showing substitution effect. Since consumption is increasing towards X that means that the price of X has decreased.

[O/N 2016/Q5]

**Q35 | A**

The higher the indifference curve the greater the utility. Consumer therefore acts rationally when they shift the equilibrium to the highest possible indifference curve.

[M/J 2017/Q4]

**Q36 | C**

In the case of normal goods both the substitution and income effect work in the same direction.

**Key Points:**

1. Normal Goods – SE is Positive and Income Effect is Positive [Quantity of Good X ↑]
2. Inferior Goods – SE is Positive > Income Effect is Negative [Quantity of Good X ↑]
3. Giffen Goods – SE is Positive < Income Effect is Negative [Quantity of Good X ↓]

[M/J 2017/Q5]

Q37 | C

Since MU of water diminishes therefore people do not consumer water beyond a certain point where MU of money that they pay for it equals MU of an additional unit of water.

**Key Point:** Consumers will use till the point  $MU = P$ .

[O/N 2017/Q4]

Q38 | A

A budget line a curve that only changes because of TWO things: (1) Income of the consumer (2) Price of goods. Hence option A is correct. Option B, C & D are all reasons to shift the budget line.

[M/J 2018/Q5]

Q39 | D

The demand curve is also the marginal utility curve. Hence a point where Marginal Utility is zero the total utility is maximized.

[M/J 2018/Q6]

Q40 | D

A movement from T to U was the substitution effect because a movement on the indifference curve is always due to the substitution effect.

A movement from U to P represents the income effect because after U it went to a new indifference curve hence making it an income effect.

**Key Point:** On an indifference curve diagram there are only two effects. Income and Substitution.

[O/N 2018/Q4]

Q41 | D

Since the indifference curve is rectangular hyperbola and passes through points X and W. Hence Since Z is above the indifference curve it is more preferred. Option A & B are incorrect because all points that lie on the indifference curve have the same utility and Y & Z don't lie on the same curve and same is the case with Z & W. Option C is incorrect because Y is below the difference curve which shows it is less preferred than X.

[O/N 2018/Q5]

Q42 | A

Marginal utility is the gradient of the TU curve. Hence a point where the gradient starts to fall the MU will decline. Hence after 3 units we see that the gradient starts to decrease as the curve starts to get flatter.

[M/J 2019/Q4]

Q43 | C

Since there is a pivotal shift there is only a change in price. Hence since the quantity of X decreased that shows that the price of X increased and there was no change in price of Y and level of consumer income.

[M/J 2019/Q5]

Q44 | C

Income effect is shown by a movement of a point from beyond the substitution effect to the new indifference curve. Since the substitution effect resulted in X1 to X2 and from X2 to X4.

[M/J 2019/Q6]

Q45 | C

MU curve is also the demand curve hence a point on the demand curve that is above the price is called the consumer surplus.

[O/N 2019/Q4]

Q46 | B

Total Utilities can be obtained by adding the marginal ones. Hence we will calculate for every option to see which option gives the highest total.

- (A)  $16 + 14 + 12 = 42$
- (B)  $16 + 13 + 14 = 43$
- (C)  $16 + 13 + 10 = 39$
- (D)  $14 + 12 + 9 = 35$

**Key Point:** In order to get total utility we simply need to add all marginal utilities for all the options.

[O/N 2019/Q5]

Q47 | A

If the price increases it will shift the point inside the curve.  
When the income increases it shifts the curve parallel to GH.

[O/N 2019/Q6]

Q48 | A

Always remember a movement on the indifference curve is due to the substitution effect and a shift to another indifference curve is due to the income effect. Whenever a point is in the middle that shows that good is inferior and the price of G decreased as the consumption increased from X to Z.

[O/N 2019/Q7]



AATIK TASNEEM

**A2 – ECONOMICS (9708)**

**MICRO**

**CHAPTER 2**

**Production, Costs, Revenues and Profits**

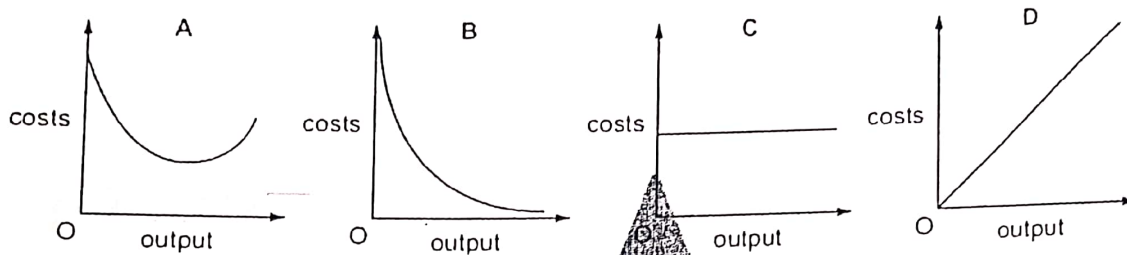
**Q1** [M/J 2008/Q6]

What is the name for the relationship between a firm's output and the quantities of factor inputs that it employs?

- A a long-run production function
- B a long-run average cost function
- C productive efficiency
- D returns to scale

**Q2** [M/J 2008/Q7]

Which diagram shows a firm's total fixed cost curve?

**Q3** [M/J 2008/Q8]

What explains why both large and small firms are often found within the same industry?

- A There are significant barriers to the entry of new firms into the industry.
- B Firms that assemble the final product buy component parts from other specialist firms.
- C Production is subject to diseconomies of scale.
- D All firms in the industry produce identical products.

**Q4** [O/N 2008/Q4]

Which statement explains why labour is subject to the law of diminishing returns in the short run?

- A As additional workers are hired, total output decreases.
- B As employment increases, the capital-labour ratio falls.
- C As employment increases, wage rates will have to be increased.
- D As output increases, eventually diseconomies of scale will occur.

**Q5** [O/N 2008/Q7]

When a firm increases all its inputs by 300%, its output increases by 200%.

What does this illustrate?

- A the law of diminishing returns
- B increasing returns to scale
- C diseconomies of scale
- D the law of variable proportions



Q6 [O/N 2008/Q8]

The table shows the production of a firm.

production (tonnes)	total cost (\$)
0	20
1	30
2	35
3	40
4	45
5	50

What is the average variable cost of producing 5 tonnes of output?

- A \$4.00      B \$5.00      C \$6.00      D \$10.00

Q7 [M/J 2009/Q5]

An economist calculates that a firm has incurred the following costs over the course of a year.

	\$(000)
wages and salaries	150
opportunity cost of owner's time	40
materials	80
rent	30
marketing fees	20
interest on bank loans	25
interest forgone on finance provided by owner	15

By how much does total cost as defined by an economist exceed the total cost as defined by an accountant?

- A \$15 000      B \$40 000      C \$55 000      D \$86 000

Q8 [M/J 2009/Q6]

A manufacturing firm has one plant of optimum size.

The firm builds a second plant identical to its first plant. The firm then finds that its long-run average cost has risen.

What could account for the change in its long-run average cost?

- A diminishing returns  
 B external diseconomies of scale  
 C managerial diseconomies of scale  
 D technical diseconomies of scale

Q9 [O/N 2009/Q3]

Which statement describes a situation in which a rise in input of factor X, all other factors being constant, results in no change in a firm's output?

- A There are diminishing returns to factor X.  
 B Returns to scale are constant.  
 C There are diseconomies of scale.  
 D The marginal product of X is zero.

**Q10** [O/N 2009/Q8]

The table shows the inputs of the two factors of production, capital and labour, needed to produce varying levels of output.

output	capital	labour
100	5	10
200	8	16
300	14	28
400	20	40
500	26	52

Over which output range do increasing returns to scale occur?

- A 100 to 200    B 200 to 300    C 300 to 400    D 400 to 500

**Q11** [M/J 2010/Q6]

The schedule shows the short-run marginal cost of producing good X.

units of X	1	2	3	4	5
marginal cost (\$)	40	30	30	60	120

Given that the total fixed cost is \$20, what level of output minimises average total cost?

- A 2 units    B 3 units    C 4 units    D 5 units

**Q12** [M/J 2010/Q7]

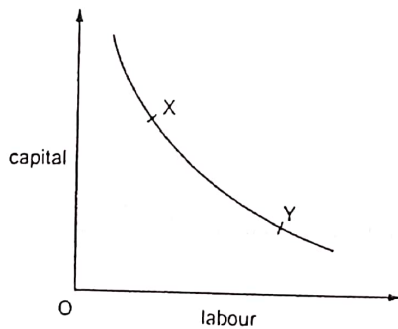
Which is an example of an external diseconomy?

- A difficulties in co-ordinating activities in a large organisation  
 B difficulties in motivating workers in a large organisation  
 C higher transport costs as a firm's market expands  
 D increased traffic congestion as industries expand

**Q13** [O/N 2010/Q5]

In the diagram, the curve shows the various combinations of labour and capital that can be employed to produce a given level of output.

A firm chooses the combination of labour and capital shown by point X on the curve.

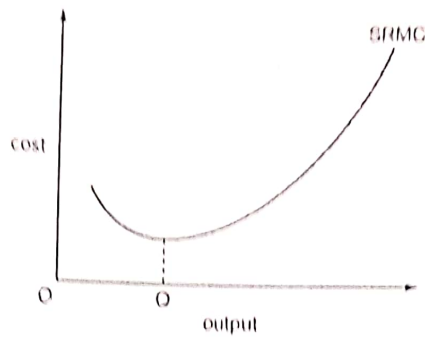


What could explain why the firm later chooses the combination of labour and capital shown by point Y?

- A an increase in capital productivity  
 B an increase in interest rates  
 C an increase in labour productivity  
 D an increase in wage rates

**Q14** | [O/N 2010/Q8]

The diagram shows a firm's short-run marginal cost curve.

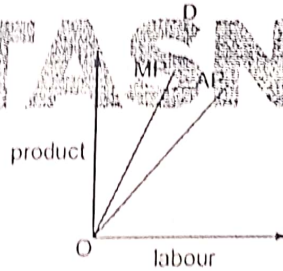
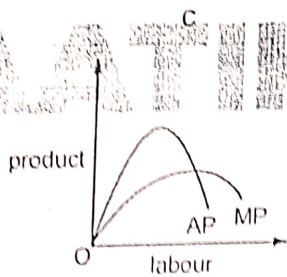
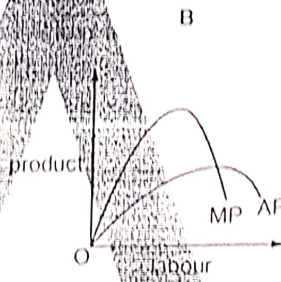
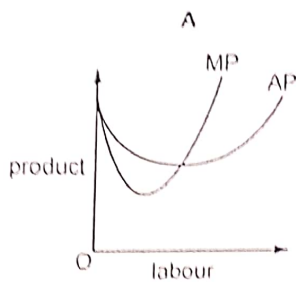


What explains why the curve is upward sloping at output levels above OQ?

- A diseconomies of scale
- B inelasticity of supply
- C rising fixed costs
- D the law of variable proportions

**Q15** | [M/J 2011/Q4]

Which diagram correctly shows the relationship between the average product (AP) and the marginal product (MP) of labour given that the quantities of other factor inputs remain constant?



**Q16** | [M/J 2011/Q5]

What is the name for the relationship between a firm's output and the quantities of factor inputs that it employs?

- A a long-run average cost function
- B a long-run production function
- C productive efficiency
- D returns to scale

**Q17 [O/N 2011/Q7]**

The table shows the levels of output of a good which can be produced with different combinations of labour and capital.

capital (number of machines)	labour (number of workers)	output (units)
2	6	100
2	7	106
2	8	108
4	12	200

Which characteristic of the production function for this good does the table show?

- A a fixed ratio between capital and labour inputs
- B constant returns to scale
- C increasing marginal productivity of labour
- D technical economies of scale

**Q18 [O/N 2011/Q8]**

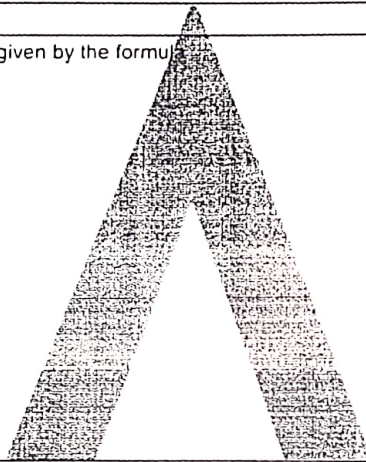
The short-run total costs (SRTC) of a firm are given by the formula

$$\text{SRTC} = \$ (10\,000 + 5X^2)$$

where X is the level of output.

What are the firm's average fixed costs?

- A \$10 000
- B  $\frac{\$(10\,000 + 5X^2)}{X}$
- C  $\frac{\$10\,000}{X}$
- D  $\frac{\$10\,000}{5X^2}$

**Q19 [O/N 2011/Q9]**

What would be most likely to constrain a firm's ability to grow?

- A the increased difficulty faced by the firm in marketing its product
- B the increased risks arising from product diversification
- C the increasing costs of distributing goods from a given location
- D the increased difficulties faced by the management in coordinating production

**Q20 [M/J 2012/Q5]**

A firm experiences diseconomies of scale over its entire range of output.

What is the shape of its long-run average cost curve?

- A It is horizontal.
- B It is 'U' shaped.
- C It slopes downwards.
- D It slopes upwards.

**Q21** [M/J 2012/Q6]

Which is a financial economy of scale?

- A lower costs in raising capital
- B lower costs of marketing
- C lower risk due to diversification
- D lower variable costs of production

**Q22** [M/J 2012/Q7]

The table shows a firm's total costs of production.

production (tonnes)	total cost (\$)
0	40
1	60
2	70
3	80
4	90
5	100

What is the average variable cost of producing 5 tonnes of output?

- A \$8.00
- B \$10.00
- C \$12.00
- D \$20.00

**Q23** [M/J 2012/Q8]

An economist calculates that a firm has incurred the following costs over the course of a year.

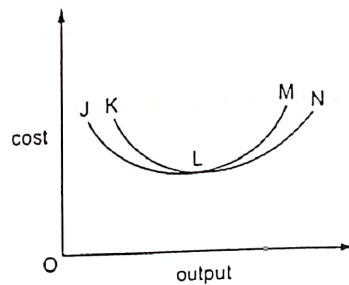
	\$(000)
wages and salaries	150
opportunity cost of owner's time	35
materials	80
rent	80
marketing fees	20
interest on bank loans	25
interest forgone on finance provided by owner	10

By how much does total cost as defined by an economist exceed the total cost as defined by an accountant?

- A \$75 000
- B \$45 000
- C \$35 000
- D \$10 000

**Q24** [M/J 2012/Q9]

The diagram shows a firm's short-run and long-run average cost curves.

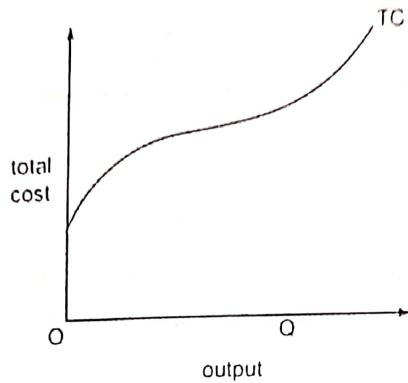


Which curve is the firm's long-run average cost curve?

- A JLN
- B JLM
- C KLM
- D KLN

Q25 | [M/J 2012/Q13]

The diagram shows a firm's short-run total cost curve (TC)



What is minimised at output OQ?

- A average fixed cost
- B average total cost
- C average variable cost
- D marginal cost

Q26 | [O/N 2012/Q8]

An economist calculates that an owner-managed firm has incurred the following costs over the course of a year.

	\$(000)
wages of two employees	150
fee paid to wife for secretarial services	20
opportunity cost of owner's time	30
materials	80
rent	30
marketing fees	20
interest on bank loans	25
interest forgone on finance provided by owner	15

By how much does total cost as defined by an economist exceed the total cost as defined by an accountant?

- A \$15 000
- B \$30 000
- C \$45 000
- D \$65 000

Q27 | [O/N 2012/Q9]

A manufacturing firm has one plant of optimum size.

The firm builds a second plant identical to its first plant. The firm then finds that its long-run average cost has risen.

What could account for the change in its long-run average cost?

- A diminishing returns
- B external diseconomies of scale
- C managerial diseconomies of scale
- D technical diseconomies of scale

**Q28** [O/N 2012/Q10]

What is most likely to be associated with a firm that is growing rapidly?

- A a high rate of labour turnover
- B a low level of net investment
- C a low percentage of profits paid as dividends to shareholders
- D attainment of the necessary conditions for allocative efficiency

**Q29** [M/J 2013/Q7]

An economist calculates that a firm has incurred the following costs over the course of the year.

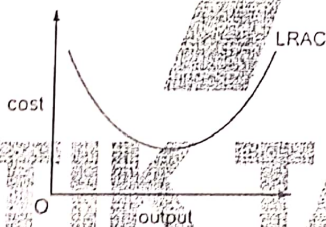
	\$(000)
wages and salaries	150
opportunity cost of owner's time	40
materials	80
rent of buildings	30
marketing fees	20
interest on bank loans	25
interest forgone on finance provided by owner	15
depreciation of equipment	20

By how much would the economist's calculation of the total cost incurred by the firm exceed an accountant's calculation of the firm's total cost?

- A \$15 000
- B \$40 000
- C \$55 000
- D \$75 000

**Q30** [M/J 2013/Q8]

The diagram shows the long-run average cost curve of a firm which faces constant factor prices.



Which economic concepts in the table explain the shape of the LRAC curve?

	economies and diseconomies of scale	the law of diminishing returns	the law of variable proportions
A	✓	✓	x
B	✓	x	x
C	x	✓	✓
D	x	x	✓

**Q31** [M/J 2013/Q9]

Which feature of an economy would be most favourable for the survival of small firms?

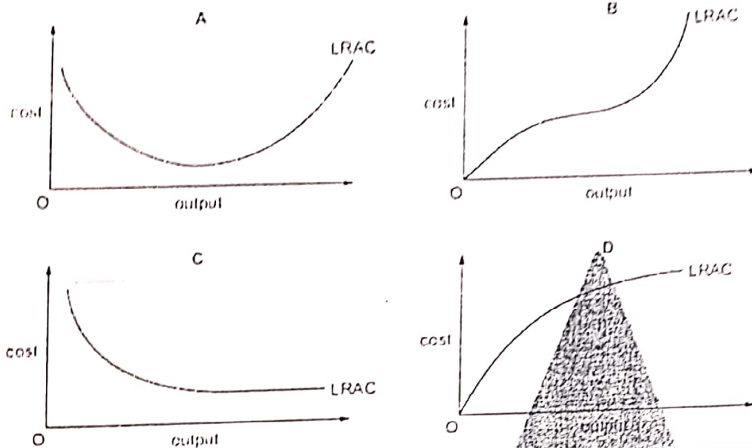
- A capital intensive production
- B economies of scale in production
- C the presence of a stock exchange
- D the widespread availability of bank lending

**Q32 [O/N 2013/Q7]**

The table shows a firm's long-run total cost schedule

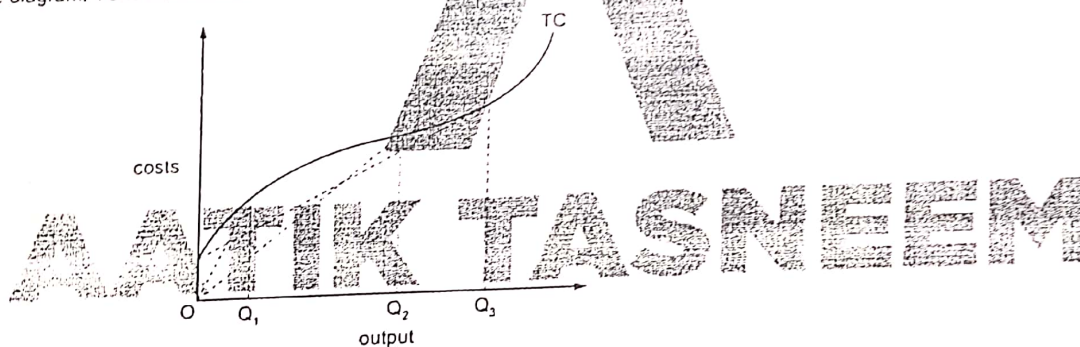
output of goods per month	total cost (US\$)
100	100
200	120
300	150
400	200

Which graph shows the shape of the firm's long-run average cost curve?



**Q33 [O/N 2013/Q8]**

In the diagram, TC is a firm's short-run total cost curve.



Which statement is correct?

- A Average total cost is minimised at output  $OQ_2$ .
- B Average variable cost is minimised at output  $OQ_1$ .
- C Average variable cost is minimised at output  $OQ_3$ .
- D Marginal cost is minimised at output  $OQ_1$ .

**Q34 [O/N 2013/Q9]**

What is an internal diseconomy of scale that often arises as a firm becomes larger?

- A a more complex decision-making process
- B an increase in the cost of raising finance for investment
- C an increase in traffic congestion
- D upward pressure on wages in the local labour market



**Q35 [M/J 2014/Q3]**

The table shows the output of chairs at a factory when different numbers of workers are employed.

number of workers	1	2	3	4	5
number of chairs produced	6	17	27	32	30

Diminishing marginal returns to labour will set in when

- A the second worker is employed.
- B the third worker is employed.
- C the fourth worker is employed.
- D the fifth worker is employed.

**Q36 [M/J 2014/Q7]**

The table gives information about a firm's costs over a given range of output in the short run and in the long run.

output (thousand)	21	22	23	24	25
short-run average cost (\$)	20	19	18	17	16
long-run average cost (\$)	12	13	14	15	16

Which conclusions can be drawn about the characteristics of production over this output range in the short run and in the long run?

	short run	long run
A	decreasing returns to scale	diminishing returns
B	economies of scale	diminishing returns
C	increasing returns	decreasing returns to scale
D	increasing returns	economies of scale

**Q37 [M/J 2014/Q9]**

The table shows a firm's marginal costs.

output	marginal cost (\$)
1	40
2	30
3	20
4	30
5	40

The average fixed cost of producing 5 units is \$6.

What is the total cost of producing 5 units?

- A \$46
- B \$70
- C \$190
- D \$230

**Q38 [M/J 2014/Q10]**

What could explain why the proportion of total employment in an economy accounted for by small firms decreases?

- A a trend towards the use of sub-contractors to produce specialised components
- B growing technical economies of scale in manufacturing
- C growth of the service sector and a decline in manufacturing
- D the opening up of specialist markets as real incomes rise

**Q39** [O/N 2014/Q8]

The table below shows the relationship between total output and total costs of a firm given constant factor prices and fixed factor proportions.

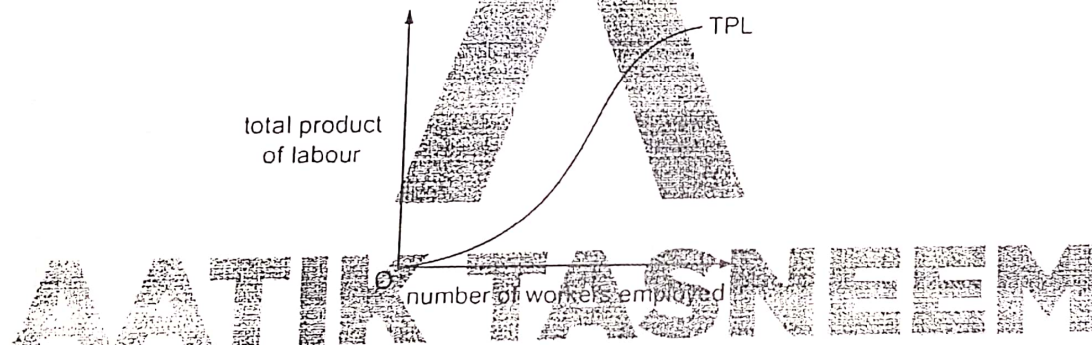
output	costs (\$)
100	100
200	160
300	180
400	320
500	500

It follows that, over this range of output, the firm experiences

- A decreasing returns for output between 100 and 300 and increasing returns for output larger than 300.
- B increasing returns for output between 100 and 300 and decreasing returns for output larger than 300.
- C decreasing returns throughout.
- D increasing returns throughout.

**Q40** [M/J 2015/Q4]

The diagram shows the total product of labour (TPL) curve for a firm whose only variable factor input is labour.



What explains the shape of the curve?

- A diminishing marginal disutility of work
- B increasing marginal disutility of work
- C technical diseconomies of scale
- D the law of variable proportions

**Q41** [M/J 2015/Q7]

What relationship does a firm's long-run production function describe?

- A the firm's output and the quantities of factor inputs employed
- B the firm's long-run average cost of production and the level of output
- C the firm's long-run average cost of production and the quantities of factor inputs employed
- D the prices of factor inputs and the quantities of factor inputs employed

**Q42** [M/J 2015/Q8]

The table shows a firm's total and marginal costs.

output	total cost (\$)	marginal cost (\$)
1	340	40
2	375	35
3	400	25
4	435	35
5	475	40

What is the average fixed cost of producing 6 units?

- A \$50
- B \$60
- C \$180
- D \$300

**Q43** [M/J 2015/Q9]

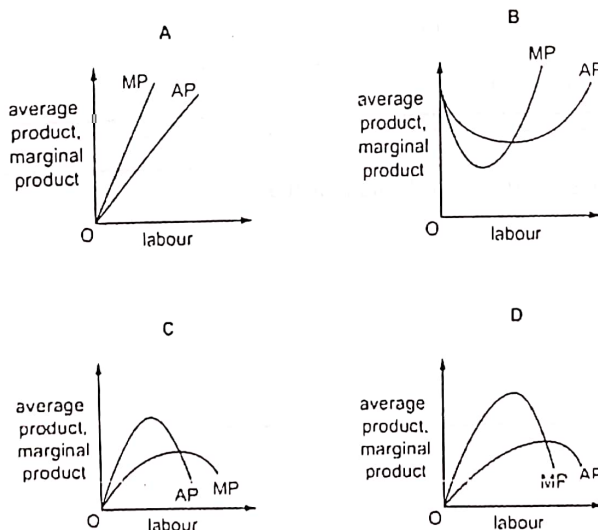
A firm experiences external diseconomies of scale and decreasing returns to scale.

How would these changes be illustrated on a cost curve diagram?

	shift in long-run average cost curve	movement along long-run average cost curve
A	downward	downward
B	downward	upward
C	upward	downward
D	upward	upward

**Q44** [O/N 2015/Q5]

Which diagram correctly shows the relationship between the average product (AP) and the marginal product (MP) of labour, given that the quantities of other factor inputs remain constant?



**Q45** [O/N 2015/Q8]

A fourfold increase in all of a firm's inputs results in a threefold increase in its output.

What does this illustrate?

- A decreasing returns to scale
- B economies of scale
- C the law of diminishing returns
- D the law of variable proportions

**Q46** [O/N 2015/Q9]

A firm employs two factors of production. The table shows the marginal products of these factors and their respective costs at the current level of output.

	land	labour
marginal product (units)	1	5
marginal cost per unit of factor (\$)	4	3

Which adjustment in factor use would be most likely to bring the firm nearer to the least-cost combination of inputs for its current output level?

	land	labour
A	less	less
B	less	more
C	more	less
D	more	more

**Q47** [M/J 2016/Q10]

Which is a risk-bearing economy of scale?

- A greater bargaining power in purchasing from suppliers
- B greater diversification of the product range
- C lower costs in raising capital
- D lower distribution costs by increasing market share

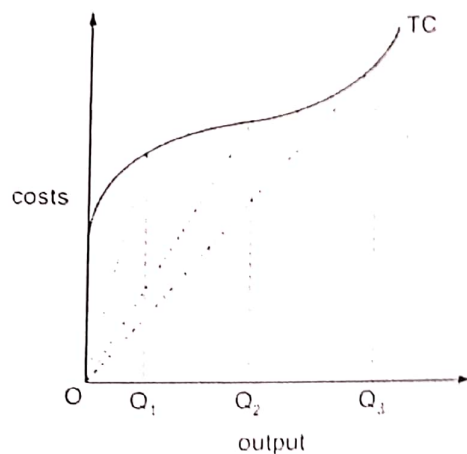
**Q48** [O/N 2016/Q8]

Which assumption is made in calculating a firm's short-run production function?

- A All factors of production are fixed.
- B All factors of production are variable.
- C The state of technology is fixed.
- D The state of technology is variable.

Q49 [O/N 2016/Q9]

In the diagram, TC is a firm's short-run total cost curve.



Which statement is correct?

- A Average total cost is minimised at output  $OQ_2$ .
- B Average variable cost is minimised at output  $OQ_1$ .
- C Average variable cost is minimised at output  $OQ_3$ .
- D Marginal cost is minimised at output  $OQ_2$ .

Q50 [O/N 2016/Q10]

The table shows the total cost of a firm.

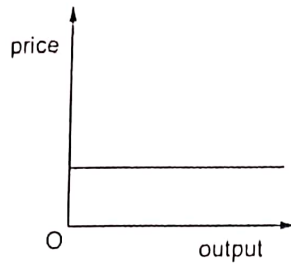
output	total cost \$
0	40
1	55
2	60
3	65
4	80

What is the average variable cost of producing 4 units of output?

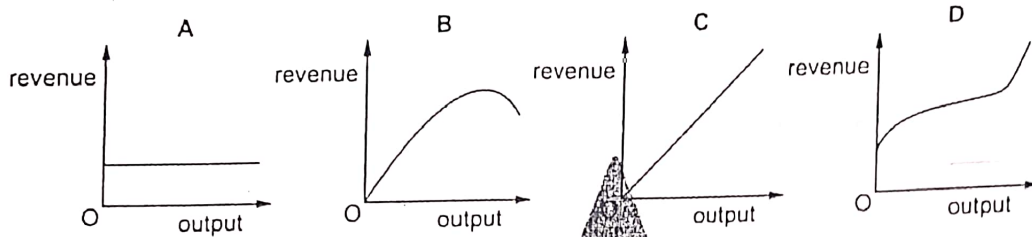
- A \$10
- B \$15
- C \$20
- D \$40

**Q51** [M/J 2017/Q11]

The diagram shows the demand curve for a firm's product.



Which diagram shows the shape of the firm's total revenue (TR) curve?



**Q52** [O/N 2017/Q2]

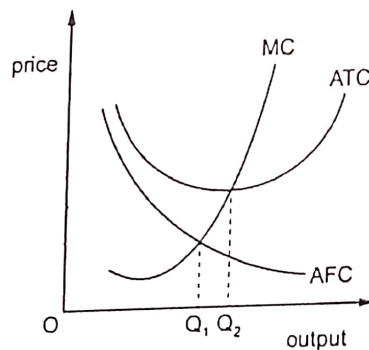
In 2015, a large mining company said it would reduce the number of staff by 6000 and sell its less profitable mines in an attempt to become more efficient.

If it is successful, what is most likely to happen to its costs?

	total fixed cost	total variable cost	average cost
A	fall	fall	fall
B	fall	fall	no change
C	fall	no change	fall
D	no change	fall	fall

**Q53** [O/N 2017/Q5]

The diagram shows the cost curves for a firm.

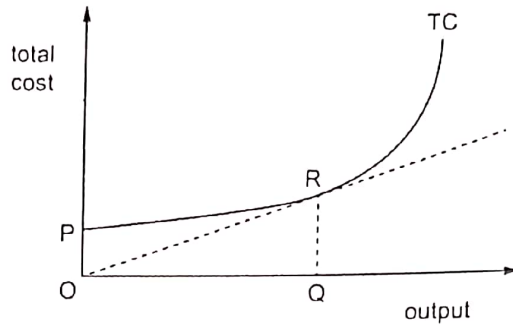


What does the firm experience as it increases output from  $Q_1$  to  $Q_2$ ?

- A decreased average variable cost
- B diminishing returns
- C economies of scale
- D increased profit

Q54 [O/N 2017/Q7]

In the diagram the curve TC shows the relationship between a firm's total costs and its level of output.



At output OQ average fixed costs are

- A equal to  $\frac{OP}{QR}$ .
- B equal to  $\frac{QR}{OQ}$ .
- C equal to  $\frac{OP}{OQ}$ .
- D measured by the slope of the line OR.

Q55 [M/J 2018/Q8]

In the year ending July 2016, airline fuel prices fell by 20.4% while the price of passenger aircraft increased by around 1.1%.

Assuming no other changes in the passenger airline industry, what was the outcome for fixed costs and variable costs?

	fixed costs	variable costs
A	decreased	decreased
B	decreased	increased
C	increased	decreased
D	increased	increased

Q56 [O/N 2018/Q6]

The schedule shows the short-run marginal cost of producing good X.

units of X	1	2	3	4	5
marginal cost (\$)	45	40	30	20	20

Given that the total fixed cost is \$50, which level of output minimises average total cost?

- A 2 units      B 3 units      C 4 units      D 5 units

Q57 [O/N 2018/Q9]

Technological change reduces the minimum efficient scale of production in an industry.

What is likely to result?

- A increased number of firms and increased size of firms  
 B increased number of firms and reduced size of firms  
 C reduced number of firms and increased size of firms  
 D reduced number of firms and reduced size of firms

Q58 [M/J 2019/Q7]

What defines average variable cost?

- A total cost divided by the quantity of the variable factor employed  
 B total variable cost divided by the quantity of the variable factor employed  
 C total variable cost divided by the output produced  
 D the addition to total variable cost by producing one more unit of output

Q59 [M/J 2019/Q8]

What **cannot** be changed in the short run?

- A the level of stock held by firms  
 B the level of technology available  
 C the market price of goods  
 D the output of individual firms in an industry



Q60 [M/J 2019/Q10]

A firm has total production cost of \$200 000. Its average fixed cost is \$120 and its average variable cost is \$80.

What are the firm's total fixed costs?

- A \$12 000      B \$40 000      C \$80 000      D \$120 000

Q61 [O/N 2019/Q8]

A firm has the choice between five levels of output. The table shows the total cost and total revenue of producing at each output level. The firm could sell whatever output it produces.

output (units)	total cost (\$)	total revenue (\$)
1000	8000	10000
2000	12000	18000
3000	19000	24000
4000	23000	28000
5000	25000	25000

The firm decides to produce 4000 units.

What is the firm's aim?

- A to maximise profit  
 B to maximise sales  
 C to maximise revenue  
 D to minimise average costs

AATIK TASNEEM

**A2 – ECONOMICS (9708)**

**MICRO**

**CHAPTER 2**

**Production, Costs, Revenues and Profits**

**ANSWERS**

## TOPIC 1: PRODUCTION, COSTS, REVENUES AND PROFITS

Q1 | A

A production function shows how output will be affected by changes in the quantity of inputs.

[M/J 2008/Q6]

Q2 | C

Fixed cost is the cost that does not change with the level of output. Hence a parallel line to the x-axis.

[M/J 2008/Q7]

Q3 | B

Small firms exist because they supply parts of the products produced by large firms at low cost. Option A will prevent small firms. Option C will lead to a small firm to shut down. Option D is incorrect because if the product is identical then the large firm will easily lead to a shutdown of small firms.

[M/J 2008/Q8]

Q4 | B

As in the short-run only labor is variable all the other factors of production are fixed. Hence when employment to increases the ratio of capital to labor will fall. Option A is incorrect because initially the total output increases then falls. Option C is incorrect because wage is not held constant. Option D is incorrect because diseconomies only occur in the long run and law of diminishing returns only exist in the short-run.

[O/N 2008/Q4]

Q5 | C

The increase in inputs highlights long-run. Hence this shows decreasing returns to scale or diseconomies of scale. Option A is short-run hence incorrect. Option B is incorrect because in increasing returns the inputs rise by a smaller proportion than the output. Option D is incorrect because law of variable proportion is a short-run concept and just another name for law of diminishing returns.

**Key Point:**

1. Law of variable proportion and law of diminishing returns is the same thing.
2. Factors only change in the long-run and never in the short-run.
3. Increasing return to Scale = Economics of Scale
4. Decreasing returns to Scale = Diseconomies of Scale
5. Economics and Diseconomies only in the short-run.

[O/N 2008/Q7]

Q6 | C

Average variable cost is calculated by  $(AVC = VC/Q)$ . At 5 tons the  $VC = 50 - 20 = 30$ . Hence 30 divided by 5 = \$6.

**Key Point:** Always remember in questions where total cost is given, the amount written in front of production 0 is the fixed cost. Hence for this question it was 20.

[O/N 2008/Q8]

Q7 | C

Economists consider both tangible and opportunity cost, whereas accountants only look at the tangible cost and ignore the opportunity cost.

1. Economists Cost =  $150 + 40 + 80 + 30 + 20 + 25 + 15 = 360$
2. Accountant Cost =  $150 + 80 + 30 + 20 + 25 = 305$  [Ignores the opportunity cost]

Hence the difference is \$55, 000

[M/J 2009/Q5]

Q8 | C

In the long-run the average cost only rises when there are diseconomies of scale. Therefore when the business increases its plants it makes it difficult to co-ordinate planning, marketing, production and so on difficult leading to a rise in LRAC. Option A is incorrect because it is a short-run concept. Option B is outside the businesses control so it cannot be because of building a second plant. Option D is incorrect the state of technology is not changing.

**Common Mistake:** Some students choose technical diseconomies of scale which would have happened if the reason was a change in technology. The firm builds an identical plant, keeping the level of technology the same. [M/J 2009/Q6]

Q9 | D

When an increase in factor leads to no increase in firm's output this means that the marginal product is zero. Option A is incorrect because law of diminishing returns suggests that total product first increases and then falls. Option B & C are incorrect because they apply to long-term and the situation talks about short-term. As the statement suggests that other factors being constant.

**Key Point:** If the question states that other factors are constant that shows that it is talking about short-run. If it states that all factors are variable that means long-run. [O/N 2009/Q3]

Q10 | A

We need to calculate the % change in input vs the % change in output at all output levels:

Output	% change in inputs	% change in output
100-200	60	100
200-300	75	50
300-400	42.8	33
400-500	30	25

**Key Point:**

- 1. Increasing Returns to Scale:** This means that a proportionate increase in all factors of production leads to a more than proportionate increase in output. [Input 10% ↑ < Output 20% ↑]
- 2. Constant Returns to Scale:** This means that a proportionate increase in all factors of production leads to an equal proportionate increase in output. [Input 10% ↑ = Output 10% ↑]
- 3. Decreasing Returns to Scale:** This means that a proportionate increase in all factors of production leads to a decrease increase in output. [Input 10% ↑ > Output 5% ↑]

[O/N 2009/Q8]

Q11 | D

Average total cost is  $(ATC = AC/Q)$ . We need to check it at all units of X.

Units of X	MC	TC	ATC
0	-	20	-
1	40	60	60
2	30	90	45
3	30	120	40
4	60	180	45
5	120	300	60

**Key Point:** If in a question that have given marginal, then add them to find the total. If in a question they have given total then find the difference between the total to find the marginal. [M/J 2010/Q6]

Q12 | D

An external diseconomy is the direct consequence of growth of "industry". Option A, B & C all refer to internal economies of scale because they apply to a single firm.

**Key Point:** Internal economies or diseconomies apply to a "firm". External economies or diseconomies apply to the "industry". [M/J 2010/Q7]

Q13 | B

Interest rate is the price of capital, when the price of capital increases it encourages firms to substitute capital with labor.

**Common Mistake:** Some students choose Option C. The reason it is incorrect is because greater labor productivity does not mean that the firm will decrease capital it just means more labor would be hired.

[O/N 2010/Q5]

Q14 | D

Law of variable proportion or law of diminishing returns suggests that a fall in returns in marginal product to the variable factors causes SRMC to rise. Option A refers to long-run. Option B refers to the slope of the SRMC. Option C is incorrect because fixed cost does not affect SRMC as it does not change with the level of production.

[O/N 2010/Q8]

Q15 | B

The relationship between the two curves is summarized below:

Marginal > Average → Average ↑  
 Marginal < Average → Average ↓  
 Marginal = Average → Average Constant

[M/J 2011/Q4]

Q16 | B

A long-run production function reflects the relationship between a firm's output and quantities of factor inputs that it employs.

[M/J 2011/Q5]

Q17 | B

Number of machines rise from 2 to 4 (100% increase) and number of workers rise from 6 to 12 (100% increase). The output rises from 100 to 200 (100% increase) hence constant returns to scale.

[O/N 2011/Q7]

Q18 | C

$$SRTC = 10\,000 + 5X^2$$

The 10,000 represents the fixed cost and in order to get the average fixed cost we have to divide it by the quantity.  $10,000/Q$ .

**Key Point:** In the equation of cost the constant value is the fixed cost and the variable value is the variable. Hence  $5X^2$  was the variable cost.

[O/N 2011/Q8]

Q19 | D

Managerial diseconomies of scale result in a higher per unit cost therefore, constraints a firm's ability to grow. The reason Options A, B & C are incorrect is because they are not part of diseconomies of scale.

[O/N 2011/Q9]

Q20 | D

Diseconomies of scale lead to an upward slop of the long-run average cost curve.

[M/J 2012/Q5]

Q21 | A

Financial economy refers to a large firm being able to raise capital at lower costs.

[M/J 2012/Q6]

Q22 | C

Average variable cost equals to  $AVC = VC/Q$

Units	$TC - FC = VC$	$AVC = VC/Q$
0	$40 - 40 = 0$	-
1	$60 - 40 = 20$	20
2	$70 - 40 = 30$	15
3	$80 - 40 = 40$	13.3
4	$90 - 40 = 50$	12.5
5	$100 - 40 = 60$	12

Hence it is \$12 per unit.

[M/J 2012/Q7]

Q23 | B

Economists consider both tangible and opportunity cost, whereas accountants only look at the tangible cost and ignore the opportunity cost.

1. Economists Cost =  $150 + 35 + 80 + 30 + 20 + 25 + 10 = 350$
2. Accountant Cost =  $150 + 80 + 30 + 20 + 25 = 305$  [Ignores the opportunity cost]

Hence the difference is \$45,000

[M/J 2012/Q8]

Q24 | A

The long-run average cost curve is JLN and short-run average cost curve is KLM. The reason of that is that short-run average cost curve is tangent to the long-run average cost curve and long-run average cost curve is always flatter than the short-run average cost curve.

[M/J 2012/Q9]

Q25 | C

By drawing rays from the origin we get the average of every curve. If the gradient of the rays increase the curve slides up, if the gradient of the rays fall the curve slopes downwards. Hence at output OQ the slope from the origin on VC curve is the lowest, which means the lowest AVC.

[M/J 2012/Q13]

Q26 | C

Economists consider both tangible and opportunity cost, whereas accountants only look at the tangible cost and ignore the opportunity cost.

1. Economists Cost =  $150 + 20 + 30 + 80 + 30 + 20 + 25 + 15 = 370$
2. Accountant Cost =  $150 + 20 + 80 + 30 + 20 + 25 = 325$  [Ignores the opportunity cost]

Hence the difference is \$45,000

[O/N 2012/Q8]

Q27 | C

Average costs rise because of internal economies of scale. Option A & B are incorrect because they are not internal diseconomies of scale. Option D is incorrect because the state of technology remained the same as the plant was identical.

[O/N 2012/Q9]

Q28 | C

Firms pay lower dividends because they need more finances in order to spend on their rapid growth.

[O/N 2012/Q10]

Q29 | D

Economists consider both tangible and opportunity cost, whereas accountants only look at the tangible cost and ignore the opportunity cost.

1. Economists Cost =  $150 + 40 + 80 + 30 + 20 + 25 + 15 + 20 = 380$
2. Accountant Cost =  $150 + 80 + 30 + 20 + 25 + 20 = 325$  [Ignores the opportunity cost]

Hence the difference is \$55,000

[M/J 2013/Q7]

**Q30 | B**

The reason for the shape of the LRAC is always economies and diseconomies of scale. Law of diminishing returns or law of variable proportions are short-run concepts.

[M/J 2013/Q8]

**Q31 | D**

Lack of finance is the major problem of small firms. Hence if lending options are available small firms can survive. Option A, B & C all relate to benefits only large firms can acquire.

[M/J 2013/Q9]

**Q32 | C**

We need to calculate the trend in the average cost to see the graph:

Output	AC = TC/Q
100	100 / 100 = 1
200	120 / 200 = 0.6
300	150 / 300 = 0.5
400	200 / 400 = 0.5

Hence the cost is continuously falling with the output and then getting stable, hence curve C shows the right trend.

[O/N 2013/Q7]

**Q33 | C**

At zero output TC = FC and VC = 0. Hence the origin of the VC curve is where the TC intersects the y-axis. Since the ray is flatter at Q3 this means that the AVC is the lowest at this point.

[O/N 2013/Q8]

**Q34 | A**

Complex decision making process refers to managerial diseconomies of scale. All other options are examples of external diseconomies of scale.

[O/N 2013/Q9]

**Q35 | B**

Diminishing returns tend to set in from the point where MP starts to fall.

Workers	No. of Chairs (TP)	MP
1	6	6
2	17	11
3	27	10
4	32	5
5	30	2

Hence from the third worker the diminishing returns start.

[M/J 2014/Q3]

**Q36 | C**

Short-Run: There were increasing returns as the cost was decreasing as the output increased.

Long-Run: Since the cost started to go up it was due to diseconomies or decreasing returns to scale.

**Key Point:** Returns to scale and economies and diseconomies are only long-run concepts.

[M/J 2014/Q7]

**Q37 | C**

$AFC \times Q = TFC$  [5 x 6 = 30]

Q	TFC	MC	TC
0	30	-	30 + 0 = 30
1	30	40	30 + 40 = 70
2	30	30	70 + 30 = 100
3	30	20	100 + 20 = 120
4	30	30	120 + 30 = 150
5	30	40	150 + 40 = 190

**Key Point:** If in a question that have given marginal, then add them to find the total. If in a question they have given total then find the difference between the total to find the marginal.

[M/J 2014/Q9]

**Q38 | B**

EOS allow the firms to grow large and become cost effective this account of existence of large firms. All other options account for the existence of small firms.

[M/J 2014/Q10]

**Q39 | B**

For this question we need to calculate the trend in the cost to verify which statement is true.

Per unit cost = TC/Output	
1. $1,100/100 = 1$	Increasing Returns to Scale
2. $160/200 = 0.8$	
3. $180/300 = 0.6$	Decreasing Returns to Scale
4. $320/400 = 0.8$	
5. $500/500 = 1$	

**Key Point:**

1. If the average cost decreases that is increasing returns to scale or economies of scale.
2. If the average cost is constant then constant returns to scale.
3. If the average cost increases then decreasing returns to scale.

[O/N 2014/Q3]

**Q40 | D**

All the short-run curves have law of variable proportions as their explanation for the shape. Option A & B are irrelevant while C implies long-run.

[M/J 2015/Q4]

**Q41 | A**

A production function describes relationship between inputs and output.

[M/J 2015/Q7]

**Q42 | A**

The fixed cost was \$300. This fixed cost is calculated by deducting 40 out of the total cost of 340. AFC is  $FC/Q = 300/6 = \$50$

[M/J 2015/Q8]

**Q43 | D**

External Diseconomies of Scale: This shifts the LRAC upward.  
Decreasing Returns to Scale: Causes a upward movement along the LRAC curve.

**Key Point:**

1. Internal Economies or Diseconomies — On the curve movement on the LRAC.
2. External Economies or Diseconomies — Causes a shift in the LRAC

[M/J 2015/Q9]

**Q44 | D**

The relationship between the two curves is summarized below:

- Marginal > Average → Average ↑
- Marginal < Average → Average ↓
- Marginal = Average → Average Constant

[O/N 2015/Q5]



Q45 | A

Since it mentions that all factors of production will increase this means the question is talking about long-run. Looking at his Option C & D are incorrect because they only exist in the short-run. Since the inputs increase by a greater proportion than the output this means decreasing returns to scale.

**Key Point:**

1. Law of variable proportion and law of diminishing returns is the same thing and only occur in the short-run.
2. Economies and Diseconomies / Increasing returns to scale and decreasing returns to scale occur in the long-run.
2. Factors only change in the long-run and never in the short-run.

[O/N 2015/Q8]

Q46 | B

Least-cost-combination implies that

$$\frac{MP \text{ Land}}{P \text{ Land}} = \frac{MP \text{ Labor}}{P \text{ Labor}}$$

$$\frac{1}{4} < \frac{5}{3}$$

Currently the ratios are not equal so in order to equate them more labor should be employed so that MP Labor falls and therefore reduces the value of its fraction. Similarly less land increases MP Land and therefore increases the value of its fraction. We need to do these adjustments until the values of these two fractions are equal.

**Key Point:** We tend to increase the employment of that factor of production towards the one which gives a greater answer like labor is 1.67 and land is 0.25, hence we increase labor and decrease land.

[O/N 2015/Q9]

Q47 | B

Diversification will spread the risk on higher number of products

[M/J 2016/Q10]

Q48 | C

According to the theory technology only varies in the very long-run. Which means that the state of technology is fixed.

[O/N 2016/Q8]

Q49 | D

The slope of the TC is the marginal cost. Since the slope is the lowest at Q2 hence the marginal cost is minimized at output Q2. Average total cost refers to slope of each point from the origin hence ATC is minimized at Q3 making Option A incorrect. Option B & C are needed to be taken from the point where TVC starts, these are not shown in the question.

[O/N 2016/Q9]

Q50 | A

AVC = VC/Q. At output of 4 units VC = 80 - 40 = 40. We divide 40/4 = \$10

[O/N 2016/Q10]

Q51 | C

Since the Price is constant and only the quantity changes. Hence the revenue will increase at a constant rate.

[M/J 2017/Q11]

Q52 | A

Selling Mines: This will reduce the fixed costs  
 Reducing Staff: This will reduce variable costs  
 Hence when both go down, they will reduce average costs.

[O/N 2017/Q2]

**Q53 | B**  
 Diminishing returns causes marginal product to fall and therefore MC to rise.  
 Option A is incorrect because it can be at its lowest point on Q1 hence cannot be concluded. Option C is incorrect because economies of scale are a long-run concept and are not valid in the short-run. Option D is incorrect because in order to deduce profits we need the revenue curves which are not present.  
 Key Point: Every short-run cost has its shape because of law of diminishing returns. [O/N 2017/Q5]

**Q54 | C**  
 In order to find the average of any curve we take the gradient of the ray. Hence in the case of output OQ the average fixed cost is OP/OQ. (Change in y over change in x). Another way to look at this was to just divide the fixed cost OP by the output OQ. [O/N 2017/Q7]

**Q55 | C**  
 Fuel is a variable cost: Hence since the prices fell the variable costs declined.  
 Aircraft: This is a fixed expense hence fixed costs increased. [M/J 2018/Q8]

**Q56 | D**  
 We need to first complete the table.

Q	TFC	MC	TC	AC
0	50	-	$50 + 0 = 50$	
1	50	45	$50 + 45 = 95$	95
2	50	40	$95 + 40 = 135$	67.5
3	50	30	$135 + 30 = 165$	55
4	50	20	$165 + 20 = 185$	46.25
5	50	20	$185 + 20 = 205$	41

Hence Q= 5units  
 Key Point: If in a question that have given marginal, then add them to find the total. If in a question they have given total then find the difference between the total to find the marginal. [O/N 2018/Q6]

**Q57 | B**

When it is easier to enter an industry and it is easier to achieve the level of efficiency, more firms will enter the market and these firms would tend to be smaller. This is because the markets would be moving towards a perfectly competitive environment.

[O/N 2018/Q9]

**Q58 | C**

In order to get the average of any cost we have to divide the total with the quantity. Hence for average variable we need to divide  $AVC = AVC / Q$ . Hence option C is correct.

[M/J 2019/Q7]

**Q59 | B**

Technology is difficult to change in the short-run because technological progress requires years of research and development which is not possible in the short-run. Options A, C & D can all change in the short-run.

[M/J 2019/Q8]

**Q60 | D**

**STEP 1: Calculate the ATC,**

$$AFC + AVC = ATC$$

$$120 + 80 = 200$$

**STEP 2: Find quantity using the ATC formula**

$$ATC = TC / Q$$

$$200 = 200,000 / Q$$

$$Q = 1000$$

**STEP 3: Multiply the quantity with AFC.**

$$\text{Hence now } TFC = 1000 \times 120 = 120,000.$$

[M/J 2019/Q10]

**Q61 | C**

In order to get the right answer we need to calculate the profit and average cost.

Output	Total Cost	Total Revenue	Profit	AC
1000	8,000	10,000	2000	8
2000	12,000	18,000	6000	6
3000	19,000	24,000	5000	6.3
4000	23,000	28,000	5000	5.75
5000	25,000	25,000	0	5

Hence at output 4,000 the revenue is maximized.

[O/N 2019/Q8]

# A2 – ECONOMICS (9708)

## MICRO

### CHAPTER 3

#### Market Structures

Q1 [M/J 2008/Q9]

The table shows some of the assumptions of perfect competition and monopolistic competition.

Which pairing is correct?

	perfect competition	monopolistic competition
A	barriers to entry	small number of firms
B	differentiated products	large number of firms
C	freedom of entry and exit	differentiated products
D	large number of firms	barriers to entry

Q2 [M/J 2008/Q10]

A perfectly competitive industry becomes a profit-maximising monopoly.

The marginal cost curve of the monopolist is identical to the supply curve of the perfectly competitive industry.

How will output and price be affected?

	output	price
A	increases	increases
B	increases	decreases
C	decreases	decreases
D	decreases	increases

Q3 [M/J 2008/Q11]

Why might a firm introduce a policy of price discrimination?

- A to achieve allocative efficiency
- B to achieve productive efficiency
- C to avoid diseconomies of scale
- D to turn consumer surplus into producer surplus

Q4 [O/N 2008/Q9]

Which feature does a contestable market share with a perfectly competitive market?

- A Firms must be price takers.
- B Firms must operate on a small scale.
- C There must be freedom of entry to and exit from the industry.
- D There must be many firms in the industry.

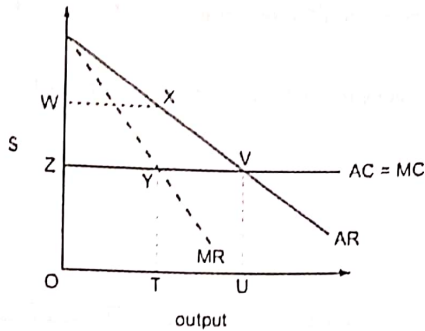
Q5 [O/N 2008/Q10]

Which characteristic would make it easier for firms in an industry to collude?

- A low barriers to entry
- B a large number of firms
- C rapid technological change
- D product homogeneity

**Q6 [O/N 2008/Q11]**

The diagram shows the cost and revenue curves of a profit-maximising monopolist. The monopolist's average cost curve is identical to the long-run supply curve which would exist if the industry was perfectly competitive.

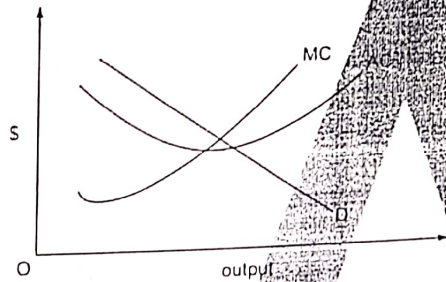


Which area shows the deadweight loss resulting from this monopoly situation?

- A WXYZ      B WXVZ      C XVY      D XVUT

**Q7 [O/N 2008/Q12]**

The diagram shows the demand and cost curves of a monopolist who initially produces at the profit-maximising level of output.



The monopolist is required by the government to adopt marginal cost pricing.

What will be the effect on the price charged and the output produced?

	price	output
A	increase	increase
B	increase	decrease
C	decrease	increase
D	decrease	decrease

**Q8 [O/N 2008/Q13]**

The table shows the costs of two milk producers.

	costs per litre
firm X	\$9
firm Y	\$7

The price received by producers is \$10 per litre. Both firms have been given quotas allowing them to produce 200 litres per day. Firm X sells its quota to firm Y.

Assuming constant costs of production and zero costs of entry and exit, what price did firm Y pay (per day) to buy X's quota?

- A \$200  
 B \$600  
 C \$700  
 D between \$200 and \$600

Q9 [M/J 2009/Q7]

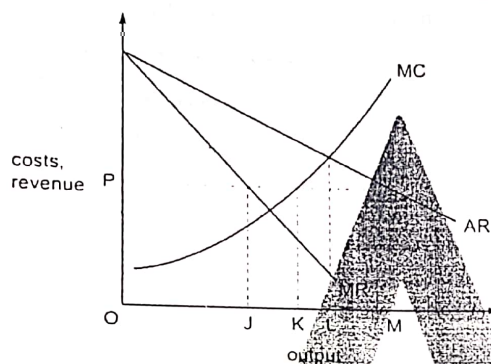
A firm estimates that, all else remaining unchanged, an increase in its output will result in an equal proportionate increase in its revenue.

What can be deduced from this about the price elasticity of demand for the firm's product?

- A It is  $-1$ .
- B It is  $+1$ .
- C It is perfectly inelastic.
- D It is perfectly elastic.

Q10 [M/J 2009/Q8]

The diagram shows the initial cost and revenue curves of a profit-maximising monopolist.



What output will the firm produce if the government fixes the price at  $OP$ ?

- A OJ
- B OK
- C OL
- D OM

Q11 [M/J 2009/Q9]

What is a feature of monopolistic competition, but not of perfect competition?

- A a small number of buyers
- B product differentiation
- C the existence of abnormal profits
- D the existence of barriers to entry

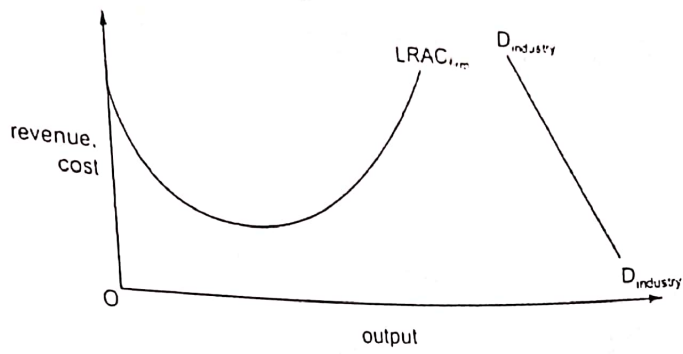
Q12 [M/J 2009/Q10]

Which assumption is essential for a market to be contestable?

- A The market is supplied by a large number of firms.
- B Firms are free to enter and leave the market.
- C Firms cannot earn abnormal profits in the short run.
- D Firms produce differentiated goods.

**Q13** [M/J 2009/Q11]

The diagram shows the long-run average cost curve of a typical firm in an industry and the demand curve for the industry's product.



Which market structure is most likely to occur in this industry?

- A monopolistic competition
- B monopoly
- C oligopoly
- D perfect competition

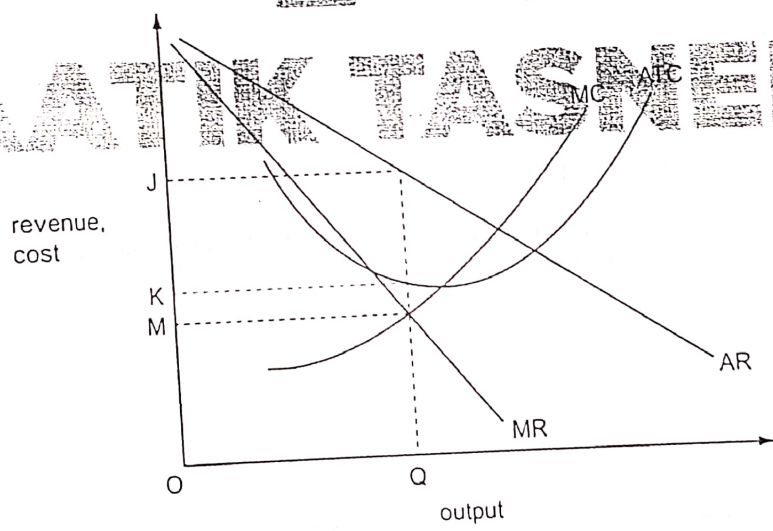
**Q14** [M/J 2009/Q12]

In which circumstance will a firm cease production in the short run?

- A It makes a profit that is less than its total variable costs
- B It makes a profit that is less than its total fixed costs
- C Its average revenue is less than its average cost
- D Its average revenue is less than its average variable cost

**Q15** [M/J 2009/Q13]

The diagram shows the cost and revenue curves of a profit-maximising monopolist.



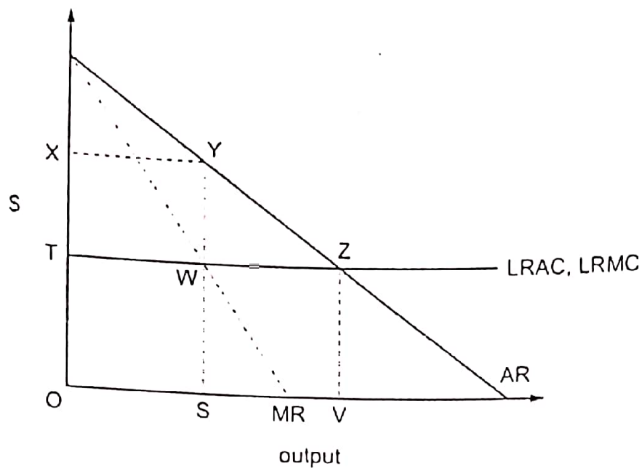
What measures the monopoly profit per unit of output made by the firm?

- A JM
- B JK
- C  $JM \times OQ$
- D  $JK \times OQ$



**Q16** [O/N 2009/Q9]

The diagram shows an industry producing under conditions of constant average costs.



Under perfect competition, the industry produces output  $OV$ .

Which area measures the loss in consumer surplus if it were to become a monopoly?

- A YWZ      B XYWT      C XYZT      D SYZV

**Q17** [O/N 2009/Q10]

The price elasticity of demand for a firm's product is zero.

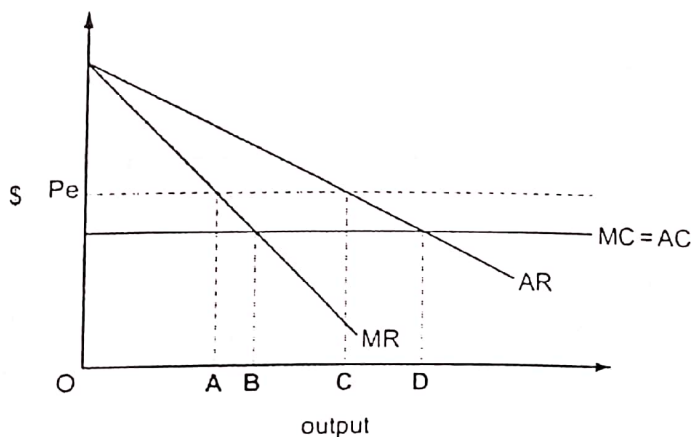
What will be the effect on the firm's revenue if it increases its price by 5%?

- A Its revenue will be unchanged.  
 B Its revenue will increase by 5%.  
 C Its revenue will decrease by 5%.  
 D Its revenue will fall to zero.

**Q18** [O/N 2009/Q11]

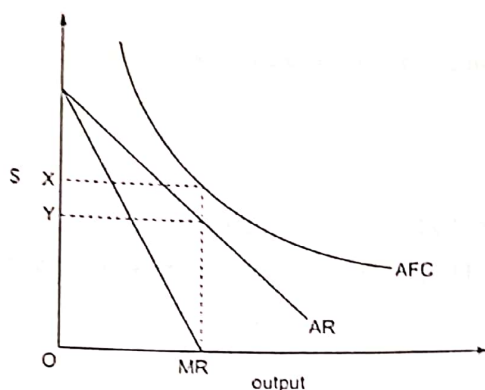
The diagram shows the short-run position of a monopolist who believes that in the long-run excessive profits might attract new entrants to the industry.

If the monopolist believes that at prices above  $P_e$  new competitors would enter, which output would he choose to protect his long-run profits?



**Q19** [O/N 2009/Q12]

The diagram shows the cost and revenue curves of a monopoly producer whose only cost of production is a fixed cost.



What will such a monopolist do?

- A set a price of OX in the short run and the long run
- B set a price of OY in the short run and the long run
- C set a price of OX in the short run, but discontinue production in the long run
- D set a price of OY in the short run, but discontinue production in the long run

**Q20** [O/N 2009/Q13]

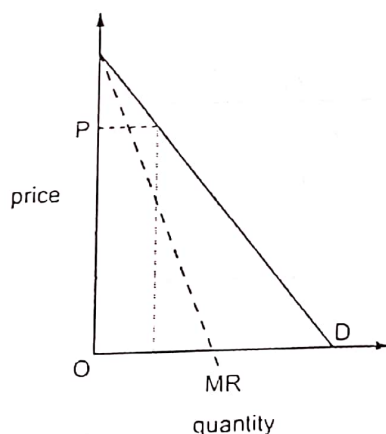
A country's steel producers are members of a cartel. Each member is allocated a production quota, and initially produces the maximum allowed under its quota.

What will be the effect on total steel production and the industry's total profits of allowing the producers to trade the quotas among themselves?

	effect on production	effect on total profits
A	increase	increase
B	increase	no change
C	no change	increase
D	no change	no change

**Q21** [M/J 2010/Q8]

The diagram shows a firm's demand curve and its marginal revenue curve.



What is the approximate price elasticity of demand at price OP?

- A 0.25
- B 0.5
- C 1
- D 2

Q22 [M/J 2010/Q9]

In the absence of regulation, why is it likely that the market for air travel on the Singapore-Sydney route would be highly contestable?

- A An airline entering the market would lose little if it later exited that market.
- B The airline industry's capacity to expand its operations in the short-run is limited.
- C The demand for air travel on the Singapore-Sydney route is price-elastic.
- D There is no effective substitute for air travel for journeys between Singapore and Sydney.

Q23 [M/J 2010/Q10]

The table shows information about a profit-maximising firm.

output	17 000 units
price per unit	\$1.75
fixed costs	\$10 000
variable costs per unit	\$1.70

What should the firm do?

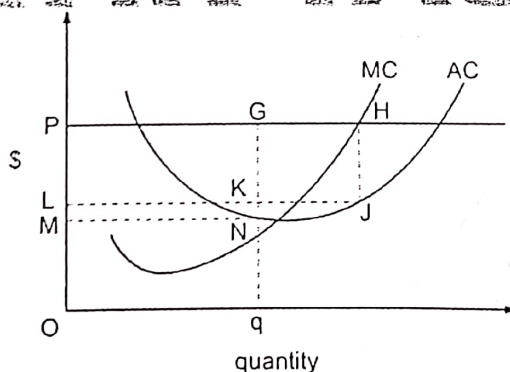
- A close down immediately because it is not covering its fixed costs
- B close down immediately because it is not covering its average costs
- C close down immediately because it is not covering its total costs
- D continue production in the short run because it is covering its variable costs

Q24 [M/J 2010/Q11]

The diagram shows a firm's marginal and average cost curves.

The firm enters a collusive agreement with other firms in the industry. It is agreed that each firm will charge a common price,  $OP$ , and will restrict the level of its output to a production quota set by the industry cartel.

The firm is allocated a production quota,  $Oq$ .



The firm decides to cheat in order to maximise its profits.

What is its short-run increase in profits?

- A PGKL
- B PHJL
- C PHJL minus PGNM
- D PGKL minus LKNM

**Q25** [M/J 2010/Q12]

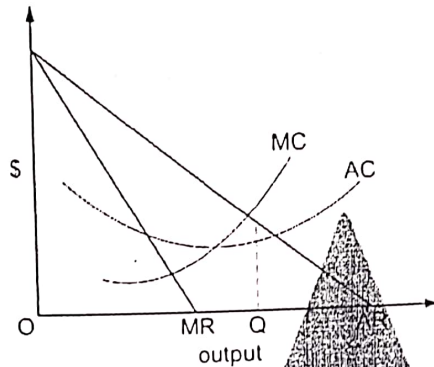
A competitive market becomes a monopoly.

What is likely to happen?

- A Consumer surplus will be reduced by the amount of the deadweight loss.
- B Producer surplus will be reduced by the amount of the deadweight loss.
- C The loss in consumer surplus will be balanced by the increase in producer surplus.
- D There will be a transfer of surplus from consumer to producer.

**Q26** [O/N 2010/Q9]

The diagram shows a firm's cost and revenue curves.



What could explain why the firm produces output  $Q$ ?

- A It is operating in a contestable market.
- B It is operating in a perfectly competitive market.
- C It is seeking to maximise profits.
- D It is seeking to maximise sales revenue.

**Q27** [O/N 2010/Q10]

A firm wishes to acquire some of the consumer surplus its customers currently enjoy.

How might it achieve this?

- A by introducing price discrimination
- B by reducing operating costs
- C by setting a price that maximises revenue
- D by taking advantage of economies of scale

**Q28** [O/N 2010/Q11]

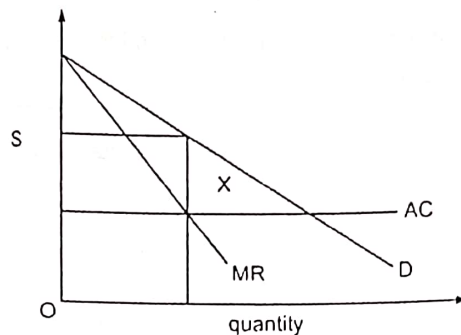
A perfectly competitive firm finds that at its current level of output, marginal revenue is \$2.00 and marginal cost is \$2.50.

If the firm is a profit maximiser, what will happen to its price and output?

	price	output
A	increases	decreases
B	increases	unchanged
C	unchanged	decreases
D	unchanged	unchanged

**Q29** [O/N 2010/Q12]

The diagram shows the outcome when a perfectly competitive market is taken over by a monopoly.



What does area X represent?

- A monopoly profit
- B the reduction in consumer surplus
- C the resulting deadweight loss
- D transfer earnings

**Q30** [M/J 2011/Q7]

A product with infinite elasticity of supply has sales of 1000 units a week at a price of \$1 per unit. Price elasticity of demand is 1.5 over the relevant range.

The government imposes a tax of 10%.

What will be the government's weekly tax revenue?

- A \$15
- B \$85
- C \$100
- D \$150

**Q31** [M/J 2011/Q8]

What is the likely outcome for producers and consumers when a market moves from being non-contestable to being a contestable market?

	producers	consumers
A	gain from higher prices	gain from a wider choice of products
B	gain from likely higher profits	lose from likely higher prices
C	lose from likely lower output	lose from a reduced choice of products
D	lose from likely lower profits	gain from likely lower prices

**Q32** [M/J 2011/Q9]

A firm is engaging in price discrimination.

In order to maximise profits, what should the firm do?

- A charge a higher price to consumers earning higher incomes
- B charge a higher price to consumers earning lower incomes
- C charge a higher price to consumers whose demand for the product is price inelastic
- D charge a higher price to consumers whose demand for the product is price elastic

**Q33** [M/J 2011/Q11]

A government imposes a maximum price for electricity.

Which statement justifying this measure might be considered valid on economic grounds?

- A It will encourage electricity suppliers to invest in additional capacity.
- B It will increase the incentive for consumers to conserve energy.
- C It will prevent the monopolistic exploitation of consumers.
- D It will prevent the rationing of electricity through power cuts.

**Q34** [O/N 2011/Q3]

To prevent a surplus of milk, each milk producer is given a production quota which specifies the volume of milk he is allowed to supply.

Initially the quotas are not tradable, but then trade in quotas is allowed.

Who would gain or lose when trade in quotas takes place?

	purchasers of quotas	sellers of quotas
A	gain	gain
B	gain	lose
C	lose	gain
D	lose	lose

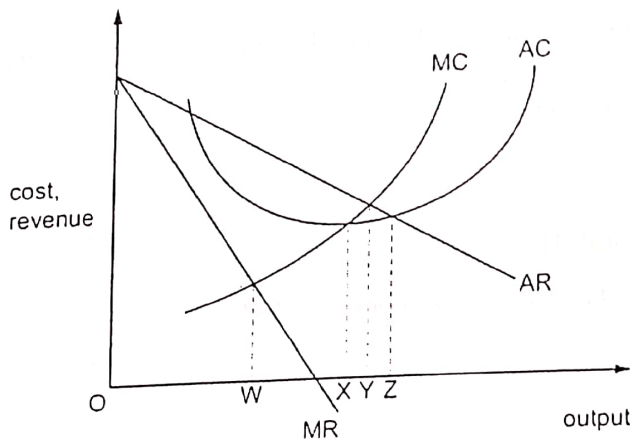
**Q35** [O/N 2011/Q10]

Which would be least likely to practise price discrimination?

- A a baker
- B a cinema
- C a hairdressing salon
- D a restaurant

**Q36** [O/N 2011/Q11]

The diagram shows the cost and revenue curves of a monopoly.



Which movement between levels of output would indicate a wish to change from unit cost minimisation to earning a normal profit?

- A W to Y
- B W to Z
- C X to W
- D X to Z

**Q37** [O/N 2011/Q12]

What will increase the likelihood that the firms in an industry will collude to maximise their joint profits?

- A The industry consists of a large number of producers.
- B The industry has many differentiated products.
- C The industry is characterised by rapid technological change.
- D There are significant barriers to prevent new firms entering the industry.

**Q38** [M/J 2012/Q10]

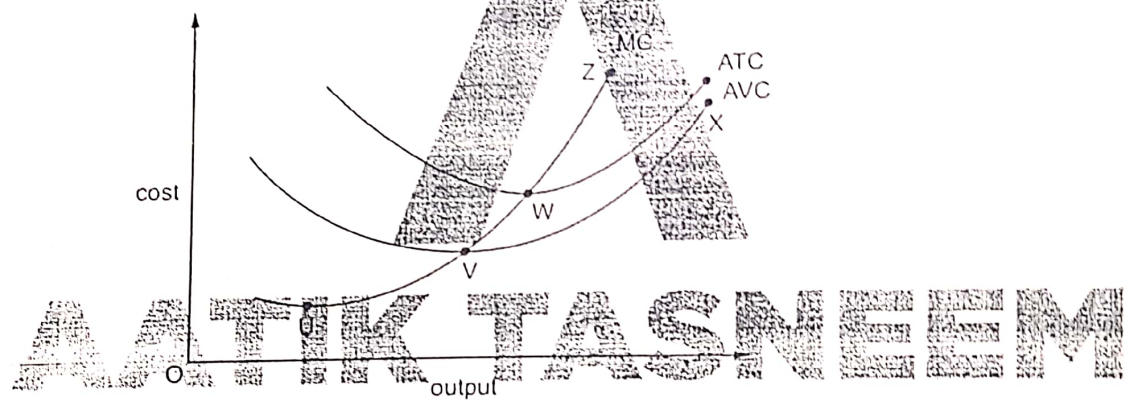
The five firm concentration ratio for an industry changes from 50% to 60%.

Which statement about the industry is correct?

- A Each firm has become more efficient.
- B The industry has become more oligopolistic.
- C The industry has benefited from external economies of scale.
- D The industry now has fewer barriers to entry.

**Q39** [M/J 2012/Q11]

The diagram shows the cost curves of a firm in a perfectly competitive market.



Which segment of a curve shows the quantity that the firm would be willing to supply to the market in the short-run?

- A VX
- B UZ
- C VZ
- D WZ

**Q40** [M/J 2012/Q12]

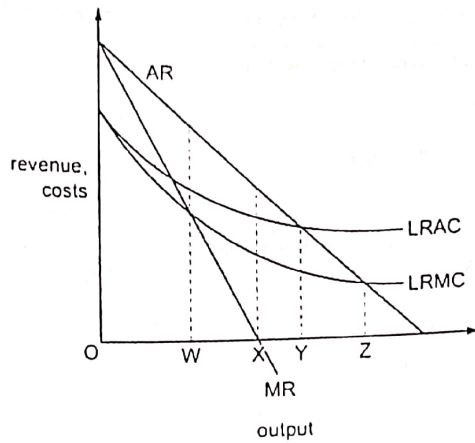
A perfectly competitive firm is currently producing at a level of output where its marginal cost is above both its average total cost and the market price.

What will be the effect on price and output if the firm were to maximise its profit?

	effect on output	effect on price
A	decrease	increase
B	decrease	unchanged
C	increase	decrease
D	increase	unchanged

**Q41** [M/J 2012/Q16]

The diagram shows the long-run cost and revenue curves of a monopolist.



Which level of output satisfies the condition for an efficient allocation of resources?

- A OW      B OX      C OY      D OZ

**Q42** [O/N 2012/Q7]

What would be the effect of imposing a specific tax on each item produced by a profit maximising monopolist?

- A Average revenue falls by the amount of the tax.  
 B Marginal costs rise by the amount of the tax.  
 C Price increases by the amount of the tax.  
 D There will be no change in price or output.

**Q43** [O/N 2012/Q11]

What is meant by a four firm concentration ratio of 25%?

- A The largest four firms' market share totals 25%.  
 B The largest four firms have a market share of 25% each.  
 C There are only four firms in the industry.  
 D The largest firm has a 25% market share.

**Q44** [O/N 2012/Q12]

Instead of charging all its customers the same price, a firm decides to charge different prices in different markets.

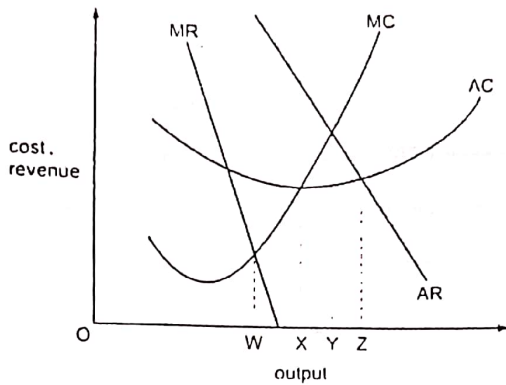
How is this likely to affect consumer surplus and the firm's marketing costs?

	consumer surplus	marketing costs
A	decrease	decrease
B	decrease	increase
C	increase	decrease
D	increase	increase



**Q45** [O/N 2012/Q13]

The diagram shows a profit-maximising firm's cost and revenue curves.



What would be the increase in the firm's output if it was required to charge a price equal to marginal cost?

- A WX      B XY      C WY      D XZ

**Q46** [M/J 2013/Q1]

In which market situation will a firm take account of the reactions of its competitors before deciding to cut its price?

- A monopoly  
 B monopolistic competition  
 C oligopoly  
 D perfect competition

**Q47** [M/J 2013/Q10]

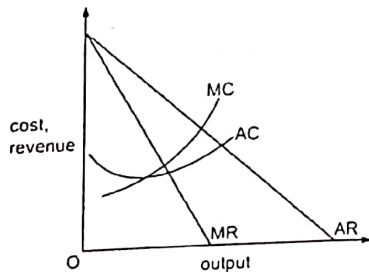
The demand for a firm's product is perfectly inelastic.

What will be the effect on the firm's revenue if it increases its price by 5%?

- A Its revenue will be unchanged.  
 B Its revenue will increase by 5%.  
 C Its revenue will decrease by 5%.  
 D Its revenue will fall to zero.

**Q48** [M/J 2013/Q11]

The diagram shows a firm's cost and revenue curves.



The firm changes its objective from sales revenue maximisation to profit maximisation.

Which groups are most likely to be winners and losers as a result of this change?

	winners	losers
A	customers	managers
B	managers	workers
C	workers	shareholders
D	shareholders	customers

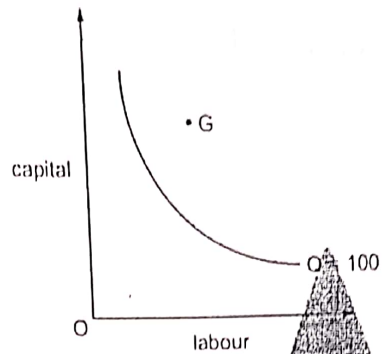
**Q49** [M/J 2013/Q13]

Which change would make it easier for a cartel to operate effectively?

- A an increase in competition from closely related industries
- B an increase in the number of firms in the industry
- C an increase in the range of products made by cartel members
- D an increase in the stability of the market for its products

**Q50** [M/J 2013/Q14]

The curve in the diagram shows the minimum combinations of capital and labour that are needed to produce 100 units of output.



A firm's management hires the combination of capital and labour indicated by point G in the diagram to produce 100 units of output.

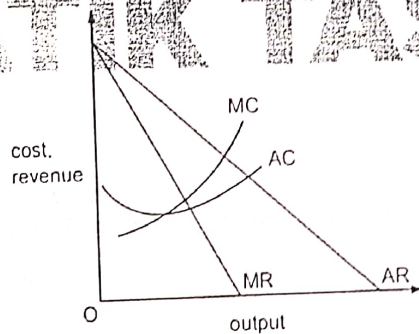
Which term best describes this situation?

- A lack of specialisation
- B managerial diseconomy
- C market failure
- D X-inefficiency

**Q51** [O/N 2013/Q10]

The diagram shows a firm's cost and revenue curves.

AATIK TASNEEM



The firm changes its objective from profit maximisation to sales revenue maximisation.

Which groups are likely to be winners and losers as a result of this change?

	winners	losers
A	customers	shareholders
B	managers	customers
C	workers	managers
D	shareholders	workers

**Q52** [O/N 2013/Q11]

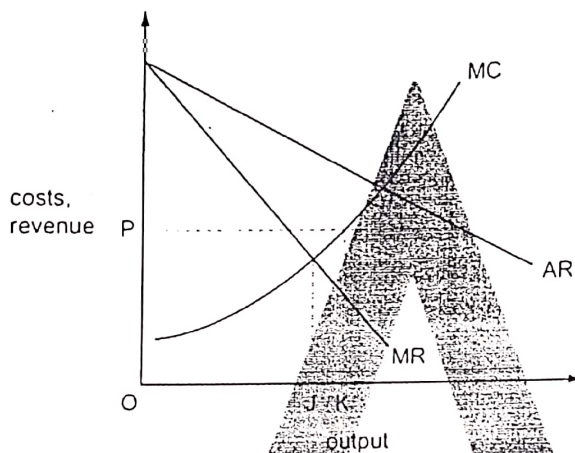
The table shows some of the assumptions of perfect competition and monopolistic competition.

Which pairing is correct?

	perfect competition	monopolistic competition
A	barriers to entry	small number of firms
B	differentiated products	large number of firms
C	freedom of entry and exit	barriers to entry
D	large number of firms	differentiated products

**Q53** [O/N 2013/Q12]

The diagram shows the initial cost and revenue curves of a profit-maximising monopolist.



What would cause the firm to increase its output from OJ to OK?

- A The government fixes the price at OP.
- B The government requires the firm to charge a price equal to marginal cost.
- C The government imposes an indirect tax on the firm's product.
- D The firm is allowed to earn only a normal profit.

**Q54** [O/N 2013/Q13]

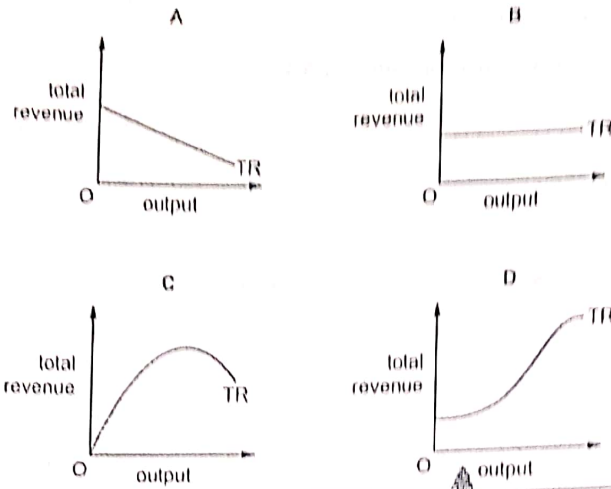
What makes it most likely that a firm's profits will be volatile and subject to substantial fluctuations?

- A Fixed costs are a high percentage of total costs.
- B It produces a diversified range of products.
- C It produces basic consumer products.
- D It sells its product in a number of different markets.

**Q55** | [M/J 2014/Q11]

A monopolist faces a downward-sloping straight-line demand curve.

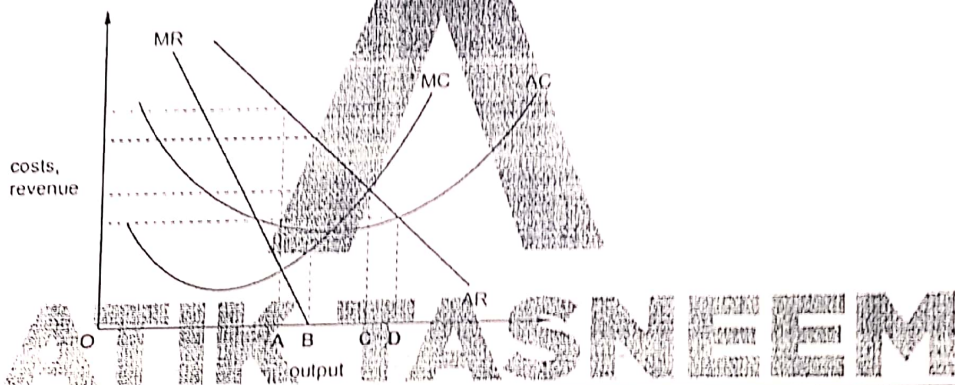
Which diagram shows his total revenue curve (TR)?



**Q56** | [M/J 2014/Q12]

The diagram shows the cost and revenue curves of a monopolist.

Which output will the firm produce if its aim is to maximise profit?



**Q57** | [O/N 2014/Q9]

In 2009, the United Kingdom's largest grocery supermarket, Tesco plc, created Tesco Bank offering a range of financial services to customers.

This is an example of

- A external growth and horizontal merger.
- B external growth and vertical merger.
- C internal growth and diversification.
- D internal growth and market concentration.

**Q58** | [O/N 2014/Q10]

The price elasticity of demand for a firm's product is zero.

What will be the effect on the firm's revenue if it reduces its price by 5%?

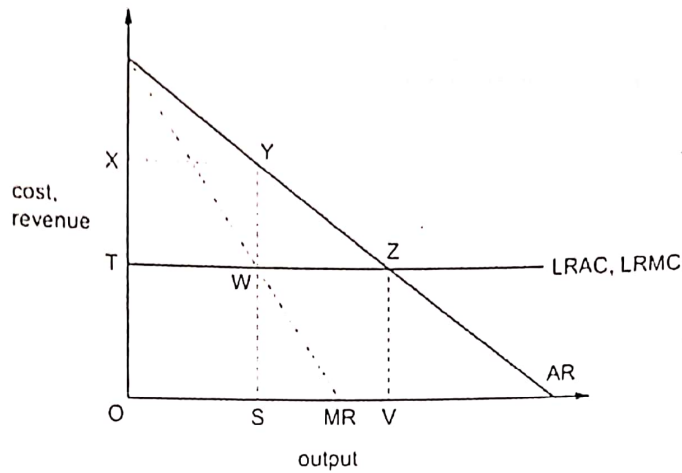
- A Its revenue will be unchanged.
- B Its revenue will decrease by 5%.
- C Its revenue will increase by 5%.
- D Its revenue will fall to zero.



**AATIK TASNEEM**

**Q59** [O/N 2014/Q11]

The diagram shows an industry producing under conditions of constant average costs.



Under perfect competition, the industry produces output OV.

Which area measures the increase in the industry's profits if it were to become a monopoly?

- A XYSO      B XYWT      C XYZT      D YZW

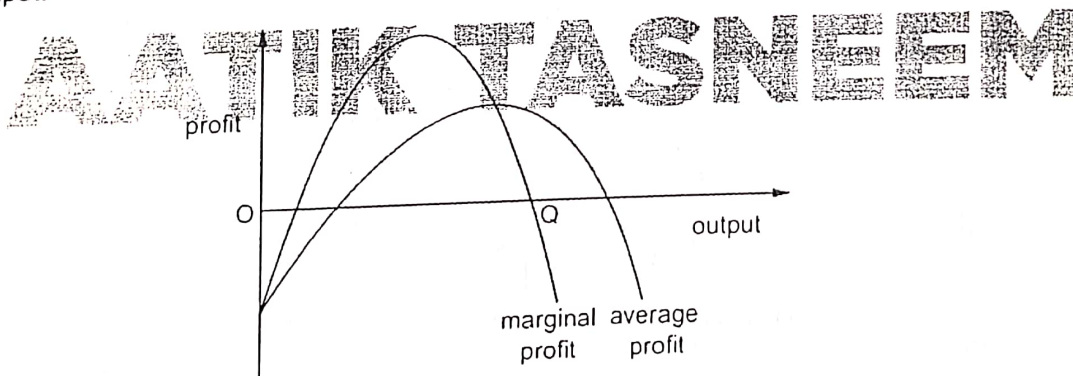
**Q60** [O/N 2014/Q12]

When is collusion likely to be successful in an oligopolistic market?

- A Barriers to entry are relatively low.  
 B Firms have accurate information about each other's output levels.  
 C There are significant differences in the firms' costs of production.  
 D There are significant fluctuations in demand from one period to another.

**Q61** [O/N 2014/Q13]

The diagram shows how a firm's average profit and marginal profit vary at differing levels of output.



If the firm produces output OQ, which statement is correct?

- A The firm is earning a zero profit.  
 B The firm is making a normal profit.  
 C The firm is maximising its profit.  
 D The firm is producing above its profit-maximising output.

**Q62** [O/N 2014/Q14]

A firm wishes to acquire some of the consumer surplus its customers currently enjoy.

How might it achieve this?

- A by introducing price discrimination
- B by reducing operating costs
- C by setting a price that maximises revenue
- D by taking advantage of economies of scale

**Q63** [O/N 2014/Q15]

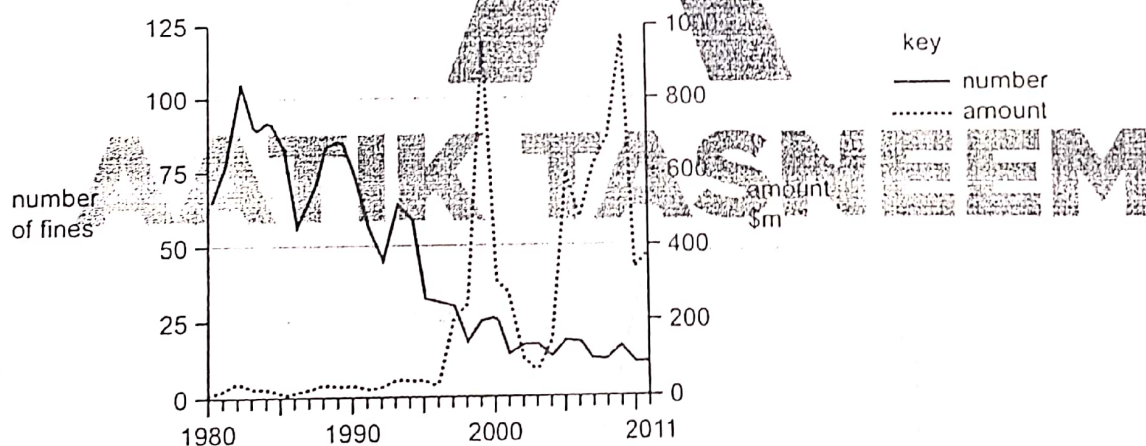
A country's steel producers are members of a cartel. Each member is allocated a production quota, and initially produces the maximum allowed under its quota.

What will be the effect on total steel production and the industry's total profits of allowing the producers to trade the quotas among themselves?

	effect on production	effect on total profits
A	increase	increase
B	increase	no change
C	no change	increase
D	no change	no change

**Q64** [O/N 2014/Q19]

The diagram shows the number and amount of fines (\$m) imposed by the US Department of Justice for firms' illegal cartel behaviour between 1980 and 2011.

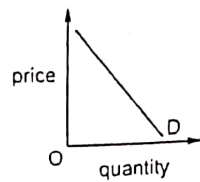


What is the most likely conclusion from the diagram about the view of the US Department of Justice of firms' cartel behaviour?

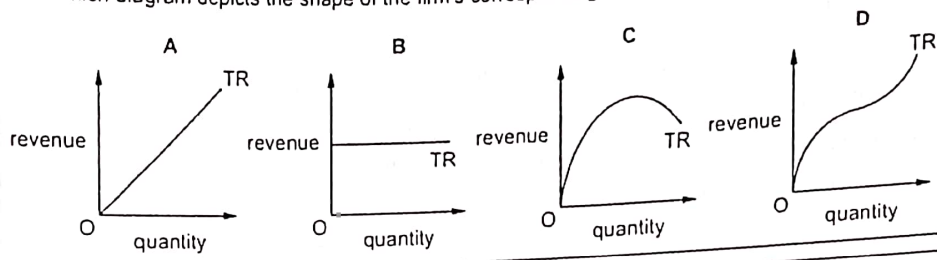
- A It believed that cartel behaviour was unimportant before 1980.
- B It believed that illegal cartel behaviour was insignificant in 2011.
- C It believed that increasing fines was necessary to deter cartel behaviour.
- D It believed that the free market can regulate cartel behaviour.

**Q65** [M/J 2015/Q10]

The diagram shows the demand curve for a firm's product.



Which diagram depicts the shape of the firm's corresponding total revenue (TR) curve?



**Q66** [M/J 2015/Q11]

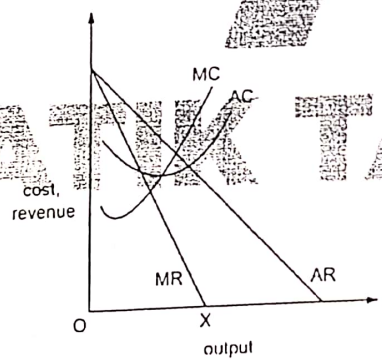
The firms in an industry all produce a homogeneous product, but each firm is able to influence the price it charges for its own product.

In which market structure do the firms operate?

- A perfect competition
- B monopolistic competition
- C oligopoly
- D monopoly

**Q67** [M/J 2015/Q12]

The diagram shows the cost and revenue curves of a monopoly.



What is the firm's objective if it produces output OX?

- A to achieve normal profit
- B to maximise profit
- C to maximise total revenue
- D to minimise average cost



**Q68** [M/J 2015/Q13]

The table shows information about a profit-maximising firm.

price per unit	\$1.70
fixed costs	\$10000
variable costs per unit	\$1.75

What can be concluded about the firm's behaviour?

- A It should close down immediately because it is not covering its average costs.
- B It should close down immediately because it is not covering its variable costs.
- C It should continue production in the long-run because it is covering its total costs.
- D It should continue production in the short-run because it is covering its fixed costs.

**Q69** [O/N 2015/Q10]

Firms can grow either externally or internally.

What represents internal growth?

	finding new export markets	merging with rival firms in the same industry	merging with firms in other industries
A	no	no	yes
B	no	yes	no
C	yes	no	no
D	yes	yes	yes

**Q70** [O/N 2015/Q11]

A firm, operating in an imperfectly competitive market, produces at the level of output where the price elasticity of demand for its product is equal to unity.

What has the firm achieved?

- A normal profit
- B maximum profits
- C maximum revenue
- D maximum sales volume

**Q71** [O/N 2015/Q12]

The table shows the five-firm concentration ratios for a selection of industries in an economy.

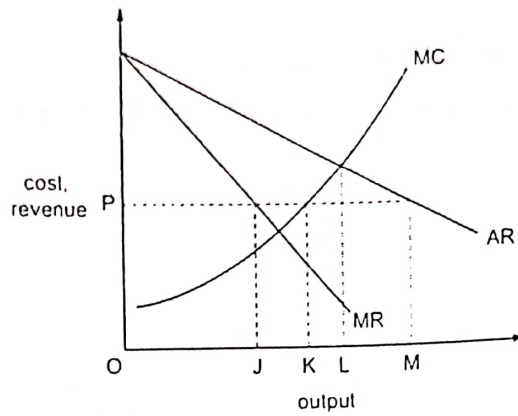
industry	percentage of total sales accounted for by the five largest firms in the industry (%)
tobacco	95
steel	60
water supply	60
printing	12

What can be concluded from the table?

- A The firms are of equal size in the steel industry and the water supply industry.
- B The printing industry is more competitive than the tobacco industry.
- C The tobacco industry is a monopoly market.
- D There are more firms in the tobacco industry than in the water supply industry.

Q72 [O/N 2015/Q13]

The diagram shows the initial cost and revenue curves of a profit-maximising monopolist.



What output will the firm produce if the government fixes the price at OP?

- A OJ      B OK      C OL      D OM

Q73 [O/N 2015/Q14]

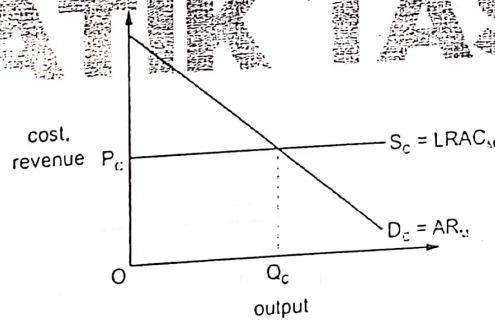
Instead of charging all of its customers the same price, a firm decides to charge different prices in different markets.

How is this likely to affect consumer surplus and the firm's marketing costs?

	consumer surplus	marketing costs
A	decrease	decrease
B	decrease	increase
C	increase	decrease
D	increase	increase

Q74 [O/N 2015/Q15]

The diagram shows the demand curve,  $D_c$ , and supply curve,  $S_c$ , of a perfectly competitive industry.



The industry is taken over by a monopolist. The monopolist's long-run average cost curve,  $LRAC_M$ , is identical to the supply curve of the perfectly competitive industry.

What will be the effects of the takeover on profit and allocative efficiency?

	profit	allocative efficiency
A	decreases	decreases
B	decreases	increases
C	increases	decreases
D	increases	increases

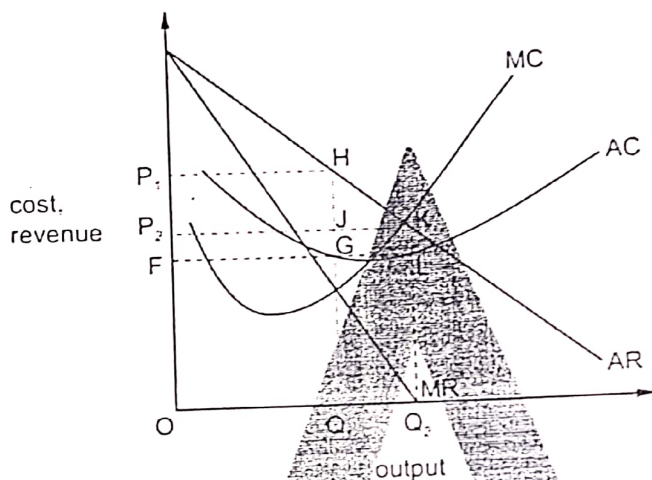
Q75 [M/J 2016/Q6]

Which statement about the 'kinked demand curve' model of oligopoly is incorrect?

- A The kink in the demand curve of each firm is based on expectations about other firms' responses to changes in its price.
- B The marginal revenue curve of the firm has a vertical segment at the market price.
- C The model explains how the equilibrium market price is determined.
- D The model suggests price stickiness within a certain range of marginal costs.

Q76 [M/J 2016/Q7]

A monopolist changes its objective from profit maximisation to sales revenue maximisation.



On the diagram, which areas represent the monopolist's total profit?

	original profit	final profit
A	$P_1HJP_2$	$P_2KLF$
B	$P_1HJP_2$	$JKLG$
C	$P_1HGF$	$P_2KLF$
D	$P_1HGF$	$JKLG$

Q77 [M/J 2016/Q8]

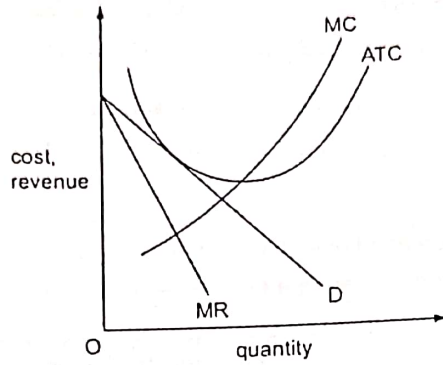
A firm estimates that, all else remaining unchanged, an increase in its output will result in a fall in its revenue.

What can be concluded from this?

- A The demand for the firm's product is price-elastic.
- B The demand for the firm's product is price-inelastic.
- C The supply of the firm's product is price-elastic.
- D The supply of the firm's product is price-inelastic.

**Q78** [M/J 2016/Q9]

The diagram shows the cost and revenue curves of a firm.



What does the diagram represent?

- A a firm in monopolistic competition making normal profit
- B a firm in monopolistic competition making short-term losses
- C a firm in perfect competition at long-run equilibrium
- D a monopoly making abnormal profits

**Q79** [M/J 2016/Q11]

A firm wishes to eliminate competition and become a monopoly.

What should it do?

- A maximise output
- B maximise profit
- C reduce prices
- D reduce the number of its suppliers

**Q80** [M/J 2016/Q12]

In many developed economies, clothes are designed by small firms and retailed by large firms.

What is the most likely explanation for this pattern?

	clothes design firms	clothes retail firms
A	need to be flexible to cope with frequent fashion changes	need to exploit marketing economies of scale
B	need to employ highly specialised and skilled workers	need to operate at a low minimum efficient scale
C	need to operate at a high minimum efficient scale	need to offer a wide range of products to survive
D	need to overcome high barriers to entry into the industry	need to take advantage of technical economies of scale

**Q81** [M/J 2016/Q13]

What is likely to have its cause in the separation of ownership and control in a firm?

- A contestable markets
- B diseconomies of scale
- C principal-agent problem
- D prisoner's dilemma

Q82 [O/N 2016/Q6]

What is one of the long-term benefits to a firm of vertical integration?

- A a concentration on activities in which the firm has a comparative advantage
- B a reduction in the total costs involved in agreeing contracts with other firms
- C an increase in the firm's market share
- D improvements in efficiency resulting from increased use of market incentives

Q83 [O/N 2016/Q7]

The organisers of a major sporting event produce official souvenir products. Cheaper unofficial souvenirs are also produced by street traders who sell them to people walking to the event.

Of what is this an example?

- A a contestable market
- B perfect competition
- C price discrimination
- D price leadership

Q84 [O/N 2016/Q11]

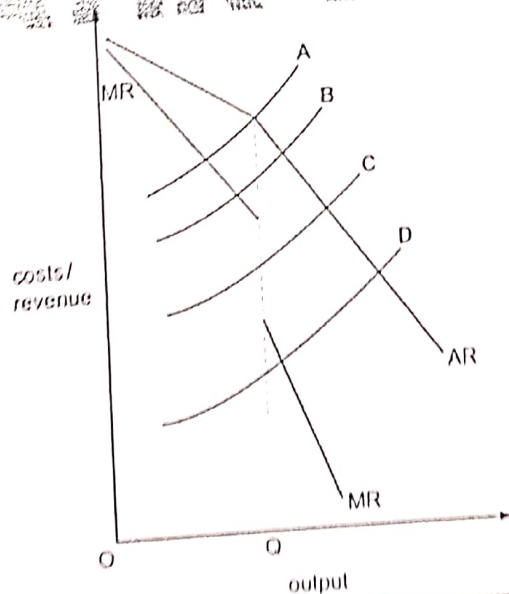
Which condition must apply before a market can be regarded as perfectly contestable?

- A All firms in the industry are price-takers.
- B All firms in the industry produce an identical product.
- C There are a large number of firms in the industry.
- D There are zero costs of entry to, and exit from, the industry.

Q85 [O/N 2016/Q12]

The diagram shows the average and marginal revenue curves of an oligopolistic firm. OQ is the profit-maximising output.

Which curve could be the firm's marginal cost curve?



Q86 | [O/N 2016/Q13]

What is most likely to be found when comparing the long-run equilibrium outcome in monopolistic competition with that in perfect competition?

- A a greater degree of excess capacity in monopolistic competition
- B a higher level of profit in monopolistic competition
- C a larger number of firms in monopolistic competition
- D a more price-elastic demand curve in monopolistic competition

Q87 | [M/J 2017/Q6]

Where is the long-run equilibrium output of a perfectly competitive firm?

- A where average costs are at a minimum
- B where average costs are falling
- C where marginal costs are at a minimum
- D where marginal costs are falling

Q88 | [M/J 2017/Q7]

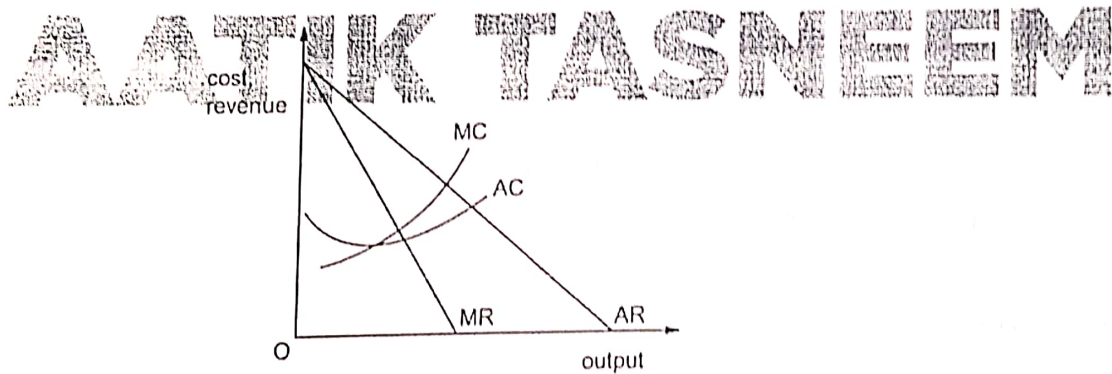
A firm estimates that, all else remaining unchanged, an increase in its output will result in an equal proportionate increase in its revenue.

What can be concluded from this?

- A The demand curve for the firm's product is horizontal.
- B The firm operates in a monopolistically competitive market.
- C The price elasticity of demand for the firm's product is 1.
- D The supply of the firm's product is perfectly inelastic.

Q89 | [M/J 2017/Q8]

The diagram shows a firm's cost and revenue curves.



The firm changes its objective from profit maximisation to sales revenue maximisation.

Which groups are likely to be winners and losers as a result of this change?

	winners	losers
A	customers	shareholders
B	managers	customers
C	workers	managers
D	shareholders	workers

**Q90** [M/J 2017/Q9]

What could be a reason for the existence of small firms in various industries?

- A a low minimum efficient scale of production
- B greater scope for specialisation and division of labour
- C the need to diversify in order to reduce risk
- D the principal-agent problem

**Q91** [M/J 2017/Q10]

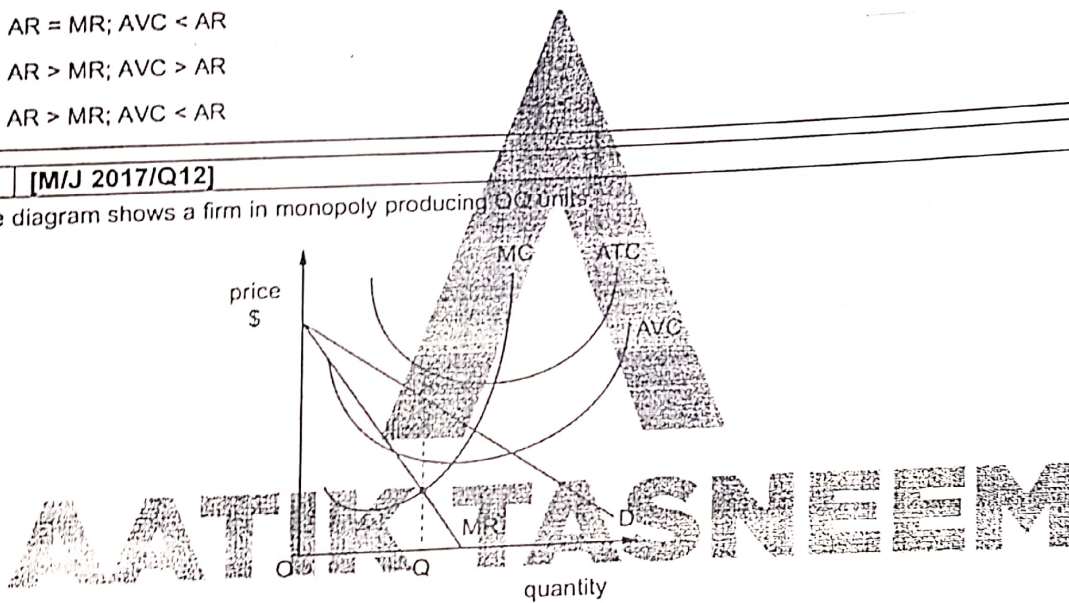
A firm in monopolistic competition that is producing at its profit maximising output is making a loss in the short run.

For it to continue in production, what must be correct about its average revenue (AR), marginal revenue (MR) and average variable cost (AVC)?

- A  $AR = MR; AVC > AR$
- B  $AR = MR; AVC < AR$
- C  $AR > MR; AVC > AR$
- D  $AR > MR; AVC < AR$

**Q92** [M/J 2017/Q12]

The diagram shows a firm in monopoly producing  $Q_0$  units.

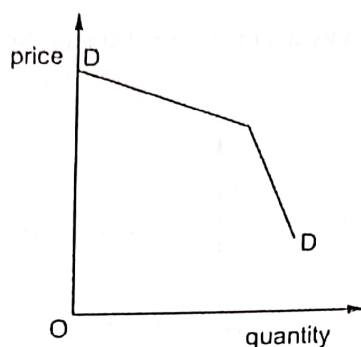


Which outcome can be observed in the diagram?

- A loss minimisation
- B profit satisfying
- C revenue maximisation
- D unit cost minimisation

**Q93** [M/J 2017/Q13]

Which feature of oligopoly is being assumed when the demand curve for an individual firm is as shown?



- A price discrimination
- B price leadership by the dominant firm
- C interdependence between firms
- D collusion between firms

**Q94** [O/N 2017/Q6]

Firms X and Y merge in a horizontal integration.

What must be true about the industry and the stage of production in which X and Y operate?

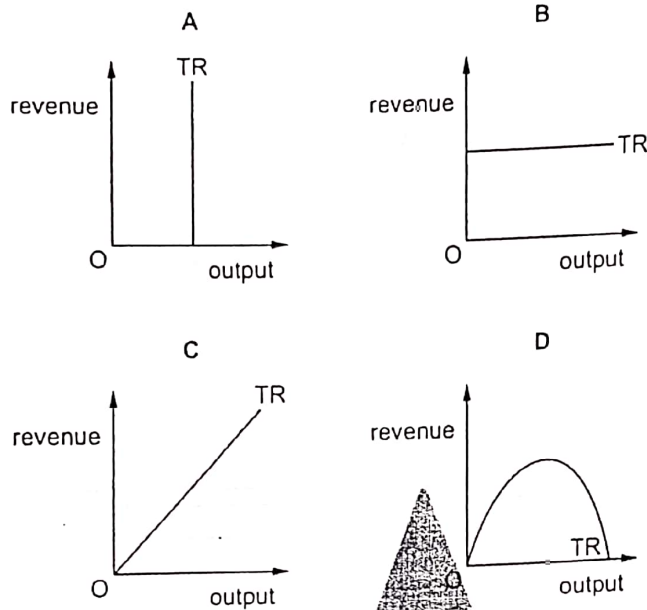
	industry	stage of production
A	different	different
B	different	same
C	same	different
D	same	same

**AATIK TASNEEM**



Q95 | [O/N 2017/Q8]

Which diagram shows the total revenue function for a firm in perfect competition?



Q96 | [O/N 2017/Q9]

Many public utilities can be described as 'natural' monopolies.

Which statement best describes the situation leading to a 'natural' monopoly?

- A There are high fixed costs and falling average costs over all outputs demanded.
- B There are legal restrictions on new entrants.
- C A single firm controls the supply of raw materials.
- D The firm has a patent on an essential process.

AATIK TASNEEM

Q97 [O/N 2017/Q10]

Increased advertising by a firm in an imperfectly competitive industry leads to an increase in demand for the industry's product but a fall in the firm's profits.

What could help to explain this?

- A Production is subject to diseconomies of scale.
- B Rival firms respond by increasing their advertising outlays.
- C The demand for the industry's product is price-inelastic.
- D The increase in demand for the firm's output is entirely at the expense of other firms.

Q98 [O/N 2017/Q11]

An industry consists of a dominant firm, which acts as a price leader, and a large number of small firms.

Which statement about the profit-maximising output of the small firms is correct?

- A Average cost is equal to average revenue.
- B Average cost is minimised.
- C Marginal cost is equal to price.
- D Marginal revenue is zero.

Q99 [O/N 2017/Q12]

There are two firms in an industry. Firm X faces a choice: it can either act independently or work with its rival. If it acts independently its profit could be \$900 a week but it could be only \$400 a week depending on what its rival does. If it works with its rival the joint profit of the two firms together would be \$1400, \$700 each. It has no knowledge of what the rival's policy will be.

Which concept describes this situation?

- A contestable market
- B kinked demand curve
- C principal agent problem
- D prisoner's dilemma

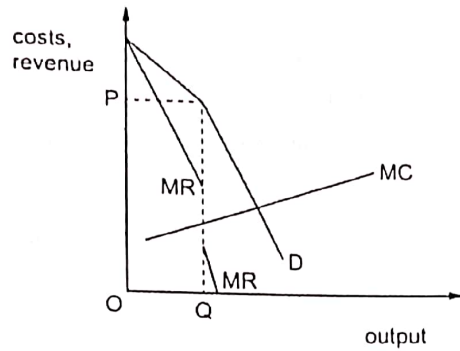
Q100 [O/N 2017/Q13]

What explains the kinked demand curve model of price rigidity in oligopoly?

- A collusion between all firms in the industry in the setting of prices
- B the assumption that a single firm acts as price leader for all firms in the industry
- C the individual firm's expectations about other firms' responses to its price changes
- D the presence of barriers to the entry of new firms into the industry

**Q101** [M/J 2018/Q7]

The diagram shows a firm's cost and revenue curves.



Which features are associated with the diagram?

- A economies of scale and allocative efficiency
- B interdependence and allocative efficiency
- C price rigidity and economies of scale
- D price rigidity and interdependence

**Q102** [M/J 2018/Q9]

Which feature of production would make it more likely that an industry is a contestable market?

- A advertising has established consumer loyalty
- B all firms in the industry share research and development
- C low fixed costs
- D market rivals aim to reduce product differentiation

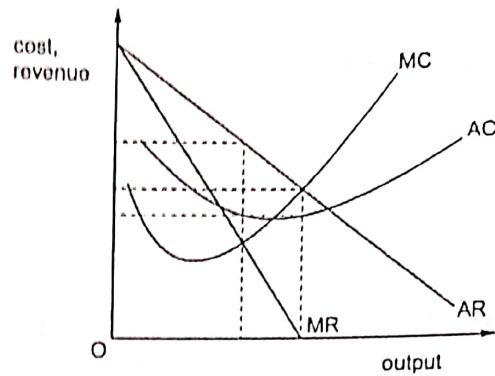
**Q103** [M/J 2018/Q10]

What is an example of backward vertical integration?

- A a bakery buying a wheat farm
- B a car manufacturer buying a car showroom
- C a vineyard buying an apple orchard
- D two rival supermarkets joining together

**Q104** | [M/J 2018/Q11]

The diagram shows a firm in imperfect competition. It changed its aim from profit maximising to sales revenue maximising.



Which type of profit was it making in each case?

	profit maximising	sales revenue maximising
A	normal profit	supernormal profit
B	subnormal profit	normal profit
C	supernormal profit	normal profit
D	supernormal profit	supernormal profit

**Q105** | [M/J 2018/Q12]

An airline sells seats at \$100 each three months before a flight, at \$150 each one month before the flight and at \$200 each the day before the flight.

What describes this type of market behaviour by the firm?

- A limit pricing to deter entry in an imperfect market
- B price discrimination by a monopoly supplier
- C price leadership by an oligopolist
- D pricing where price equals average cost under perfect competition

**Q106** | [M/J 2018/Q13]

What would not be an indication of a divergence between the interests of the managers and the shareholders of a company?

- A an emphasis on sales maximisation
- B management salaries which are linked to the long-run growth of the company's share price
- C the acceptance of 'X' inefficiency in the company's production process
- D the purchase of artwork for a company's headquarters

**Q107** | [O/N 2018/Q7]

What must be found in two markets for price discrimination to be profitable?

- A different price elasticities of demand
- B different price elasticities of supply
- C different producers
- D different products

**Q108** | **[O/N 2018/Q8]**

A firm maximises its profits by maximising its total revenue.

What does this imply?

- A Average fixed cost is zero.
- B Average revenue is equal to average cost.
- C Marginal cost is zero.
- D Marginal revenue is greater than marginal cost.

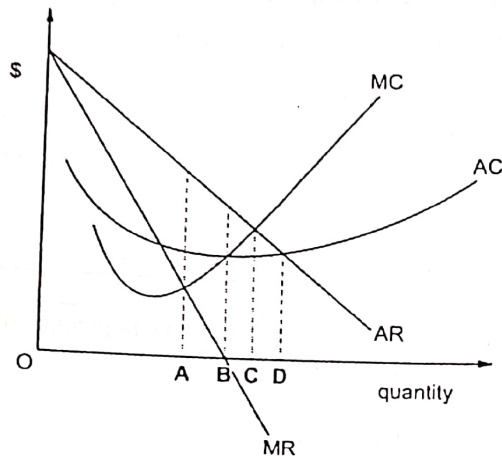


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Q109 [O/N 2018/Q10]

The diagram shows the costs and revenue for a firm in imperfect competition.

Which level of output would produce only a normal profit?



Q110 [O/N 2018/Q11]

What would be a reason why small firms do **not** survive?

- A In certain industries, there are economies of scale.
- B Small firms often supply personal services to consumers.
- C Small firms often supply products, the size of the market for which is limited.
- D Small owner-managed firms involve less risk.

Q111 [O/N 2018/Q12]

What is the implication of a dominant oligopoly following a limit-pricing policy?

- A The industry will be restricted to a target number of firms.
- B The industry will contract as rival oligopolists are eliminated.
- C The oligopolist will achieve a satisfying level of profit.
- D The oligopolist will sacrifice short-term profit for long-term profit.

Q112 [M/J 2019/Q9]

The market structure of an industry changed from being an oligopoly to monopolistic competition.

What is **most** likely to have increased?

- A an individual firm's ability to influence the market price
- B an individual firm's degree of interdependence in the market
- C the concentration ratio in the market
- D the number of firms in the market

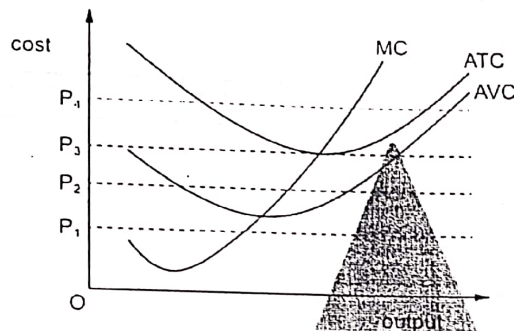
**Q113** [M/J 2019/Q11]

What is a characteristic of monopolistic competition?

- A abnormal profits in the long run
- B advertising supporting product differentiation
- C all firms charge the same price
- D barriers to entry are high

**Q114** [M/J 2019/Q12]

The diagram shows the marginal cost (MC), average variable cost (AVC) and average total cost (ATC) curves of a profit maximising firm in a perfectly competitive market.



Which market price would mean the firm would operate in the short run but not in the long run?

- A  $P_1$
- B  $P_2$
- C  $P_3$
- D  $P_1$

**Q115** [O/N 2019/Q9]

In which type of market structure are commercial banks usually found?

- A perfect competition, because they all link their interest rates to that of the central bank
- B perfect competition, because they offer identical products and services
- C monopolistic competition, because a competitive market prevents them making excess profits
- D oligopoly, because they are affected by the actions of other banks

**Q116** [O/N 2019/Q10]

What is a condition for operating a successful cartel?

- A a large number of firms in the industry
- B each firm has a differentiated product
- C low barriers of entry to the industry
- D strictly enforced production quotas

**Q117** [O/N 2019/Q11]

Which assumption is essential for a market to be contestable?

- A The market is supplied by a large number of firms.
- B Firms are free to enter and leave the market.
- C Firms cannot earn abnormal profits in the short run.
- D Firms produce differentiated goods.

Q118 | [O/N 2019/Q12]

What is generally associated with the principal-agent problem?

- A Directors prefer company growth to greater shareholder dividends.
- B Managers ignore workers' concerns about safety in the workplace.
- C Shareholders determine the price of products.
- D Workers go on strike against managers' reorganisation plans.



AATIK TASNEEM



# A2 – ECONOMICS (9708)

**MICRO**

**CHAPTER 3**

**Market Structures**

**ANSWERS**

## TOPIC 1: MARKET STRUCTURES

Q1 | C

These are part of the assumptions of perfect competition and monopolistic competition. Only option C has the correct pair. In perfect competition there is freedom of entry and exit whereas in monopolistic there are differentiated products.

[M/J 2008/Q9]

Q2 | D

When perfect competition turns into a monopoly it reduces the output and increases the prices.

**Common Mistake:** Some students got confused with the part "Marginal cost curve of the monopolist is identical to the supply curve of the perfectly competitive industry" This was just telling that the marginal cost remained at its place and there was no change in the MC.

[M/J 2008/Q10]

Q3 | D

Price discrimination is when a firm charges two different prices in two different set of markets. This allows companies to turn consumer surplus into producer surplus by charging higher prices to specific consumers.

[M/J 2008/Q11]

Q4 | C

Perfectly competitive markets and contestable market share the feature of free entry and exit. Option A & D are only true in perfect competition but not required in a contestable market. Option B is irrelevant.

**Key Point:** A contestable market is in which the existing firm makes only normal profit in the long-run, as it cannot set a price higher than average cost without attracting entry, this is because of the absence of barriers to entry and sunk costs. There is freedom of entry and exit.

[O/N 2008/Q9]

Q5 | D

Collusion is when firms agree to work together. When products are homogenous it is easy to collude because the production processes, the cost structures are almost the same and it is easy to keep a check on all the firms. Option A, B & C all make collusion difficult. As if there are low barriers new firms will enter and collusion will break. If there are many firms the same problem will occur. If the technology keeps on changing only the firm that is able to adapt will survive.

[O/N 2008/Q10]

Q6 | C

If this was perfect competition the firm would be operation at a point where the demand and supply intersected that is at point V. As  $AR = D$  and  $MC = S$ . Since now the market has become a monopoly it would be charging price OW and reduce the quantity to OT. Hence the area lost would be triangle XVY.

[O/N 2008/Q11]

Q7 | C

Since MR is half of the slope of AR if we draw it on the diagram we can see that price would be at a high point. When the monopolist is required to adopt marginal cost pricing that means that  $P = MC$  or where  $MC = AR$  since AR equals price. On this point the price is low and the output is higher.

[O/N 2008/Q12]

Q8 | D

To check the price of quota we need to see that how much profit X was making by producing 200 units and he would ask for more than the profit for it to be profitable. Similarly Y would be willing to pay only that amount which will generate profit for Y otherwise there is not benefit from buying the quota.

$$\text{Profit of X} = \$10 - \$9 = 1 \times 200 = \$200$$

$$\text{Profit of Y} = \$10 - \$7 = 3 \times 200 = \$600$$

Hence the deal would only be beneficial for both parties if it is greater than \$200 but below \$600. As any price below \$200 won't be acceptable to X and any price above \$600 won't be acceptable to Y.

[O/N 2008/Q13]

Q9 | D

Equal proportionate increase in TR suggests that the firm is a price taker and faces a perfectly elastic demand curve. Option A & B are incorrect because in unitary there is no change in revenue. In Option C the quantity cannot vary.

**Common Mistake:** Some students choose option A thinking that in unitary there is a equal proportionate change in demand, but in that the price also varies. It was clearly written that nothing else changes except the quantity and that is only possible if the demand curve is perfectly elastic.

[M/J 2009/Q7]

Q10 | B

If the government fixes the price at OP that means that the firm becomes a price taker and  $P = MR = AR$ . Hence a point where  $MR = MC$  which is "OK" would be the quantity produced.

**Common Mistake:** Some students choose option OM thinking that  $P = AR$ . This was incorrect because when the government fixes the price the firm automatically becomes a price taker and hence the MR needs to change.

[M/J 2009/Q8]

Q11 | B

Product differentiation does not exist in perfect competition it exists in monopolistic competition. Option A & D are not relevant to either of the two structures. Option C is true for both market structures in the short-run.

[M/J 2009/Q9]

Q12 | B

A contestable market is characterized by 'costless entry and exit'. Option A, C & D are not required for a market to become contestable.

[M/J 2009/Q10]

Q13 | C

The graph indicates that the firm in question is large relative to the size of industry, but there is room for other firms too.

[M/J 2009/Q11]

Q14 | D

The short-run condition is that the firms should at least cover its AVC. Meaning the Price should be equal or greater than AVC.  $P \geq AVC$ . Hence if price falls below AVC the firm will stop. Note  $P = AR$ .

[M/J 2009/Q12]

Q15 | B

Profit per unit is  $AR - AC$  at the equilibrium quantity Q. Hence it is JK.

**Key Point:** If the question would have asked total profit we would have multiplied JK with OM.

[M/J 2009/Q13]

Q16 | C

When the market was in perfect competition the area above the LRMC and between the  $AR = D$  was the consumer surplus. However after it was made into a monopoly the price is now  $OX$ . Hence the area lost in consumer surplus is  $XYZT$ .

[O/N 2009/Q9]

Q17 | B

When the demand is zero it means that it is perfectly inelastic. Hence a 5% increase in price will lead to a 5% increase in revenue. This can be checked through an example:

Let's Assume initially the price was \$10 and quantity sold was 20 which generated a revenue of \$200. Now the price increases by 5% which makes it \$10.5 and the quantity is still 20 because of the perfectly inelastic demand which makes the revenue \$210. The percentage increase in revenue is 5%  $(10/200) * 100 = 5\%$

Before:  $\$10 \times 20 = \$200$

After:  $\$10.5 \times 20 = \$210$

[O/N 2009/Q10]

Q18 | C

The monopolist would charge a price which is exactly  $P_e$  to prevent competition from entering and since  $Price = AR$  it will produce output  $C$  where  $P_e$  cuts the  $AR$ .

**Common Mistake:** Some students got confused and choose option B because this is the point where  $MC = MR$ . However the statement said the firm wants to prevent other firms from entering, if  $MC = MR$  price was charged this would have led to a price higher than  $P_e$  which was not acceptable.

[O/N 2009/Q11]

Q19 | D

In the short-run the price would be  $OY$  since the variable cost would be covered. However in the long-run the firm will shut-down because it can't cover its fixed costs.

**Key Point:** The rule of continuity is that,

1. Short-run: You should be able to cover the variable cost
2. Long-run: You should be able to cover the variable and the fixed cost.

[O/N 2009/Q12]

Q20 | C

**Effect on Production:** Since there is a production quota the units in production will stay the same hence the effect on production will be unchanged.

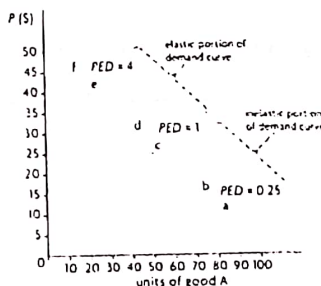
**Effect on Total Profits:** The total profits will increase because of economies of scale, as some firms might be more efficient than others as the firms that would buy the quota will get economies of scale hence pushing their profits upwards.

[O/N 2009/Q13]

Q21 | D

On a straight line demand curve the mid-point is exactly equal to 1. Above the mid-point is elastic which means greater than 1. Below the mid-point is inelastic which is below 1.

**Key Point:** Since the  $AR$  is the demand curve.



[M/J 2010/Q8]

Q22 | A

Ease of entry and exit is a distinguishing feature of contestable markets

[M/J 2010/Q9]

Q23 | D

The decision about continuity is taken on two factors:

1. Short-run:  $P \geq AVC$
2. Long-run:  $P \geq AC [AVC + AFC]$

Hence in this case Price is greater than  $AVC [1.75 > 1.70]$  so should keep the production in short-run. However price is less than  $AC [1.75 < 1.70 + 1.59]$  hence should discontinue in the long-run.

[M/J 2010/Q10]

Q24 | C

Whenever the firm cheats the resulting benefit is the new profit minus the old profit.

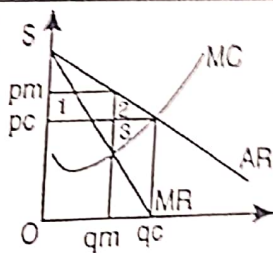
New Profit area: PHJL

Old Profit area: PGNM

Net Increase: PHJL – PGNM

[M/J 2010/Q11]

Q25 | D



When price increases from  $P_c$  to  $P_m$  it will lead to a fall in consumer surplus by area 1 & 2. Rectangle 1 shows transfer of consumer surplus to producers, while triangle 2 is part of dead-weight loss, hence options A, B & C are incorrect.

**Key Point:**

1. Always remember that whenever a market goes from being competitive the prices increase and the quantity declines.
2. Perfect competition is operating at point where  $MC = P$  (AR). Hence when it becomes monopoly the prices increase and the quantity declines.

[M/J 2010/Q12]

Q26 | A

In contestable markets since entry and exit is easy the firm tends to produce at a point where it earns just enough profit that deters the entry of new firms. Option B is incorrect because a perfectly competitive firm faces infinite elastic demand. Option C is incorrect because if it was looking to maximize profits it would be operating at a point where  $MC = MR$ . Option D is incorrect because if it was looking to maximize sales revenue then it would be operating at a point where  $MR = 0$ .

[O/N 2010/Q9]

Q27 | A

Firms tend to acquire consumer surplus by using price discrimination. As when it sells the same output at two different prices in two different markets this are able to transform some part of consumer surplus into producer surplus.

**Key Point:**

There are two main ways to convert producer surplus into consumer surplus:

1. Form a monopoly
2. Price discrimination.

[O/N 2010/Q10]

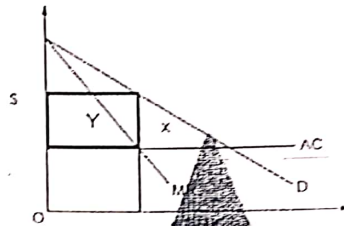
Q28 | C

Since the marginal revenue is less than the marginal cost the firm will cut back on production to maximize profits, as profit maximization takes place on the point where  $MC = MR$ . The price will remain unchanged because the firm is a price taker and has no control over price. [O/N 2010/Q11]

Q29 | C

This was the part of consumer surplus that is now not available to the market hence the dead-weight loss. Option A is irrelevant. Option B is incorrect X shows only part of the consumer surplus lost and not the complete consumer surplus. Option D is incorrect because transfer earnings are part of labor market.

**Common Mistake:** Some students made a mistake and choose option B thinking that consumer surplus is going down, however the complete loss in consumer surplus is area X + area Y



[O/N 2010/Q12]

Q30 | B

In order to calculate the tax revenue we need to know the number of units. A 10% tax will increase the price by 10% because when the supply is infinite elastic price rises by the amount of tax.

$$PED = \frac{\% \text{ Change in } Q_d}{\% \text{ Change in Price}}$$

$$-1.5 = \frac{X\%}{10\%}$$

Hence the quantity falls by 15%. Which makes the new quantity 15% less of 1000 = 850. Since the tax is 10% of the price which makes the tax amount \$0.1 per unit. Hence  $850 \times 0.1 = \$85$

[M/J 2011/Q7]

Q31 | D

In a contestable market the entry and exit is free, hence firms tend to charge low prices to prevent competition from entering. Therefore, producers will likely lose profits and consumers are likely going to gain from lower prices.

[M/J 2011/Q8]

Q32 | C

In price discrimination the firms charges two different prices to two different set of consumers. Hence the one that has an inelastic demand pays more and the one that has an elastic demand pays less.

[M/J 2011/Q9]

Q33 | C

The firm will monopolistic power tends to exploit consumer by charging a higher price. Option A & B are contrary to the likely impact while D is irrelevant.

[M/J 2011/Q11]

Q34 | A

Purchaser of Quota: The purchaser will gain by producing and selling additional quantity of milk.  
Sellers of Quota: Sellers of quota will gain from selling any unused amount of quota which otherwise would be wasted.

[O/N 2011/Q3]

Q35 | A

Price discrimination is done by monopolies that have control over the market and can separate the two markets to charge two different prices to two different set of consumers. The baker is less likely to do that because charging different prices for the same product is difficult for them. Whereas cinemas can charge more for rush hours. Hairdressing salon can charge more for signature haircuts. A restaurant can charge more in peak hours or reservations.

[O/N 2011/Q10]

Q36 | D

Units cost minimizing is done on point X where the AC is at its minimum. Normal profit is made then  $AC = AR$  at point Z. Hence a movement from point X to Z is the answer.

[O/N 2011/Q11]

Q37 | D

Significant barriers would help collusion as it would allow the firms to charge high prices without the fear of losing market share to the new entrants. Other options will just make collusion more difficult. Option A will make it difficult because If there are more firms it would make activities of policing difficult and chances of cheating will increase. Option B will make it difficult to calculate one prices since products are not the same. Option C will make it difficult as if technology keeps on changing one firm might become more efficient than other and might want more market share as opposed to colluding to gain profits.

[O/N 2011/Q12]

Q38 | B

The concentration ratio tells what percentage of the market do the top firms hold. Higher the concentration ratio the more oligopolistic the industry becomes. Other options are not related to concentration ratio.

[M/J 2012/Q10]

Q39 | C

The MC shows the supply curve in a perfectly competitive market.  
 1. Short-run Supply Curve: The part of the MC above AVC. [V to Z]  
 2. Long-run Supply Curve: The part of the MC above ATC or AC. [W to Z]

[M/J 2012/Q11]

Q40 | B

Since the marginal revenue is less than the marginal cost the firm will cut back on production to maximize profits, as profit maximization takes place on the point where  $MC = MR$ . The price will remain unchanged because the firm is a price taker and has no control over price.

[M/J 2012/Q12]

Q41 | D

Efficient allocation of resources indicate allocative efficiency, with is  $P = MC$ . Hence point OZ.

[M/J 2012/Q16]

Q42 | B

Since the marginal cost is also the supply curve hence an amount of specific tax will cause an increase in the marginal cost by the amount of the tax, however price rises by less than the amount of tax and output decreases. Thus Option A, C & D are incorrect.

[O/N 2012/Q7]

Q43 | A

The concentration ratio tells what percentage of the market do the top firms hold. Higher the concentration ratio the more oligopolistic the industry becomes.

Concentration Ratio =  $(\text{Sales of Top firms} / \text{Total Sales}) \times 100$

[O/N 2012/Q11]

Q44 | B

This practice of charging different customers different prices is called price discrimination and leads to a fall in consumer surplus. However the cost of marketing will also increase as now the firm will have to spend more on marketing its products in different markets.

[O/N 2012/Q12]

Q45 | C

A profit maximizing firm would be producing at a point where  $MC = MR$  [Point W]  
 If the price is equal to the marginal cost it would be where  $MC = AR (P)$  [Point Y]  
 Hence WY.

[O/N 2012/Q13]

Q46 | C

Taking into account the reactions of its competitors before deciding to cut prices is a trait of interdependence and exists in oligopoly.

[M/J 2013/Q1]

Q47 | B

$TR = P \times Q$ . Hence since the PED is perfectly inelastic thus a 5% increase in Price with Q remaining unchanged will increase the TR by 5%.

[M/J 2013/Q10]

Q48 | D

When the objective shifts from sales revenue maximization to profit maximization the prices increase and the output declines.

Winners: These would be the shareholders as the profits will increase

Losers: Customers would be losers as now they have to pay higher prices than before.

[M/J 2013/Q11]

Q49 | B

When the markets are stable it makes cartels to operate effectively as cost structures would remain stable hence making it easier to operate a cartel. Other options just make it difficult.

[M/J 2013/Q13]

Q50 | B

Since point G lies above the minimum quantities of capital and labor required to produce 100 units of output, therefore, indicates X inefficiency. Option A & B are related to the costs. Option C is irrelevant.

[M/J 2013/Q14]

Q51 | B

When the objective shifts from profit maximization to sales revenue maximization the prices decrease and the output increases.

Winners: Customers as now they enjoy lower prices than before.

Losers: Shareholders as they will get less return in their investments.

[O/N 2013/Q10]

Q52 | D

These are part of the assumptions of perfect competition and monopolistic competition. Only option D has the correct pair. In perfect competition there is freedom of entry and exit whereas in monopolistic there are differentiated products.

[O/N 2013/Q11]

Q53 | A

Since the price is fixed  $P = MR = AR$ . Hence the firm would be operating at OK if the government fixes the price at P.

[O/N 2013/Q12]

Q54 | A

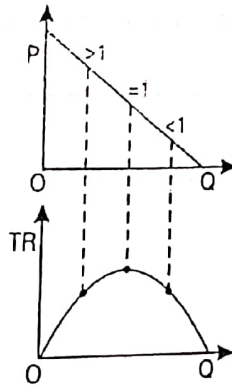
Fluctuation in output has more impact on firm's total revenue than its total cost.

[O/N 2013/Q13]



**Q55 | C**

On a straight line demand curve the upper half is elastic hence when prices decline the total revenue increases, however after the mid-point the PED is inelastic when the prices decline the total revenue declines. Exactly at the midpoint since the revenue is at it max where  $PED = 1$ .



[M/J 2014/Q11]

**Q56 | B**

Sales revenue maximization is done where the  $MR = 0$ . Hence at Point B.

[M/J 2014/Q12]

**Q57 | C**

Since this was without a merger and the company relied on its internal resources this was internal growth and since they are switching to a different industry this is diversification.

[O/N 2014/Q9]

**Q58 | B**

$TR = P \times Q$ . Hence since the PED is perfectly inelastic, thus a 5% decrease in Price with Q remaining unchanged will decrease the TR by 5%.

[O/N 2014/Q10]

**Q59 | B**

The area of profit would be  $XYWT$ . As the monopolist would charge price (AR)  $OX$ . The AC is  $OT$ . Hence the profit per unit would be  $XT$  ( $OX - OT$ ) multiplied by the quantity  $OS$ .

[O/N 2014/Q11]

**Q60 | B**

When firms have accurate information about each other output levels this will make cheating difficult. Option A, C & D will make collusion difficult.

[O/N 2014/Q12]

**Q61 | C**

When the marginal profit is zero the total profit is at its maximum.

[O/N 2014/Q13]

**Q62 | A**

Firms tend to acquire consumer surplus by using price discrimination. As when it sells the same output at two different prices in two different markets this are able to transform some part of consumer surplus into producer surplus.

**Key Point:**

There are two main ways to convert producer surplus into consumer surplus:

1. Form a monopoly
2. Price discrimination.

[O/N 2014/Q14]

**Q63 | C**

The total production will remain the same as the amount produced is unchanged. However due to more production some firms will get economies of scale which would increase their profits hence leading to overall profits to increase.

[O/N 2014/Q15]

Q64 | C

A fall in the number of fines and an increase in amount of fines tell that it was necessary to increase fines amount to deter cartel behavior.

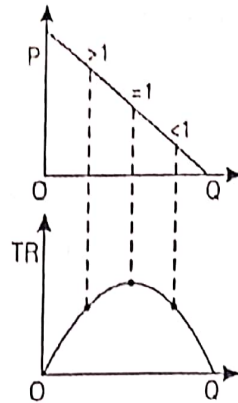
[O/N 2014/Q19]



AATIK TASNEEM

Q65 | C

On a straight line demand curve the upper half is elastic hence when prices decline the total revenue increases, however after the mid-point the PED is inelastic when the prices decline the total revenue declines. Exactly at the midpoint since the revenue is at it max where  $PED = 1$ .



[M/J 2015/Q10]

Q66 | C

This is only possible in oligopolies as every firm is large enough to influence the price. Firms in monopolistic competition sell only differentiated product. Firms that are monopolies sell a unique product. In perfect competition firms cannot influence the price.

[M/J 2015/Q11]

Q67 | C

When the  $MR = 0$  the firm aims to maximize revenue.

[M/J 2015/Q12]

Q68 | B

The decision about continuity is taken on two factors:

1. Short-run:  $P \geq AVC$
2. Long-run:  $P \geq AC [AVC + AFC]$

Hence in this case Price is less than  $AVC$  ( $70 < 1.75$ ) so should close the production immediately because not even the variable cost is being covered.

[M/J 2015/Q13]

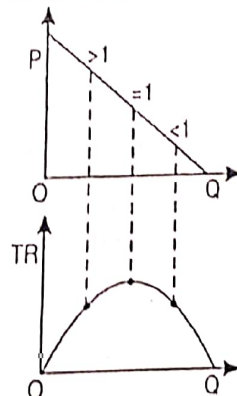
Q69 | C

Internal growth is when the firm grows relying on its own resources without joining hands with other firms. Hence option C.

[O/N 2015/Q10]

Q70 | C

On a straight line demand curve the upper half is elastic hence when prices decline the total revenue increases, however after the mid-point the PED is inelastic when the prices decline the total revenue declines. Exactly at the midpoint since the revenue is at it max where  $PED = 1$ .



Hence at the mid-point the revenue is maximized.

[O/N 2015/Q11]

Q71 | B

Concentration ratio measures the percentage of market share held by top few firms. The lower the value of CR the higher is the industry's competitiveness.

[O/N 2015/Q12]

Q72 | B

If the government fixes the price at OP that means that the firm becomes a price taker and  $P = MR = AR$ . Hence a point where  $MR = MC$  which is "OK" would be the quantity produced.

**Common Mistake:** Some students choose option OM thinking that  $P = AR$ . This was incorrect because when the government fixes the price the firms automatically becomes a price taker and hence the MR needs to change.

[O/N 2015/Q13]

Q73 | B

This practice of charging different customers different prices is called price discrimination and leads to a fall in consumer surplus. However the cost of marketing will also increase as now the firm will have to spend more on marketing its products in different markets.

[O/N 2015/Q14]

Q74 | C

Whenever the perfectly competitive market turns into a monopoly, the profits increase and the efficiency declines.

[O/N 2015/Q15]

Q75 | C

Option A, B & D are all assumptions of the kink demand curve model. Option C is incorrect because kink-demand curve does not explain how a firm attains equilibrium, instead it explains why they maintain their prices.

[M/J 2016/Q6]

Q76 | C

At profit maximization we will take the profit on Q1.  
At sales revenue maximization we will take profit on Q2.

Original Profit:  $P_1HGF$   
Final Profit:  $P_2KLF$

[M/J 2016/Q7]

Q77 | B

When the demand curve is inelastic a fall in price leads to reduced revenue.

[M/J 2016/Q8]

Q78 | A

1. Since the demand curve is elastic it shows monopolistic competition  
2.  $AC = AR$  making it normal profit.

[M/J 2016/Q9]

Q79 | C

In order to eliminate competition the firm will tend to reduce prices, since it is a price maker.

**Common Mistake:** Some students choose option B, this was incorrect because it might be possible for a normal monopoly but not for a firm that wants to drive competition out.

[M/J 2016/Q11]

Q80 | A

Small firms are flexible in their production while large firms can benefit from marketing economies.

[M/J 2016/Q12]

Q81 | C

Principal-Agent Problem: This is a situation in which people (Principal) cannot be sure that those who act on their behalf (Agents) will act in their best interests, as a result of asymmetric information.  
 Example: In a public limited company the shareholders (principal) delegate the day-to-day activities to managers (agents) who act on their behalf. Hence there is a divorce between ownership and control. [M/J 2016/Q13]

Q82 | B

It will eliminate profit earned by other firms with which it had contracts. [O/N 2016/Q6]

Q83 | A

A contestable market because it is a market in which there is free entry and exit. This is indicated by street vendors entering the market. Perfect competition is incorrect because every firm has the same price but here the street vendors sell it at a cheaper rate. Option C & D are irrelevant. [O/N 2016/Q7]

Q84 | D

A contestable market is characterized by costless entry and exit from the industry. [O/N 2016/Q11]

Q85 | C

In an oligopolistic market the equilibrium is established where the MC cuts the broken part of MR. [O/N 2016/Q12]

Q86 | A

In the long-run both the firms make normal profits however the price in monopolistic is high and quantity is low as compared to perfect competition. In other words greater degree of excess capacity. Option B is incorrect because both earn normal profits. Option C is incorrect because perfect competition has larger number of firms. Option D is incorrect because in perfect competition the demand curve is perfectly elastic as compared to monopolistic which has a normal elastic demand curve. [O/N 2016/Q13]

Q87 | A

In the long-run a perfectly competitive firm will produce normal profits. These are created when the  $AC = AR = P$  or in other words at the minimum of the AC. [M/J 2017/Q6]

Q88 | A

Since the additional output can be sold at the same price, therefore it will result in the same proportionate increase in revenue. Hence this is when demand curve is horizontal as in the case of a perfectly competitive firm.

Option B is incorrect PED varies throughout its demand curve that brings proportionately difference changes in revenue. Option C is incorrect because it will leave revenue unchanged. Option D is incorrect because when  $PES = 0$  output cannot change. [M/J 2017/Q7]

Q89 | A

When the firm change their objective from profit maximization to sales revenue maximization. The output increases and the prices reduce.

1. Winners: Customers (As these people will get lower prices)
2. Losers: Shareholders (As the returns to shareholders will decline)

[M/J 2017/Q8]

Q90 | A

A small firm cannot produce a large quantity. Hence if there is a low minimum efficient scale of production then smaller firms will be able to achieve it quickly. Hence several these types of firms will exist.

Option B is incorrect because specialization and division of labor usually requires the businesses to be large. Option C is incorrect because diversification requires the company to be large. Option D is incorrect because principal-agent problem usually arises in large businesses where there is a difference in ownership and control which is not the case in small business.

[M/J 2017/Q9]

Q91 | D

Since it's the short-run the condition to keep the business open is that the  $P(AR)$  must be equal to greater than the  $AVC$ . Hence option A is correct because in a monopolistic competition the  $AR > MR$  and in order to stay in business  $AVC < P(AR)$ .

[M/J 2017/Q10]

Q92 | A

At this point the company is making a loss. However, it is reducing its losses as it is able to cover all the  $AVC$  and partially some  $AFC$ .

Option B is irrelevant. Option C is incorrect because revenue is maximized at a point where  $MR = 0$ . Option D is incorrect because cost per unit is minimized at a point where  $AC$  is at its lowest point.

[M/J 2017/Q12]

Q93 | C

A kink in the oligopoly shows interdependence. Hence option C is correct.

[M/J 2017/Q13]

Q94 | D

In horizontal integration the industry and the stage of production is the same.

**Key Point:**

1. Horizontal: Same Industry, Same Stage of Production
2. Vertical: Same Industry, Different Stage of Production
3. Conglomerate: Different Industry, Different Stage of Production

[O/N 2017/Q6]

Q95 | C

In perfect competition the Total Revenue is always rises at a constant rate. Hence option C.

[O/N 2017/Q8]

Q96 | A

Economies of scale is the source of a natural monopoly and high fixed costs results in higher economies of scale leading to a natural monopoly.

**Common Mistake:** Some students choose some other option thinking it applies to a monopoly as well like legal restrictions. It should be noted all the other features where of a normal monopoly only EOS is the feature of a natural monopoly.

[O/N 2017/Q9]

Q97 | B

It will increase the firm's costs but response by the rival firms will make it ineffective. All other options will lead to an increase in firms profits.

[O/N 2017/Q10]

Q98 | C

Price leadership takes place in oligopolies. Hence The leader decides the price and all the other firms just become price takers. Therefore in this case  $AR (P) = MC$ .

[O/N 2017/Q11]

Q99 | D

This is an example of game theory where the rival's move needs to be considered but the firm does not have knowledge of the rival's policy.

[O/N 2017/Q12]

Q100 | C

A kink-demand curve is made on the assumption of interdependence. Which means that individuals firm's expectations about other firm's responses to its price changes.

[O/N 2017/Q13]



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Q101 | D

The diagram drawn shows that model of an oligopoly. Hence option D is the only option that shows both the features of oligopoly of "Price Rigidity" and "Interdependence".

[M/J 2018/Q7]

Q102 | C

A contestable market is the in which the existing firm makes only normal profit in the long-run, as it cannot set a price higher than average cost without attracting entry, this is because of the absence of barriers to entry and sunk costs. Hence if the fixed cost is low the barriers to entry will drop therefore leading to more chances of firm entry and the market becoming more contestable.

[M/J 2018/Q9]

Q103 | A

In vertical backward integration the industry is the same but the stage of production is the previous one. Hence option A. Option B is vertical forward. Option C & D is horizontal integration.

**Key Point:**

1. Horizontal: Same Industry, Same Stage of Production
2. Vertical: Same Industry, Different Stage of Production
3. Conglomerate: Different Industry, Different Stage of Production

[M/J 2018/Q10]

Q104 | D

It was making supernormal in both cases.

Profit Maximization ( $MC = MR$ ): On this output the  $AR > AC$  (Supernormal Profit)  
Sales Revenue Maximization: On this output  $AR > AC$  (Supernormal Profit)

**Key Point:** Always remember to check profitability on any output we always take particular output and then check the  $AR$  vs  $AC$  on that quantity.

[M/J 2018/Q11]

Q105 | B

Setting difference prices after different stages is called price discrimination and it can only be done by monopoly suppliers.

[M/J 2018/Q12]

Q106 | B

A divergence occurs when one party gets something at the cost of the other. Option B is correct because linking management salaries to company's growth will let both parties gain out of it. Option A, C & D all benefit one party at the expense of the other.

[M/J 2018/Q13]

Q107 | A

There are several conditions of price discrimination:

1. Monopoly Power
2. Separate the two markets
3. Prevent Re-Sell
4. Different PEDs in different markets

Hence option A is correct.

[O/N 2018/Q7]

Q108 | C

Profit Maximization means to operate at a point where  $MC = MR$ .  
Revenue Maximization means to operate at point  $MR = 0$ .

Hence a point where  $MC = 0$  is where this firm be operating.

[O/N 2018/Q8]



Q109 | D

A firm earns normal profits where  $AC = AR(P)$ . Hence a point where AC curve cuts AR which is point D.

[O/N 2018/Q10]

Q110 | A

Presence of economies of scale will make small it difficult for small firms to match costs. Options B, C & D are all benefits to a small business that helps the business to survive.

[O/N 2018/Q11]

A  
AATIK TASNEEM

**TOPIC 1: ECONOMIC EFFICIENCY AND MARKET FAILURE**

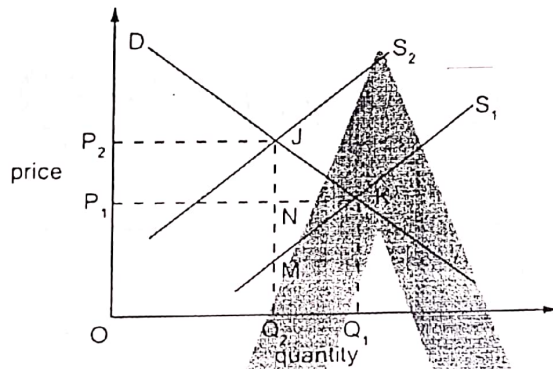
**Q1** [M/J 2008/Q1]

What will happen if a firm is subsidised by an amount equal to the external benefits that it confers on the rest of society?

- A Resource allocation will be improved.
- B The firm will produce less.
- C There will be a misallocation of resources.
- D There will be no effect upon production.

**Q2** [M/J 2008/Q12]

In the diagram the imposition of a tax on a commodity causes its supply curve to shift from  $S_1$  to  $S_2$ .



Which area measures the resulting deadweight loss?

- A  $P_1P_2JK$
- B  $JKQ_1Q_2$
- C  $JKM$
- D  $JKN$

**Q3** [M/J 2008/Q13]

A good gives rise to external costs and is produced under conditions of monopolistic competition.

Which statement must be true?

- A Output of the good is at the socially optimum level.
- B Output of the good is below the socially optimum level.
- C Private costs of production exceed social costs.
- D Social costs of production exceed private costs.

**Q4** [M/J 2008/Q15]

A government decides to privatise a state monopoly.

What should the government do to try to ensure that this will result in an improvement in efficiency?

- A allocate vouchers to all citizens entitling them to a share in the ownership of the monopoly
- B encourage competition
- C impose a maximum profit margin
- D privatise the monopoly as a going concern

Q5 [O/N 2008/Q1]

Which condition must be met for economic efficiency to be achieved?

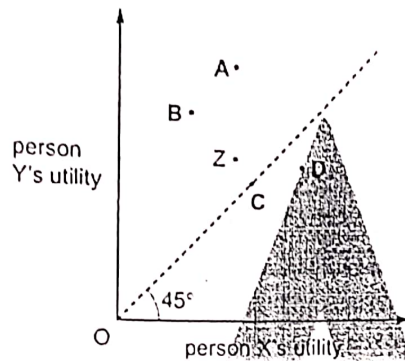
- A Marginal social costs are zero in the production of all goods.
- B Marginal social costs equal marginal social benefits in the production of all goods.
- C Marginal social benefits are at a maximum in the production of all goods.
- D Marginal social costs are at a minimum in the production of all goods.

Q6 [O/N 2008/Q2]

The diagram shows the levels of utility corresponding to different allocations of resources between two people.

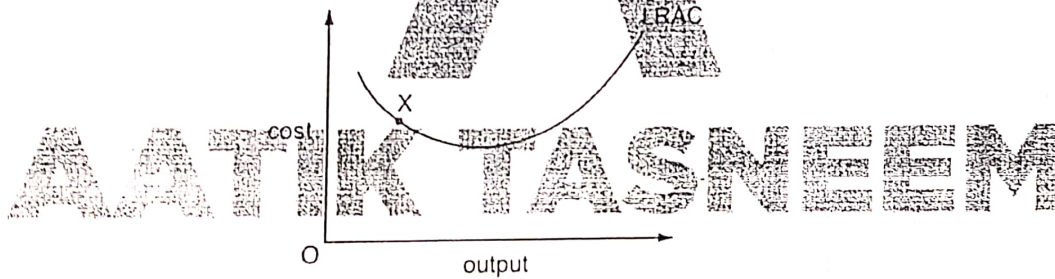
The initial allocation is Z.

Which reallocation of resources would definitely be more Pareto efficient?



Q7 [M/J 2009/Q1]

In the diagram, the firm is operating at point X on its long-run average cost curve.

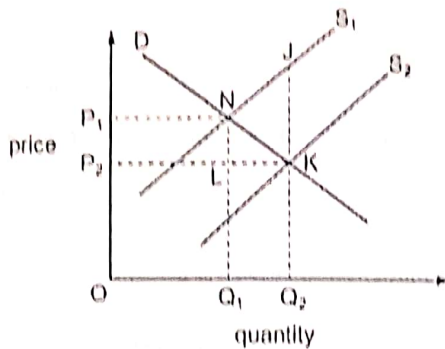


Which statement about the firm is correct?

- A It is operating at its optimal level of output.
- B It is operating below its cost-minimising level of output.
- C It is productively inefficient.
- D It could produce its current level of output at a lower cost.

**Q8** [M/J 2009/Q14]

In the diagram the introduction of a government subsidy causes an industry's supply curve to shift from  $S_1$  to  $S_2$ .



Which area measures the resulting deadweight loss to society?

- A  $P_1NKP_2$       B  $JKN$       C  $NLK$       D  $Q_1Q_2JN$

**Q9** [O/N 2009/Q14]

What could prevent a market economy achieving allocative efficiency?

- A disagreement among consumers over resource allocation
- B inequalities in the distribution of income and wealth
- C an inability to produce free goods
- D an inability to produce public goods

**Q10** [O/N 2009/Q30]

An economy is operating at a point on its production possibility curve.

What is true about the way the economy's resources are being used at this point?

	allocatively efficient	productively efficient	socially desirable
A	possibly	yes	yes
B	yes	possibly	possibly
C	possibly	yes	possibly
D	yes	possibly	yes

**Q11** [M/J 2010/Q30]

Which is a correct statement about efficiency?

- A Allocative efficiency occurs when marginal revenue equals marginal cost.
- B An economy is productively efficient when it is producing at a point on its production possibility curve.
- C An economy will improve its allocative efficiency when its production possibility curve moves outward.
- D Productive efficiency occurs when the prices of goods equal their marginal cost of production.

**Q12** [O/N 2010/Q1]

In an economy no one can be made better off without making others worse off.

What can be concluded from this?

- A All markets are perfectly competitive.
- B There are no externalities.
- C The economy is operating on its production possibility curve.
- D The distribution of income reflects what each individual deserves.

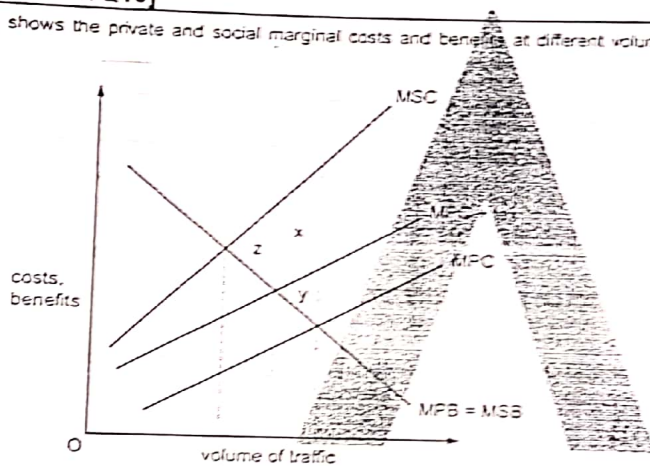
**Q13** [O/N 2010/Q14]

Which is not a policy designed to correct market failure?

- A competition policy
- B free inoculation against infectious diseases
- C minimum wage policy
- D regulations to limit river pollution

**Q14** [M/J 2011/Q10]

The diagram shows the private and social marginal costs and benefits at different volumes of traffic.



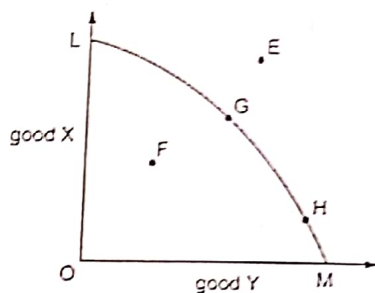
The imposition of a congestion tax raises the MPC curve to  $MPC + tax$ .

Which area measures the resulting reduction in the deadweight loss?

- A  $x + y$  only
- B  $x + y + z$
- C  $y$  only
- D  $z$  only

**Q15** [M/J 2011/Q30]

In the diagram, LM is an economy's production possibility curve.

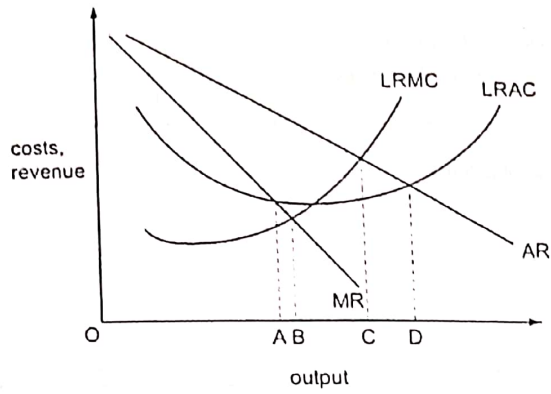


Which statement is correct?

- A E only is attainable.
- B F is economically efficient.
- C G may be economically efficient but is not productively efficient.
- D H is productively efficient but may not be economically efficient.

**Q16** [O/N 2011/Q2]

The diagram shows a firm's long-run cost and revenue curves.



At which level of output is the firm both allocatively and productively efficient?

- A OA      B OB      C OC      D OD

**Q17** [O/N 2011/Q13]

What would economists agree should be the aim of any health care system?

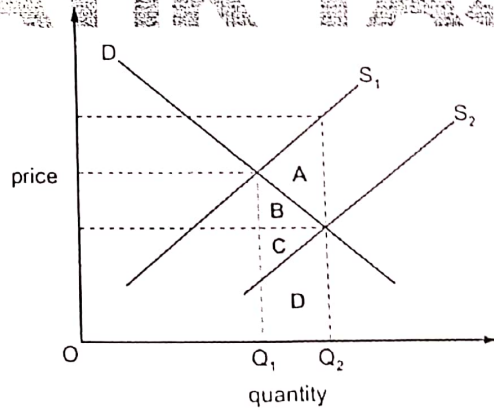
- A to meet all the health care demands of the population
- B to provide every patient with the latest and best available treatment
- C to provide free medical treatment
- D to secure the maximum health gain from the resources available

**Q18** [O/N 2011/Q15]

The diagram shows the supply and demand curves of a commodity.

A government subsidy causes the supply curve to shift from  $S_1$  to  $S_2$ .

Which area measures the difference between the cost to the economy of producing the resulting increase in output ( $Q_1 - Q_2$ ) and the value consumers place on this increase in output?



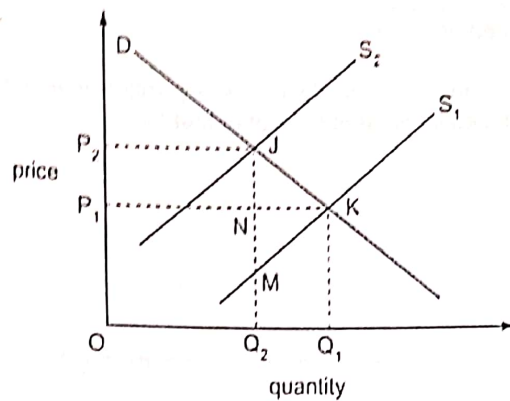
**Q19** [M/J 2012/Q1]

When is economic efficiency achieved in an economy?

- A when nobody can become better off without somebody else becoming worse off
- B when the economy is operating at its natural rate of unemployment
- C when the level of social costs is minimised
- D when the rate of economic growth is maximised

Q20 [M/J 2012/Q14]

In the diagram the imposition of a tax on a commodity causes its supply curve to shift from  $S_1$  to  $S_2$ .



Which area measures the resulting deadweight loss?

- A  $P_1P_2JK$       B  $JKQ_1Q_2$       C  $JKM$       D  $JKN$

Q21 [M/J 2012/Q15]

A good gives rise to external benefits and is produced under conditions of imperfect competition.

Which statement must be true?

- A Benefits to consumers exceed the benefits to society.  
 B Firms producing the good will make a loss.  
 C Output of the good is below the socially optimum level.  
 D Social costs of production exceed private costs.

Q22 [O/N 2012/Q1]

What will happen if a firm is subsidised by an amount equal to the external benefits that it confers on the rest of society?

- A There will be no effect upon production.  
 B The firm will produce less.  
 C There will be a misallocation of resources.  
 D Resource allocation will be improved.

Q23 [O/N 2012/Q14]

All firms in an economy produce at levels of output where price and marginal private cost are equal.

Why might this not be sufficient to ensure that allocative efficiency is achieved?

- A a small number of buyers and sellers  
 B differences in consumers' preferences  
 C product differentiation  
 D the presence of externalities

Q24 [M/J 2013/Q12]

A firm operates in a perfectly competitive market.

Which relationship between the firm's cost and revenue describes a position where allocative efficiency would be improved if the firm reduces its present level of output?

- A  $P = MR > MC$
- B  $P = MR < MC$
- C  $P > MR = MC$
- D  $P > MR > MC$

Q25 [M/J 2013/Q16]

The diagram shows the market supply and demand curves for corn.



What should a government do if it is to maintain a minimum price of  $P_2$ ?

- A buy quantity KR
- B buy quantity LR
- C sell quantity KL
- D sell quantity OL

Q26 [O/N 2013/Q1]

What is the purpose of trying to achieve economic efficiency?

- A to ensure that economic decisions are made equitably
- B to ensure that firms are internationally competitive
- C to ensure that firms maximise their profit levels
- D to ensure that the economy does not waste scarce resources

Q27 [O/N 2013/Q16]

The firms in a perfectly competitive industry combine to form a monopoly.

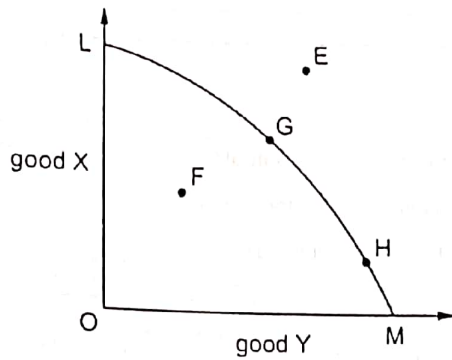
What would prevent a deadweight welfare loss resulting?

- A The government imposes an indirect tax on the monopolist's product.
- B The government requires the monopolist to charge a price equal to average cost.
- C The monopolist adopts marginal cost pricing.
- D The monopolist charges the same price to all consumers.



**Q28** [M/J 2014/Q1]

In the diagram, LM is an economy's production possibility curve.



Which statement must be correct?

- A F is productively inefficient.
- B G and H are productively efficient but economically inefficient.
- C Only E is economically efficient.
- D Only G is productively efficient.

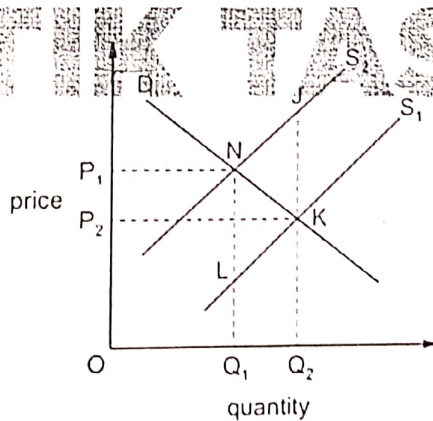
**Q29** [M/J 2014/Q14]

Which is **not** a policy designed to correct market failure?

- A competition policy
- B free inoculation against infectious diseases
- C minimum wage policy
- D regulations to limit river pollution

**Q30** [M/J 2014/Q15]

In the diagram the imposition of a specific tax causes an industry's supply curve to shift from  $S_1$  to  $S_2$ .



Which area measures the resulting deadweight loss to society given that there was no market failure initially?

- A NLK
- B JKN
- C  $P_1NKP_2$
- D  $Q_1Q_2JN$

**Q31** [O/N 2014/Q1]

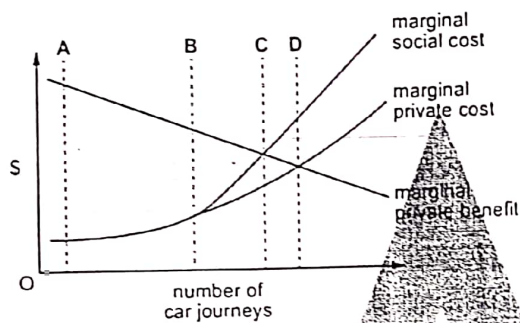
Which condition defines productive efficiency?

- A All factors of production are fully employed.
- B All firms are producing at their profit-maximising levels of output.
- C There are no further opportunities for substituting capital for labour.
- D The output of all goods is produced at the lowest possible cost.

**Q32** [O/N 2014/Q18]

The diagram shows the private and social costs and the private benefits that arise as the number of car journeys into a city centre increases.

In the absence of any external benefits, which volume of traffic would maximise the community's welfare if entry could be restricted through the issue of permits?



**Q33** [M/J 2015/Q1]

What need not pose a potential threat to allocative efficiency in a market economy?

- A externalities
- B differentiated products
- C monopolistic elements
- D perfect knowledge

**Q34** [M/J 2015/Q16]

A country's steel producers are members of a cartel. Each member is allocated a production quota and initially produces the maximum allowed under its quota.

What will be the effect on productive efficiency and on the industry's profits if the producers are allowed to trade the quotas amongst themselves?

	effect on productive efficiency	effect on profits
A	improvement	increase
B	improvement	no change
C	no change	increase
D	no change	no change

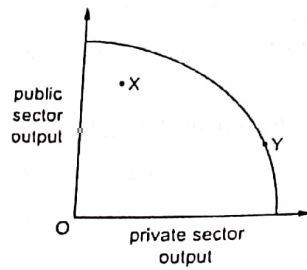
**Q35** [M/J 2015/Q17]

Which government policy would not be classified as regulation?

- A bans on heroin and cocaine consumption
- B compulsory wearing of seatbelts in cars and coaches
- C licences for the extraction of water from lakes and rivers
- D taxation of cigarettes and tobacco products

**Q36** [O/N 2015/Q1]

The diagram shows the production possibility curve for a successful transition economy that moves from point X to point Y over time.



During the transition process the population of the country expressed a strong preference for increased privatisation.

What happens to economic efficiency as a result of the transition from point X to point Y?

	productive efficiency	allocative efficiency
A	increases	decreases
B	increases	increases
C	unchanged	decreases
D	unchanged	unchanged

**Q37** [O/N 2015/Q16]

Which government microeconomic policy is not usually aimed at correcting allocative inefficiency in an economy?

- A anti-monopoly legislation
- B congestion charges for the use of roads in cities
- C pollution taxes imposed on various firms
- D subsidies for agricultural producers

**Q38** [M/J 2016/Q1]

What action by a firm is most likely to raise its dynamic efficiency?

- A distributing all its current profit to its existing shareholders
- B maximising the labour productivity of its current workers
- C minimising the average cost of producing its current output
- D retaining its current profit for product research and development

**Q39** [M/J 2016/Q2]

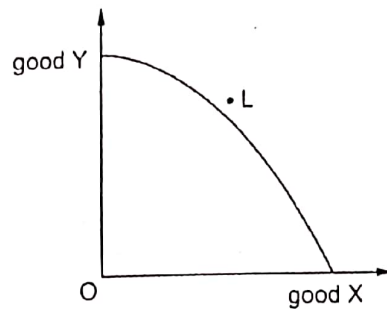
The current distribution of goods between two individuals in a two-person economy with given technology and resources is at point X.

According to the Pareto criterion, which point would definitely indicate increased allocative efficiency?



Q49 [M/J 2017/Q3]

The diagram shows the production possibility curve for an economy.



What might make it possible for consumers in this economy to consume the combination of goods X and Y indicated by the point L?

- A a reduction in unemployment
- B the achievement of productive efficiency
- C the elimination of a monopoly in the production of good X
- D trade with other economies

Q50 [M/J 2017/Q16]

A government wishes to discourage tax avoidance.

Which policy to achieve this would be an example of the behavioural approach of nudge theory?

- A compelling direct tax deduction by employers
- B making random inspections of individual tax records
- C providing information on how the tax is spent by the government
- D using penalties, such as fines and imprisonment for tax avoidance

Q51 [O/N 2017/Q1]

In an economy no one can be made better off without making someone else worse off.

What can be deduced from this?

- A Individuals are the best judges of their own well-being.
- B Individuals can be relied upon to behave rationally.
- C The distribution of income is socially optimal.
- D The economy's resources are allocated efficiently.

Q52 [O/N 2017/Q3]

The production of a firm which operates in an imperfectly competitive market gives rise to external production costs.

Which statement about this firm must be correct?

- A External costs exceed external benefits.
- B Private costs exceed social costs.
- C Social costs exceed private costs.
- D Social costs exceed social benefits.

**Q53** [O/N 2017/Q14]

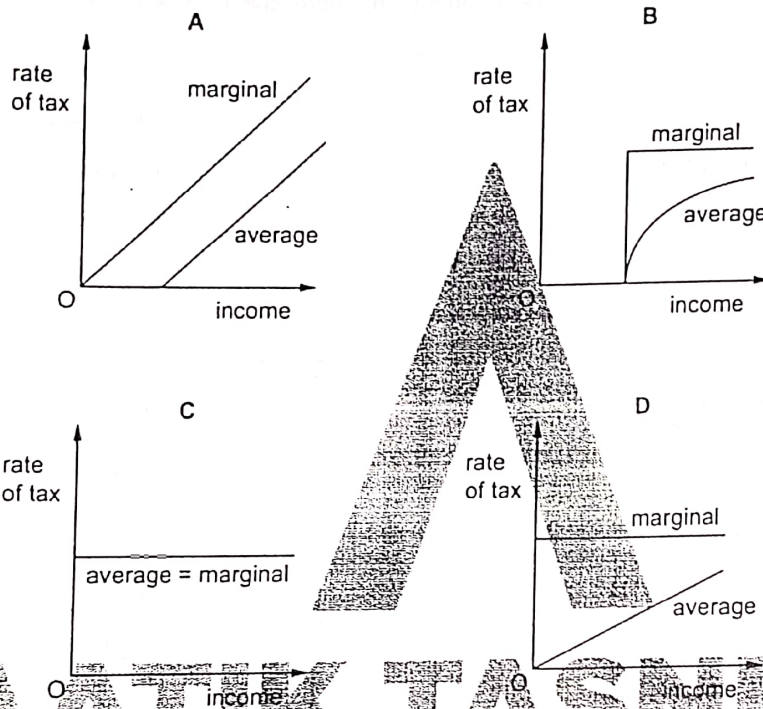
Which policy is not designed to correct a market failure?

- A government provision of health care
- B removing import quotas
- C price controls on large firms
- D regulations to limit smoke pollution

**Q54** [O/N 2017/Q15]

A tax system allows people to earn a certain sum of income free of income tax. On income above this level, tax is levied at a constant rate.

Which diagram correctly shows how marginal and average rates of tax vary with income?



**Q55** [O/N 2017/Q16]

What is the best example of nudge theory as applied to the prevention of tax evasion?

- A employing an extensive administration to ensure detection of evasion
- B imposing heavy penalties to deter offending behaviour
- C providing information to taxpayers about the undesirable effects of tax evasion
- D requiring employers to inform the tax authorities of workers' pay

**Q56** [O/N 2017/Q17]

In many countries it has been observed that, when high marginal rates of income tax imposed on richer groups are reduced, the tax revenue ralsod increases.

What is an implication of this observation?

- A Government policy should aim to minimise the income tax.
- B Sales taxes are always superior to income taxes as a means of raising revenue for the government.
- C Tax policy intended to reduce income tax on the rich may make the poor better off.
- D The government should always levy proportional rather than progressive income taxes.

**Q57** [M/J 2018/Q1]

How is social cost calculated?

- A external cost minus external benefit
- B external cost minus private cost
- C external cost plus private cost
- D social cost minus social benefit

**Q58** [M/J 2018/Q2]

Which government policy is **not** aimed at correcting inefficiency in resource allocation?

- A marginal cost pricing in state owned industries
- B permits restricting the pollution of rivers by private firms
- C requiring firms to pay a minimum wage
- D the provision of public goods at zero price

**Q59** [M/J 2018/Q3]

The table shows some of the costs and benefits in \$ millions, associated with a road building project. Both a government department and a profit-maximising private firm are considering building the road.

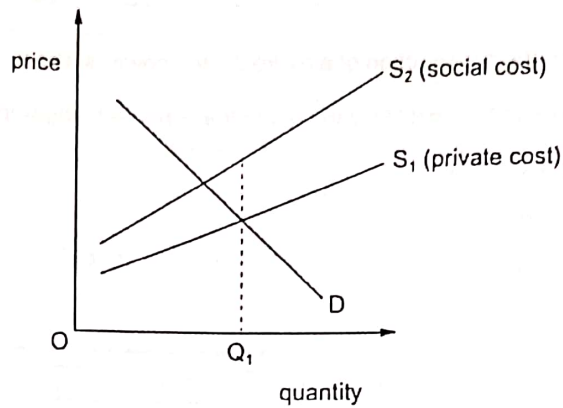
private costs	external costs	external benefits	social benefits
450	75	50	550

Who would be willing to build the road?

- A Both would be willing to build it.
- B Neither would be willing to build it.
- C Only the government department would be willing to build it.
- D Only the private firm would be willing to build it.

**Q60** [M/J 2018/Q4]

In the diagram,  $Q_1$  is the quantity produced of a good as the result of market forces.



Which concept is present at output  $Q_1$ ?

- A a government subsidy
- B a negative externality
- C a positive externality
- D a specific tax

**Q61** [M/J 2018/Q17]

Under which circumstances will a subsidy from the government be most beneficial if there are externalities from producing good X?

	externality caused by good X	price elasticity of demand of good X
A	negative	$< 1$
B	negative	$> 1$
C	positive	$< 1$
D	positive	$> 1$

**Q62** [M/J 2018/Q18]

Which tax would help a government achieve a more equal distribution of income after tax?

- A a constant rate sales tax applicable to all goods and services
- B a constant rate tax per person
- C an income tax with a constant marginal rate over the whole income range
- D an income tax with a tax-free allowance and a constant marginal rate thereafter

**Q63** [O/N 2018/Q1]

In which situation are there definitely positive externalities?

- A Private benefits exceed private costs.
- B Private benefits exceed social benefits.
- C Social benefits exceed private benefits.
- D Social benefits exceed private costs.

**Q64** [O/N 2018/Q2]

A cost-benefit analysis is carried out on the construction of a hydroelectric power station.  
Which combination of circumstances would be most likely to lead to the scheme being approved?

- A Private benefits are greater than private costs.
- B Social benefits are greater than social costs.
- C Social benefits are greater than total costs.
- D Total costs are greater than total revenue.

**Q65** [O/N 2018/Q3]

What does not pose a threat to the achievement of allocative efficiency?

- A imperfect information on the part of consumers
- B income inequalities
- C the existence of externalities—
- D the presence of monopolistic elements

**Q66** [O/N 2018/Q13]

Transport economists estimate the price elasticity of demand for private car use is very low.

What would be the most effective way of reducing road traffic congestion?

- A banning private cars and lorries from town centres
- B introducing a subsidy to lower the price of using bicycles
- C introducing road pricing on all main roads
- D subsidising public transport such as trains and buses

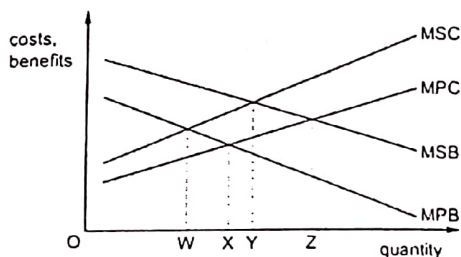
**Q67** [M/J 2019/Q1]

Which statement is correct?

- A In a command economy firms compete and profit maximise allocating resources efficiently.
- B In a command economy resources are privately owned.
- C In a market economy prices are used to signal the value of individual resources.
- D In a market economy resources are allocated by central planners.

**Q68** [M/J 2019/Q2]

The diagram shows the market for a product, the production of which has both external costs and external benefits.



What is the difference between the level of output that would be produced by the market and the socially optimum level?

- A WX
- B WY
- C XY
- D XZ



Q69 [M/J 2019/Q3]

The government is considering building flood defences along a river. It has calculated the costs and benefits as follows.

	costs \$m	benefits \$m
private	450	260
external	60	190

According to cost-benefit analysis, which decision and reasoning about flood defences is correct?

	decision	reasoning
A	build	external benefits are greater than external costs
B	build	social benefits are greater than private benefits
C	do not build	private costs are greater than the external benefits
D	do not build	social costs are greater than the social benefits

Q70 [M/J 2019/Q14]

Assuming there are no externalities, where would a nationalised firm set output to maximise social welfare?

- A where average revenue equals average cost
- B where average revenue equals marginal cost
- C where marginal revenue equals marginal cost
- D where marginal revenue is zero

Q71 [M/J 2019/Q15]

What is the specific advantage of pollution permits, when compared with an alternative policy of taxes levied on the quantity of pollutants emitted by firms?

- A firms have a financial incentive to reduce pollution
- B no monitoring of firm's emissions is required
- C pollution levels can be reduced to zero
- D the reduction in the level of pollution is more predictable

Q72 [O/N 2019/Q1]

Some multinational oil companies extracting oil in developing countries are now required to repair the damage they do to the environment.

Which best describes the total costs incurred by the oil companies in such circumstances?

- A external costs
- B private costs plus external costs
- C social costs plus external costs
- D social costs plus private costs

Q73 [O/N 2019/Q2]

In an economy, no one can be made better off without making someone else worse off.

What does not necessarily follow from this?

- A The conditions for allocative efficiency have been met.
- B The conditions for productive efficiency have been met.
- C The distribution of income is socially acceptable.
- D The economy is operating at a point on its production possibility curve.

Q74 [O/N 2019/Q3]

A government decided to approve a road building scheme because it was socially beneficial. In making its decision it calculated private costs at \$800m, private benefits at \$800m and external costs at \$150m.

What must have been true about the external benefits of the scheme?

- A External benefits equalled private benefits.
- B External benefits exceeded external costs.
- C External benefits exceeded \$200m.
- D There were no external benefits.

Q75 [O/N 2019/Q18]

What is not a source of market failure?

- A imperfect information
- B income inequality
- C monopoly
- D non-excludability

Q76 [O/N 2019/Q19]

A government regards fresh fruit and vegetables as merit goods, and subsidises agriculture to boost their production.

What could be a government failure arising from these subsidies?

- A cheaper fresh fruit and vegetables
- B land clearance reducing wildlife
- C lower spending on treating dietary illnesses
- D more jobs picking fruit and vegetables

# A2 – ECONOMICS (9708)

**MICRO**

**CHAPTER 4**

**Economic Efficiency and Market Failure**

**ANSWERS**

## TOPIC 1: ECONOMIC EFFICIENCY AND MARKET FAILURE

Q1 | A

A subsidy increases output to efficient level, hence resource allocation would improve.

[M/J 2008/Q1]

Q2 | C

When a tax is imposed the price goes from P1 to P2 and quantity decreases from Q1 to Q2. Hence triangle JKM is the loss in both producer and consumer surplus that no one acquired hence the dead-weight loss.

[M/J 2008/Q12]

Q3 | D

External costs are generated when the social costs exceed the private costs.

[M/J 2008/Q13]

Q4 | B

With privatization if the government encourages competition then the structure won't remain a pure monopoly and hence it will improve efficiency. Option A will not improve resource allocation as even with citizens as shareholders they would also try to maximize their profits. Option C will result in only less resources being produced as the firms might not produce more and cut down on supply to boost profits. Option D is irrelevant.

[M/J 2008/Q15]

Q5 | B

Economic efficiency is where the marginal social costs = marginal social benefits. Option A is not possible as there would be some costs private or external involved in producing goods. Option C & D do not consider the other side of the equation which is the benefit or the cost.

[O/N 2008/Q1]

Q6 | A

Pareto efficiency exists where it is impossible to make anyone better off without making someone else worse off. Only Point A is definitely pareto efficient because movement from point A to any other point will increase utility for person X by only reducing utility of person Y.

**Key Point:** The trick in this question to check all the points and check their movement. The pareto point will always make one worse off to make the other one better off.

[O/N 2008/Q2]

Q7 | B

The firm is operating at below its cost minimizing level of output. Option A is incorrect because optimal level of output is the lowest point of the lowest LRAC hence option A is incorrect. Option C & D are incorrect because productive efficiency is when the firm produces at a point (any point) on its LRAC not just at the lowest point on the

[M/J 2009/Q1]

Q8 | B

The area JKN measures the net cost of subsidy to the society. Because this is the area that the society does not acquire.

[M/J 2009/Q14]

Q9 | D

Market forces fail to allocate resources for public goods due to free rider problem. Option A is irrelevant. Option B is not related to the issue of efficiency. Option C is incorrect because free goods are not produced they just exist in the economy naturally.

[O/N 2009/Q14]

Q10 | C

All the points on the PPC are productively efficient while efficient allocation of resources depends on the preference of the society. The question of socially desirable is what is the combination of goods being produced hence it is still under question.

[O/N 2009/Q30]

Q11 | B

All points on the PPC are necessarily productively efficient. Allocative efficiency is where  $P = MC$ . Option A & D are incorrect because they don't mention the allocation is more desirable to the society hence maybe an outward does not lead to a desirable combination.

[M/J 2010/Q30]

Q12 | C

Pareto efficiency is attained when no one can be made better off without making others worse off and this is only possible if the economy is operating on the PPC. Option A is incorrect because even in perfectly competitive markets efficiency is not always guaranteed. Option B is incorrect because it shows economic efficiency and not pareto optimality. Option D highlights allocative efficiency not pareto optimality.

[O/N 2010/Q1]

Q13 | C

A minimum wage policy can lead to market failure as firms would employ less labor and there would be inefficiency allocation of resources as labor would be unemployed. Option A is incorrect because competition policy tends to reduce concentration of market power, a market failure. Option B is incorrect because if you regulate health care it will improve the production of merit goods. Option D is incorrect because regulation river pollution would remove over production harmful products and removing negative externalities resulting from production.

[O/N 2010/Q14]

Q14 | A

Without tax the dead-weight loss =  $X + Y + Z$ . A congestion tax raises the MPC to  $MPC + tax$  and thus reduces the volume of traffic and dead-weight loss by the area  $X + Y$ . Dead-weight loss here also represents the external costs.

[M/J 2011/Q10]

Q15 | D

All points on a PPC may or may not be economically efficient. Option A is incorrect because point E is unattainable. Option B is incorrect because it is economically inefficient. Option C is contrary to the theory hence wrong.

**Key Point:** Economic Efficiency = Productive Efficiency + Allocative Efficiency

[M/J 2011/Q30]

Q16 | C

Allocative efficiency is achieved at a point where  $P (AR) = MC$  and any point on the lowest LRAC curve is productively efficient. Hence option C.

[O/N 2011/Q2]

Q17 | D

Economists aim at efficient allocation of scarce resources. They aim to maximize gain from available resources.

[O/N 2011/Q13]

Q18 | A

Cost to the economy =  $A + B + C + D$  [Government + Consumer]  
Consumer valuation =  $B + C + D$   
Hence the triangle A is the difference.

**Key Point:** Anything below the demand curve is what consumer values, everything above the demand curve is what is the extra or dead-weight loss that is spent.

[O/N 2011/Q15]

Q19 | A

Economic efficiency is achieved in the case of pareto optimality. Hence when nobody can become better off without somebody else becoming worse off.

[M/J 2012/Q1]

Q20 | C

When a tax is imposed the price goes from  $P_1$  to  $P_2$  and quantity decreases from  $Q_1$  to  $Q_2$ . Hence triangle JKM is the loss in both producer and consumer surplus that no one acquired hence the dead-weight loss.

[M/J 2012/Q14]

Q21 | C

Market system of demand and supply always under-produce merit goods (goods with external benefits). Option A & D refer to external costs while B is irrelevant.

[M/J 2012/Q15]

Q22 | D

The resource allocation will improve because since merit goods are under-produced giving them subsidy will increase their production and hence improving their resource allocation.

[O/N 2012/Q1]

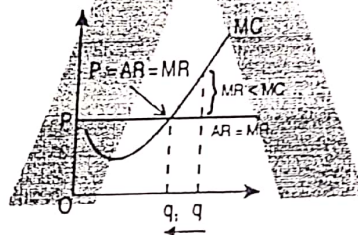
Q23 | D

Allocative efficiency is where  $P = MC$  only indicates allocative efficiency in the case of absence of externalities.

[O/N 2012/Q14]

Q24 | B

Allocative efficiency is where  $P = MR = MC$ .  $MC > MR$  implies that the firm must reduce its output up to the point where its  $MC = MR$ .



[M/J 2013/Q12]

Q25 | A

Whenever there is excess quantity the government always buys and whenever there is a shortage the government sells quantity. Hence in this case the government will buy KR.

[M/J 2013/Q16]

Q26 | D

The purpose to achieve efficiency is to utilize the resources in the best possible way which is the aim of economics.

[O/N 2013/Q1]

Q27 | C

If the firm adopts marginal cost pricing i.e. starts to produce at a point where  $P = MC$  it would be charging the same price as a perfectly competitive firm. Option A is incorrect because indirect taxes result in dead-weight loss. Option B is incorrect because  $P = AC$  ensures normal profit still there would be a dead-weight loss. Option D is irrelevant.

[O/N 2013/Q16]

Q28 | A

All points on a PPC may or may not be economically efficient. Option A is incorrect because point F is economically inefficient. Option C is incorrect because point E is unattainable. Option D is incorrect because G & H are both productively efficient.

**Key Point:** Economic Efficiency = Productive Efficiency + Allocative Efficiency.

[M/J 2014/Q1]

Q29 | C

A minimum wage policy can lead to market failure as firms would employ less labor and there would be inefficiency allocation of resources as labor would be unemployed. Option A is incorrect because competition policy tends to reduce concentration of market power, a market failure. Option B is incorrect because if you regulate health care it will improve the production of merit goods. Option D is incorrect because regulation river pollution would remove over production harmful products and removing negative externalities resulting from production.

[M/J 2014/Q14]

Q30 | A

Triangular area representing waster of both consumer and producer surplus that results from a fall in quantity is called dead-weight loss to the society.

**Common Mistake:** Some students choose triangle JKN. This was incorrect because the question mentions that there was no market failure initially hence this was incorrect.

[M/J 2014/Q15]

Q31 | D

Productive efficiency is producing all goods at the lowest possible cost. Option A is just mentioning full employment of resources. Option B is incorrect because at profit maximizing levels the firms may or may not be productively efficient. It simply means to produce at a point where  $MC = MR$ . Option C refers to the least-cost combination.

[O/N 2014/Q1]

Q32 | C

Whenever we are considered about the economic welfare it happens where  $MSB = MSC$ . Hence if there are not external benefits the  $MPB = MSB$ . Hence Point C is where  $MSC = MSB$ .

[O/N 2014/Q18]

Q33 | D

Perfect knowledge results in right choices and correct demand, therefore results in allocative efficiency. Other options suggest market failure i.e. allocative inefficiency.

[M/J 2015/Q1]

Q34 | A

When the firms are allowed to trade productive efficiency improves because firms selling their quota will do so when their profits are higher by selling rather than using the quota by themselves. Similarly buyers will buy quota only if it increases their profits, therefore trading quotas increases industry profits. In the case of less efficient firms will benefit if they sell their quota to more efficient firms hence improving productive efficiency.

[M/J 2015/Q16]

Q35 | D

Regulation is when the government passes some sort of law to intervene in the market these can include prohibition and making products illegal. Option A, B & C are all part of regulations. Taxes are example of financial intervention.

[M/J 2015/Q17]

Q36 | B

Productive Efficiency: It improved as now the economy is operating at the PPC.  
Allocative Efficiency: It improved as now more private sector output is increasing which was the preference of the population.

[O/N 2015/Q1]

Q37 | D

The objective of subsidy in this case is to reduce the prices of agricultural products and not necessarily to improve allocation of resources. All other options represent market failure.

[O/N 2015/Q16]

Q38 | D

A firm is dynamic efficient if it conducts research and development (R&D) and because of that its AC starts to decrease in the long-run.

[M/J 2016/Q1]

Q39 | B

Movement from point X to point B will make Sameer better off without making Tariq worse, therefore it will improve allocative efficiency. However a movement from point X to any other point except B will make one person better off by only making the other worse off.

[M/J 2016/Q2]

Q40 | B

A subsidy on the merit good gives the idea that since people don't fully understand the value of merit goods they tend to under-consume it and therefore these goods are underproduced hence government tends to give a subsidy on them to encourage their sales. All the other options correct the market failure but assume that people are rational and are the best judge of their own economic welfare.

[M/J 2016/Q3]

Q41 | A

When the government sets the price equal to the marginal cost ( $P(AR) = MC$ ) will be the point where allocative efficiency is achieved.

[M/J 2016/Q18]

Q42 | C

Economic efficiency is achieved so that scarce economic resources are used in the most efficient way and are not wasted.

[O/N 2016/Q1]

Q43 | B

The economic efficiency is increasing because allocative efficiency is going up. As now the P is much closer to the MC. In other words the price that the consumer places on the product comes closer to the cost of producing the last unit.

[O/N 2016/Q2]

Q44 | B

An economic decision is only rejected when the marginal social cost is greater than marginal social benefit.  $MSC > MSB$ .  
 $MSB = PB + EB = 900 + 300 = 1200m$   
 $MSC = PC + EC = 800 + \text{External Costs}$

Hence if the external costs were above \$400m they would have rejected the project

**Key Point:**Criteria of acceptance:  $MSB > MSC$ Criteria of rejection:  $MSB < MSC$ 

[O/N 2016/Q3]

Q45 | B

Income inequality is not related to efficiency or market failure.

[O/N 2016/Q14]

Q46 | B

Demerit goods are associated with higher social costs therefore greater fall in social cost will improve the net welfare. Option C is incorrect because if the total social benefit declines the economic welfare will fall. Option D is incorrect because we take marginal social benefit and marginal social cost into consideration.

**Common Mistake:** Some students choose Option D; however, this was incorrect because for economic welfare analysis we take the marginal benefit into consideration not the total to check that will the regulation generate a positive impact or not.

[O/N 2016/Q15]



Q47 | B

$MSB = PB + EB$  and  $MSC = PC + EC$ . Hence Net Social benefit will be  $MSB - MSC$  gives a positive result.

Key Point:

1.  $MSB > MSC$  – Net Social Benefit
2.  $MSB < MSC$  – Net Social Cost

[M/J 2017/Q1]

Q48 | C

Producing at a point where  $MSB = MSC$  which eliminates market failure. Hence the final output needs to be point L. The market currently operates at a point where  $MPC = MPB$  which is point M. Hence a movement from M to L will lead to elimination of the failure.

[M/J 2017/Q2]

Q49 | D

A consumption outside the PPC will only result when the economy specializes and trades with other countries.

Option A & B are incorrect because a reduction in unemployment and achievement of productive efficiency will lead to a movement from within the curve to on the PPC. Option C is irrelevant.

[M/J 2017/Q3]

Q50 | C

Nudge theory propose that the individuals or a group of people are not forced into a decision rather it is done through indirect suggests and motivation. Hence option C will just give people the motivation to pay taxes and they will see their own benefit.

Option A is incorrect because compelling will remove the concept of not forced. Option B & C are incorrect because it is not motivating people to pay more taxes willingly.

[M/J 2017/Q16]

Q51 | C

This situation is called pareto optimality and it represents that all resources are allocated efficiently. Option A & B are incorrect because individuals are not the best judge and do not always act rationally. Option C is not related to efficiency.

[O/N 2017/Q1]

Q52 | C

External costs are only present when the Social Costs are higher than the private costs.  
 $Social\ Costs = Private\ Costs + External\ Costs$ . Hence if there are no external costs then  $Social\ Costs = Private\ Costs$ .

[O/N 2017/Q3]

Q53 | B

Options A, C & D are all related to correcting market failure. Option B aims to correct deficits in the Balance of Payments.

[O/N 2017/Q14]

Q54 | B

If the tax is levied at a constant rate then the marginal rate of tax will be the same after a certain level of income. Hence option B.

[O/N 2017/Q15]

Q55 | C

Nudge theory propose that the individuals or a group of people are not forced into a decision rather it is done through indirect suggests and motivation. Hence option C will just give people the motivation to pay taxes and they will see their own benefit. All the other options force the people through administration regulations.

[O/N 2017/Q16]

**Q56 | C**  
 Increased tax revenues by charging lower tax rate will enable the government to give higher benefits to people. [O/N 2017/Q17]

**Q57 | C**  
 Social Costs = Private Costs + External Costs. Hence Option C. [M/J 2018/Q1]

**Q58 | C**  
 Paying a minimum wage will lead to unemployment and hence lead to more inefficiency in allocation of resources. Option A, B & D are all examples of government intervention to correct market failure.

**Key Point:** These are several interventions:

1. Taxes
2. Subsidies
3. Laws and Regulations
4. Prevent or Regulate monopolies
5. Changes in property rights
6. Provision of information
7. Direct Provisions
8. Pollution permits
9. Incentives and Nudge Theory

[M/J 2018/Q2]

**Q59 | A**  
 An economic decision is only accepted by the government when the marginal social cost is less than marginal social benefit.  $MSC < MSB$ .  $MSC = 525 < MSB = 550$

An economic decision is only accepted by the private firm when the Private benefit is greater than the Private Cost.  $PC < PB$ .  $PC = 450 < PB = 500$

Hence both will accept.

**Key Point:**

1. Govt. Criteria for acceptance:  $MSC < MSB$
2. Private firm criteria for acceptance:  $PC < PB$

[M/J 2018/Q3]

**Q60 | B**  
 The diagram is showing a negative externality as the Social Cost > Private Costs. [M/J 2018/Q4]

**Q61 | D**  
 (1) Subsidies are only beneficial when there a positive externalities.  
 (2) Subsidies will only work if the PED is elastic ( $> 1$ ).

Hence Option D. [M/J 2018/Q17]

**Q62 | D**  
 Income distribution gets better with progressive taxes like direct taxes which impact the rich more and less to the poor. This makes option A & D incorrect. The reason a tax-free allowance and then a constant marginal rate is better because it will not tax people with low incomes. A constant marginal rate will impact everyone and not help in removing income disparity. [M/J 2018/Q18]

**Q62 | C**  
 Positive Externalities occur when the social benefits exceed the private benefits. [O/N 2018/Q1]

**Q64 | B**

An economic decision is only accepted by the government when the marginal social cost is less than marginal social benefit.  $MSC < MSB$ . Hence Option B.

**Key Point:**

1. Govt. Criteria for acceptance:  $MSC < MSB$
2. Private firm criteria for acceptance:  $PC < PB$

[O/N 2018/Q2]

**Q65 | B**

Allocative Efficiency is when right amount of scarce resources are allocated to produce the right products. This achieved when society is producing goods and services most wanted by consumers. This exists at a point where price equals the marginal cost. This takes place in times when there is perfect competition, perfect information and no externalities. Hence income inequalities does not impact allocative efficiency.

[O/N 2018/Q3]

**Q66 | A**

A low PED shows that it is inelastic hence taxes and subsidies won't be effective. Hence by only banning private cars can this problem be controlled.

[O/N 2018/Q13]

**Q67 | C**

In a market economy the resources are allocated based on the price mechanism where signals in the market forces consumers and produces to adjust the consumption and production. Options A & B are incorrect because a command economy aims social welfare not profit maximization and government controls all the resources. Option D is incorrect because in a market economy everything is owned by private individuals.

[M/J 2019/Q1]

**Q68 | C**

Social Optimum level is where  $MSB = MSC$  hence point Y  
Market Output level is where  $MPB = MPC$  hence point X

Therefore the difference would be XY

[M/J 2019/Q2]

**Q69 | D**

An economic decision is only accepted by the government when the marginal social cost is less than marginal social benefit.  $MSC < MSB$

$$MSC = PC + EC = 450 + 60 = 510$$

$$MSB = PB + EB = 260 + 190 = 450$$

Since the  $MSC > MSB$  therefore the project should not be accepted.

**Key Point:**

1. Govt. Criteria for acceptance:  $MSC < MSB$
2. Private firm criteria for acceptance:  $PC < PB$

[M/J 2019/Q3]

**Q70 | B**

In order to maximize social welfare the company needs to achieve allocative efficiency. Allocative efficiency occurs at a point where  $P(AR) = MC$ . Hence option B is the correct option.

**Key Point:** Whenever the examiner mentions that word social welfare that means he is talking about allocative efficiency.

[M/J 2019/Q14]

Q71 | D

With taxes they only work when the demand and supply are elastic and do not work against inelastic demands. Hence by imposing permits the level that can be controlled is more predictable. Option A is incorrect because firms have to buy the permits hence no financial incentives. Option B is incorrect because permits need to be monitored so that firms do not exceed. Option C is incorrect because permits do not ban the production but it can make it zero because the production allows for some marginal benefit as well hence it will only allow pollution till the point  $MB > MC$ .

[M/J 2019/Q15]

Q72 | B

For a company private costs always exist. However now since the government has also forced them to pay the damages to the environment now they also have to pay the external costs. Hence the total cost to the oil company will be private cost + external cost.

[O/N 2019/Q1]

Q73 | C

Pareto optimality is a situation where no one can be made better off without making someone else worse off hence both allocative and productive efficiency needs to exist here. A point on the PPC can show this. There for this to occur it is not necessary that distribution of income is socially acceptable.

**Key Point:** Always remember that in any question of efficiency distribution of income is not required for any form of efficiency.

[O/N 2019/Q2]

Q74 | B

Social Costs = Private Costs + External Costs =  $800 + 150 = 950$   
 Social Benefit = Private Benefit + External Benefit =  $800 + X = \text{More than } 950$

Since the project is socially beneficial that means the social benefits have to be greater than 950 and external benefit has to be greater than 150. Hence option B.

**Key Point:** In a question where private benefit, private cost, external benefit and external cost is given always calculate the social benefits and social costs if possible. Usually the answer lies in those calculations.

[O/N 2019/Q3]

Q75 | B

Income inequality doesn't lead to market failure. Options A, C & D are all types of market failure.

[O/N 2019/Q18]

Q76 | B

A government failure is regarded as reasons why the government won't be able to achieve its targets or because of a government policy the loss that the society bears. Hence a reduction in wildlife is a drawback of the government policy to award subsidies to agriculture. Option A, C & D all give benefit to the society.

[O/N 2019/Q19]

**A2 – ECONOMICS (9708)**

**MICRO**

**CHAPTER 5**

**Labor Market**

**Q1** [M/J 2008/Q4]

The table shows the current position of a firm in a perfectly competitive industry.

	factor X	factor Y
marginal physical product	2	8
factor price	\$5.00	\$10.00

If the firm sells its product for \$1 and aims to maximise profits, what should it employ?

- A more of both X and Y
- B more of X and less of Y
- C more of Y and less of X
- D less of both X and Y

**Q2** [M/J 2008/Q5]

The government imposes a maximum earnings limit on recording artists.

What must result in the short run if the measure is effective?

- A a decrease in the economic rent earned by recording artists
- B a decrease in the transfer earnings of recording artists
- C a decrease in the supply of recording artists
- D a decrease in the profits of record companies

**Q3** [O/N 2008/Q5]

A firm currently employs 30 workers at a daily wage rate of \$40.

It calculates that the marginal cost per day of hiring an additional worker would be \$102.

By how much would the daily wage rate have to be increased to attract an extra worker?

- A \$2
- B \$42
- C \$62
- D \$102

**Q4** [O/N 2008/Q6]

In which circumstances is a trade union most likely to be successful in raising wage rates?

- A The demand for the good produced is price-elastic.
- B The industry faces substantial foreign competition.
- C The industry's cost structure is capital-intensive.
- D The workers are unskilled.

**Q5** [M/J 2009/Q4]

To increase its labour force from 100 to 101 workers, a firm has to increase its daily wage rate from \$400 to \$405.

What is the marginal cost of labour per day?

- A \$5
- B \$405
- C \$905
- D \$40 905

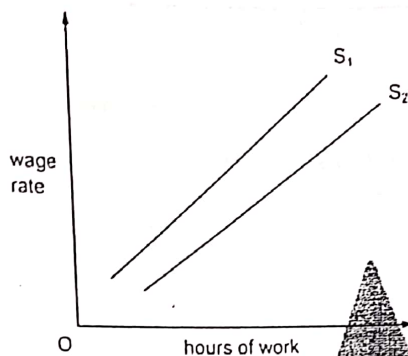
Q6 [M/J 2010/Q3]

What could cause the demand curve for labour to shift to the left?

- A a decrease in immigration
- B a decrease in labour productivity
- C a fall in real wages
- D a rise in the money wage rate

Q7 [M/J 2010/Q4]

In the diagram  $S_1$  is an individual worker's supply of labour curve.



What could cause the curve to shift from  $S_1$  to  $S_2$ ?

- A a decrease in the hourly wage rate
- B a decrease in work satisfaction
- C a decrease in the opportunity cost of leisure
- D a decreased preference for leisure

Q08 [M/J 2010/Q5]

A firm's workers join a trade union which negotiates an increase in the workers' wage rate.

The increase in the wage rate results in an increase in the number employed by the firm.

What could explain this?

- A The demand for the firm's product is price-elastic.
- B The firm is a monopsonist within its local labour market.
- C The firm operates in a perfectly competitive labour market.
- D There is a high degree of substitutability between capital and labour.

Q9 [O/N 2010/Q4]

A firm in a perfectly competitive industry employs two factors of production, X and Y.

The table shows the factor price and the current marginal physical product of these two factors.

	factor X	factor Y
factor price	\$2.50	\$6.00
marginal physical product	2	8

If the firm sells its product for \$1 and aims to maximise profits, what should it do?

- A employ less of both X and Y
- B employ less of X and more of Y
- C employ more of both X and Y
- D employ more of X and less of Y

**Q10** [O/N 2010/Q8]

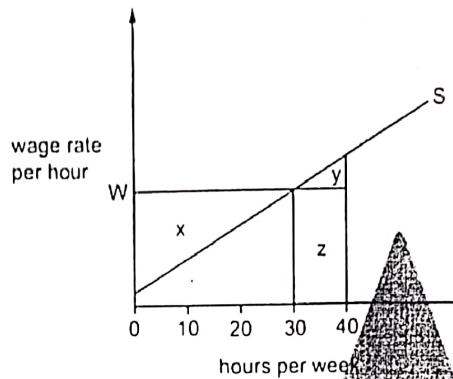
To increase its labour force from 100 to 101 workers, a firm has to increase the daily wage rate from \$300 to \$302.

What is the marginal cost of labour per day?

- A \$2                      B \$202                      C \$302                      D \$502

**Q11** [O/N 2010/Q7]

The diagram shows a worker's supply of labour curve.



The worker is required to work a minimum of 40 hours a week at the hourly wage,  $0W$ .

Which area measures the economic rent obtained by the worker?

- A  $x - y$                       B  $x + y$                       C  $y - x$                       D  $y + z$

**Q12** [O/N 2010/Q15]

What is meant by 'real wages'?

- A the marginal physical product of labour  
 B the opportunity cost of labour  
 C the purchasing power of money wages  
 D wages net of tax

**Q13** [M/J 2011/Q3]

The table shows the main characteristics of employment in two occupations.

	occupation X	occupation Y
average annual wage	\$100 000	\$60 000
number of weeks annual leave	5 weeks	10 weeks
average length of working week	48 hours	44 hours
job security	low	high
length of training course to obtain job qualification	1 year	2 years

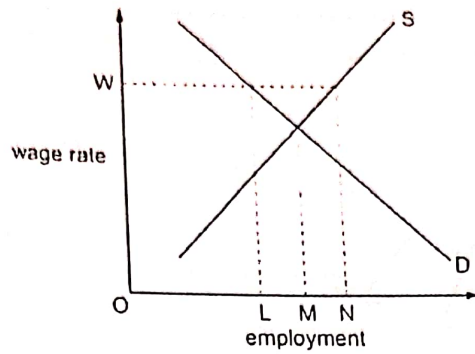
What can definitely be deduced from the table?

- A Those employed in occupation Y attach greater importance to job security.  
 B Those employed in occupation X attach less importance to leisure activities.  
 C There will be more competition for places on training courses to enter occupation X than occupation Y.  
 D Occupation Y has greater non-pecuniary advantages than occupation X.



**Q14 [M/J 2011/Q6]**

The diagram shows the supply and demand for labour in an industry.



Initially the industry's labour market is in equilibrium.

What effect will the introduction of a minimum wage  $OW$  have on the level of employment in the industry?

- A It will decrease by an amount  $LM$ .
- B It will decrease by an amount  $LN$ .
- C It will increase by an amount  $LN$ .
- D It will increase by an amount  $MN$ .

**Q15 [M/J 2011/Q12]**

Individuals are free to choose the number of hours they work, how much of their income they save and which goods and services they buy.

Which type of tax will not distort the choices individuals make?

- A a tax levied on the wealth accumulated by individuals
- B a uniform tax which raises the same fixed amount from all individuals
- C indirect taxes on specific goods
- D proportional income taxes

**Q16 [O/N 2011/Q5]**

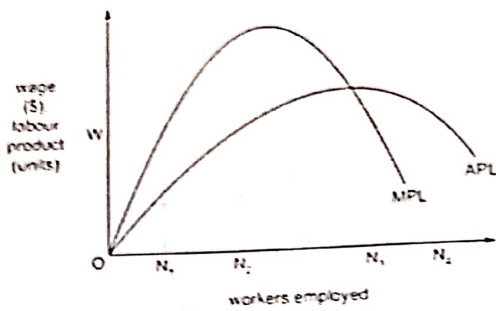
An actor is paid \$100 000 a year. The next best paid job he could get is as a lecturer at \$60 000 a year.

What are his transfer earnings and his economic rent?

	transfer earnings	economic rent
A	\$60 000	\$40 000
B	\$60 000	zero
C	\$40 000	\$60 000
D	\$40 000	zero

**Q17 | [M/J 2012/Q4]**

The diagram shows a perfectly competitive firm's average product of labour (APL) and marginal product of labour (MPL) curves.



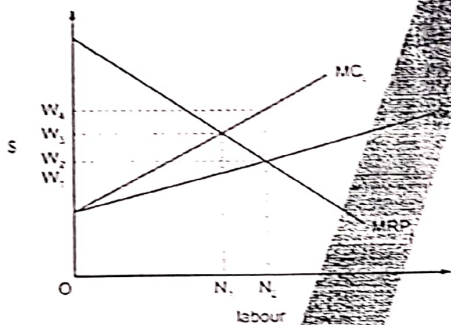
The market price of the firm's product is \$1.

How many workers will the firm employ at a wage of OW?

- A  $ON_1$       B  $ON_2$       C  $ON_3$       D  $ON_4$

**Q18 | [O/N 2012/Q4]**

In the diagram,  $MRP_L$  is a firm's marginal revenue product of labour curve and  $MC_L$  is its supply of labour curve.

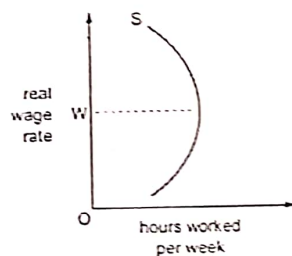


Assuming profit maximisation, how many workers will the firm employ and what wage will it pay?

	number employed	wage
A	$N_1$	$W_3$
B	$N_1$	$W_2$
C	$N_2$	$W_2$
D	$N_2$	$W_4$

**Q19 | [O/N 2012/Q5]**

The diagram shows a backward sloping supply curve of labour.

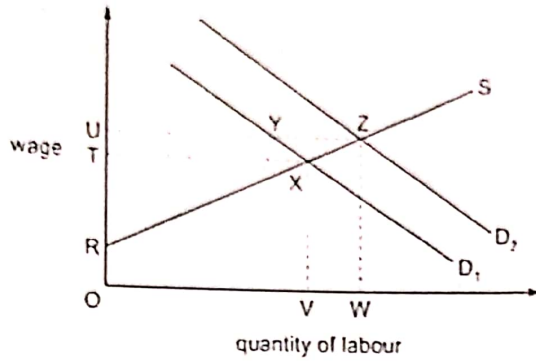


What is correct about the substitution effect and the income effect when the real wage rises above OW?

	substitution effect	income effect
A	negative	negative
B	negative	positive
C	positive	negative
D	positive	positive

**Q20** [O/N 2012/Q6]

In the diagram D<sub>1</sub> and S are the initial demand and supply curves for building workers.



If the demand for building workers increases to D<sub>2</sub> by how much does the economic rent earned by building workers rise?

- A RZU      B TXZU      C VWZX      D XZY

**Q21** [M/J 2013/Q4]

The table shows the current position of a firm in a perfectly competitive industry.

	factor X	factor Y
marginal physical product	35	12
factor price	\$5.00	\$10.00

If the firm sells its product for \$1 and aims to maximise profits, what should it employ?

- A more of both X and Y  
 B more of X and less of Y  
 C more of Y and less of X  
 D less of both X and Y

**Q22** [M/J 2013/Q5]

A firm operates under perfect competition in both product and factor markets with labour as the only variable factor input.

In the diagram, the line JK shows the relationship between the marginal physical product of labour and the man-hours hired.



When the hourly wage is \$3.20, the firm employs 4000 man-hours per day.

What is the price of the product?

- A \$1.60      B \$2.00      C \$3.20      D \$6.40

**Q23 [M/J 2013/Q6]**

A fashion model is paid \$100 000 a year.

The next best paid job she could get is as a teacher at \$60 000 a year.

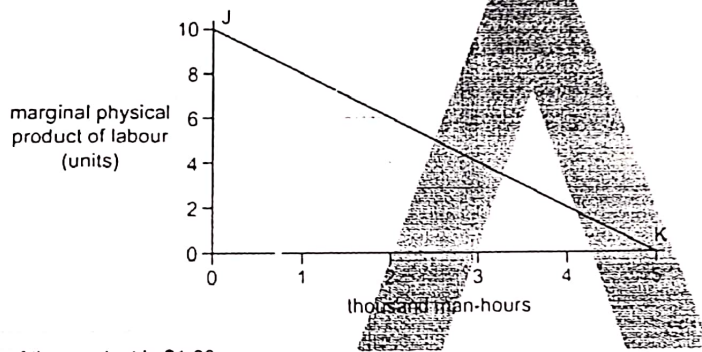
What are her transfer earnings and her economic rent?

	transfer earnings \$	economic rent \$
A	60 000	zero
B	60 000	40 000
C	100 000	zero
D	100 000	40 000

**Q24 [O/N 2013/Q4]**

A firm operates under perfect competition in both product and factor markets with labour as the only variable factor input.

In the diagram, the line JK shows the relationship between the marginal physical product of labour and the man hours hired.



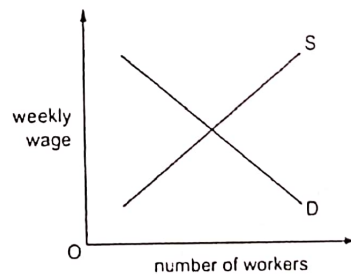
The price of the product is \$1.60.

What will be the number of man-hours hired by the firm if the hourly wage is \$6.40?

- A 1000    B 2000    C 3000    D 4000

**Q25 [O/N 2013/Q5]**

The diagram shows the initial position of a labour market.



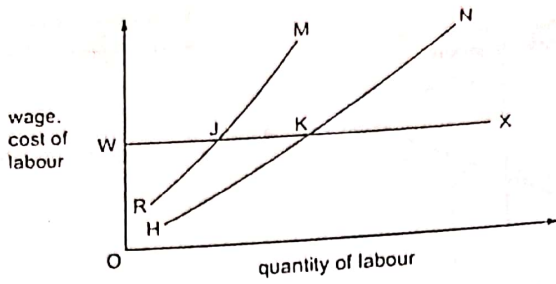
The government increases the number of statutory paid holidays to which workers are entitled from 10 days a year to 15 days a year.

How will this affect the supply and demand curves in the diagram?

	employers' demand curve	workers' supply curve
A	shifts to left	shifts to right
B	shifts to left	shifts to left
C	shifts to right	shifts to right
D	shifts to right	shifts to left

**Q26 [O/N 2013/Q6]**

In the diagram, HN is the initial supply of labour curve faced by a firm, and RM is its initial marginal cost of labour curve.

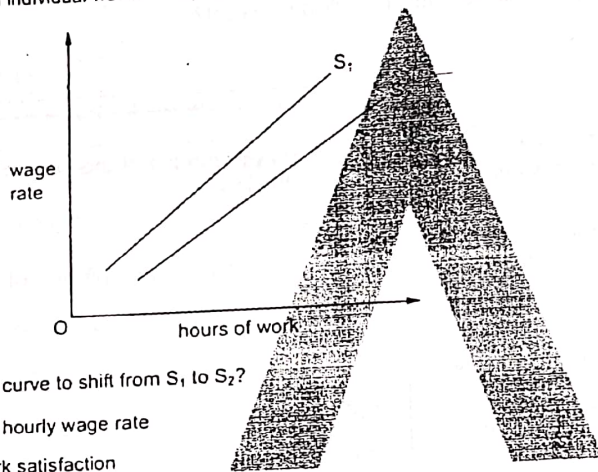


What will be the firm's new labour supply curve, if the workers join a trade union and achieve a union negotiated wage, OW?

- A RJX      B HKX      C WJM      D WKN

**Q27 [M/J 2014/Q4]**

In the diagram  $S_1$  is an individual worker's supply of labour curve.



What could cause the curve to shift from  $S_1$  to  $S_2$ ?

- A a decrease in the hourly wage rate  
 B a decrease in work satisfaction  
 C a decrease in the opportunity cost of leisure  
 D a decreased preference for leisure

**Q28 [M/J 2014/Q5]**

The table shows the marginal revenue product of labour schedule of a profit-maximising firm producing under conditions of perfect competition.

number of workers	1	2	3	4	5	6	7
marginal revenue product (\$)	125	130	135	140	135	130	125

If the wage is \$135, what is the maximum number of workers the firm will employ?

- A 3      B 4      C 5      D 6

**Q29 [M/J 2014/Q6]**

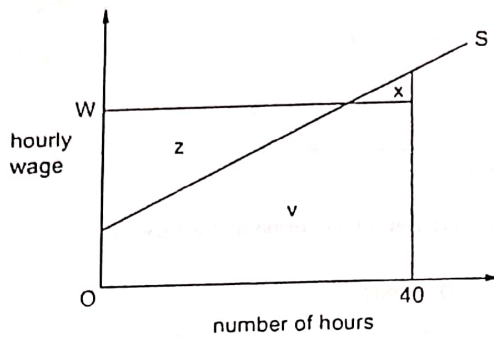
In 2004 union officials and businessmen in Argentina agreed to increase the minimum wage from 350 to 450 pesos.

In which circumstances would such a rise increase employment?

- A Investment increases at a more rapid rate than consumption.  
 B Labour and product markets are competitive.  
 C The higher wage rate produces a proportionately greater rise in labour productivity.  
 D The minimum wage is set above the equilibrium level.

**Q30 [M/J 2014/Q8]**

The diagram shows an individual worker's supply curve of labour.



The hourly wage is  $W$  and the worker is required to work a standard 40-hour week.

Which area measures the minimum amount per week he would be willing to accept?

- A  $v$       B  $v + x$       C  $v - x$       D  $z - x$

**Q31 [O/N 2014/Q4]**

A worker is considering accepting a job she has been offered. She draws up a list of the annual monetary values she places on the advantages and disadvantages of the job.

advantages and disadvantages of the job	value (£)
income	750
dangerous working conditions	500
long working hours	250
high prestige of the job	200
cost of providing own uniform	150
opportunity for travel	100
short holidays	50

What can be concluded from the table?

- A She values the pecuniary advantages more highly than the non-pecuniary advantages.  
 B She would take the job even if it had none of the non-pecuniary advantages.  
 C The job has no pecuniary disadvantages.  
 D The non-pecuniary advantages outweigh the non-pecuniary disadvantages.

**Q32 [O/N 2014/Q5]**

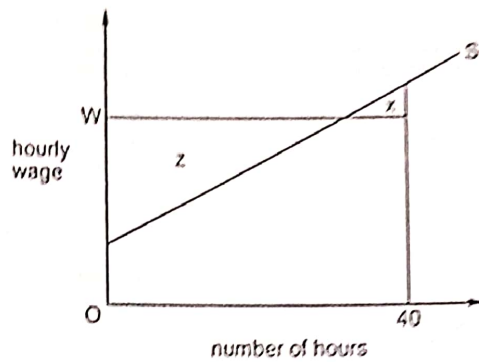
To increase its labour force from 100 to 101 workers, a firm has to increase its daily wage rate from \$500 to \$502.

What is the marginal cost of labour per day?

- A \$2      B \$200      C \$202      D \$702

Q33 [O/N 2014/Q6]

The diagram shows an individual worker's supply curve of labour.



The hourly wage is  $W$  and the worker is required to work a standard 40-hour week.

Which area measures the net improvement in the worker's welfare if he were allowed to choose the number of hours he wished to work per week?

- A  $x$       B  $z - x$       C  $z + x$       D  $z$

Q34 [O/N 2014/Q7]

A firm's workers join a trade union which negotiates an increase in the workers' wage rate.

The increase in the wage rate results in an increase in the number employed by the firm.

What could explain this?

- A The demand for the firm's product is price-elastic.  
 B The firm is a monopsonist within its local labour market.  
 C The firm operates in a perfectly competitive labour market.  
 D There is a high degree of substitutability between capital and labour.

Q35 [O/N 2014/Q16]

The introduction of a minimum hourly wage for all workers over 21 years of age is expected to increase the average wages of these workers.

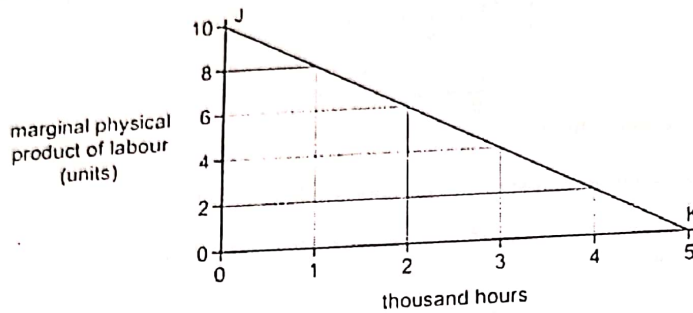
What will be the likely effect on workers under 21?

	unemployment for under 21s	average wages for under 21s
A	falls	fall
B	falls	rise
C	rises	fall
D	rises	rise

**Q36** [M/J 2015/Q5]

A firm operates under perfect competition in both product and factor markets with labour as the only variable factor input.

In the diagram, the line JK shows the relationship between the marginal physical product of labour and the hours worked:



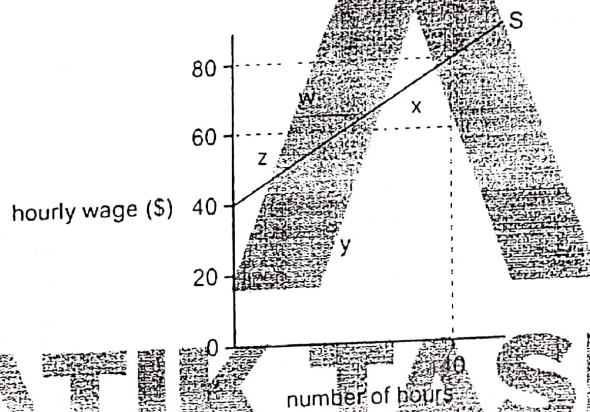
When the price of the product is \$1.60, the firm uses 3000 hours of labour.

What is the hourly wage?

- A \$0.40      B \$2.40      C \$5.60      D \$6.40

**Q37** [M/J 2015/Q6]

The diagram shows an individual's supply of labour curve



He is offered a job which would require him to work a standard 40-hour week.

Which area measures the lowest amount he would have to be paid per week to get him to accept this job offer?

- A  $w + z$       B  $x + y$       C  $x + y - z$       D  $w + x + z + y$

**Q38** [M/J 2015/Q15]

The government introduces a minimum wage above the equilibrium market wage rate.

How will this affect low-paid workers?

- A All those initially in employment will receive the new guaranteed minimum wage.  
 B Fewer of those not already in employment will enter the labour force.  
 C There will be an increase in the number of low-paid workers in employment.  
 D Some low-paid workers will lose their job.



**Q39 [O/N 2015/Q4]**

What will result from the differences in the non-pecuniary advantages of various occupations?

- A disequilibrium in the labour market
- B long-term differentials in wage rates
- C monopsony in particular labour markets
- D shortages of labour in particular occupations

**Q40 [O/N 2015/Q6]**

A firm currently pays its employees on an hourly basis.

Even though the management acknowledges that its employees work to the best of their ability and could not work any harder, the firm decides to switch to a piece-rate system of remuneration whereby the wage paid to each employee depends on their level of output.

Why might this new system of remuneration result in a significant improvement in labour productivity?

- A It will dispense with the need for management to monitor the actions of its employees.
- B It will increase the losses that workers will incur if they are dismissed for not working hard enough.
- C It will lead to the recruitment and retention of more highly talented workers.
- D It will strengthen the incentives for workers to increase their earnings.

**Q41 [O/N 2015/Q7]**

A fashion model is paid \$500 000 a year.

If the next best paid job he could get is as a teacher at \$100 000 a year, what are his transfer earnings and his economic rent?

	transfer earnings \$	economic rent \$
A	zero	400 000
B	100 000	400 000
C	400 000	zero
D	400 000	100 000

**Q42 [M/J 2016/Q14]**

A firm employs a worker who adds less to output than the previous worker employed.

What does this illustrate?

- A decreasing marginal costs
- B diseconomies of scale
- C increasing returns to scale
- D the law of diminishing returns

**Q43 [M/J 2016/Q15]**

To increase the number of cleaners at a local school from 10 to 11, the employer has to raise the hourly rate of pay from \$8.00 to \$8.50.

What is the marginal cost of labour per hour to the employer?

- A \$0.50
- B \$13.50
- C \$88.50
- D \$93.50

**Q44** [M/J 2016/Q16]

For a firm in imperfect competition, the marginal revenue product of labour at any given level of employment is equal to

- A marginal revenue divided by the number employed.
- B marginal revenue divided by the wage rate.
- C the marginal physical product of labour multiplied by marginal revenue.
- D the marginal physical product of labour multiplied by the wage rate.

**Q45** [O/N 2016/Q17]

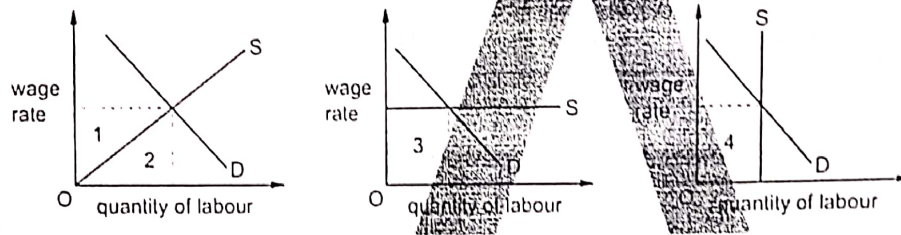
'The addition to revenue which results from employing one additional unit of a factor of production, the quantities of all other factors of production remaining constant'.

What does this define?

- A marginal factor cost
- B marginal revenue
- C marginal revenue product
- D the law of diminishing returns

**Q46** [O/N 2016/Q18]

18 The diagrams show the demand for and supply of labour



Which two areas represent economic rent?

- A 1 and 3
- B 1 and 4
- C 2 and 3
- D 2 and 4

**Q47** [O/N 2016/Q19]

The table shows the short-run production function of a firm with labour as the variable factor of production.

number of workers employed	total output per day
1	10
2	20
3	40
4	50
5	60

If workers are hired in a perfectly competitive labour market at a wage rate of \$50 per day, when will the labour cost per unit of output be at its lowest?

- A 2 workers
- B 3 workers
- C 4 workers
- D 5 workers

**Q48** [O/N 2016/Q20]

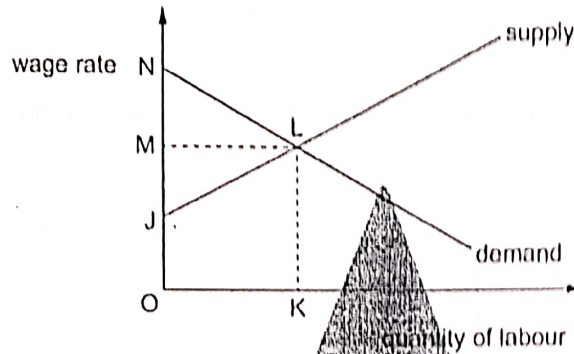
Over a given period the amount of overtime worked in manufacturing industry increases.

What is likely to be a consequence of this?

- A a decrease in employment
- B a decrease in the rate of inflation
- C a more rapid growth in average earnings than in hourly wage rates
- D a more rapid growth in manufacturing output than in productivity

**Q49** [M/J 2017/Q17]

The diagram shows the supply and demand situation in a particular labour market.



When the market is in equilibrium, which areas measure the economic rent and transfer earnings received by employees?

	economic rent	transfer earnings
A	JLN	OKLJ
B	JML	OKLJ
C	NML	OKLM
D	OKLM	NML

**Q50** [M/J 2017/Q18]

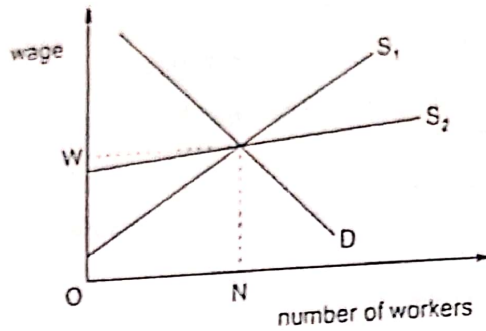
In 2015 a company drilling for oil wished to reduce its workforce because of a fall in the price of oil. The workers' trade union opposed the proposal.

Which situation would have helped the trade union in the negotiations?

- A Capital and labour were close substitutes.
- B The cost of labour had been a small percentage of total cost.
- C The demand for oil had been price inelastic.
- D There had been a large supply of labour.

**Q51 | [O/N 2017/Q18]**

The diagram represents the market for labour.



What would be the effect on transfer earnings and economic rent of a change in the supply curve from  $S_1$  to  $S_2$ ?

	transfer earnings	economic rent
A	fall	falls
B	fall	rises
C	rise	rises
D	rise	falls

**Q52 | [M/J 2018/Q14]**

The total cost to a school of employing ten cleaners is \$60 per hour.

The school estimates that the hourly marginal cost of employing an eleventh cleaner would be \$11.50.

By how much would the hourly wage have to increase to employ an additional cleaner?

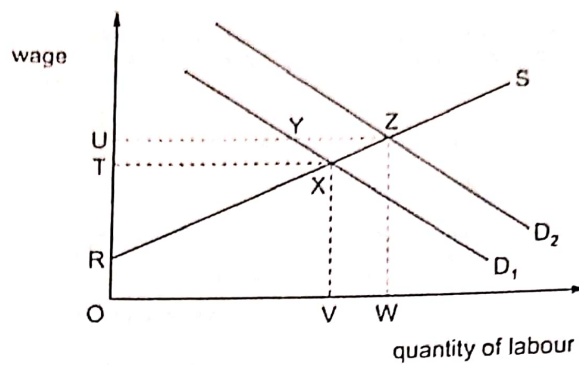
- A \$0.50      B \$0.65      C \$2.25      D \$11.50

**Q53 | [M/J 2018/Q15]**

What would cause a rise in the productivity of labour?

- A an increase in indirect taxes
- B an increase in the quality of capital
- C a rise in consumer surplus
- D a rise in the elasticity of supply of labour

Q54 [M/J 2018/Q16]

In the diagram  $D_1$  and  $S$  are the initial demand and supply curves for building workers.If the demand for building workers increases to  $D_2$  by how much does the economic rent earned by building workers rise?

- A RUZ      B TUZX      C VXZW      D XYZ

Q55 [O/N 2018/Q14]

What would help to explain why there was a reduction in wage inequality in a country during the post-2008 economic recession?

- A a decline in the share of wages in national output  
 B a decline in trade union bargaining power  
 C the existence of a minimum wage  
 D the trend towards later retirement

Q56 [O/N 2018/Q15]

How is marginal revenue product calculated?

- A marginal physical product  $\times$  marginal revenue  
 B marginal physical product  $\div$  price  
 C total physical product  $\times$  marginal cost  
 D total physical product  $\div$  marginal cost

Q57 [O/N 2018/Q16]

A firm currently employs 30 workers at a daily wage of \$50 each.

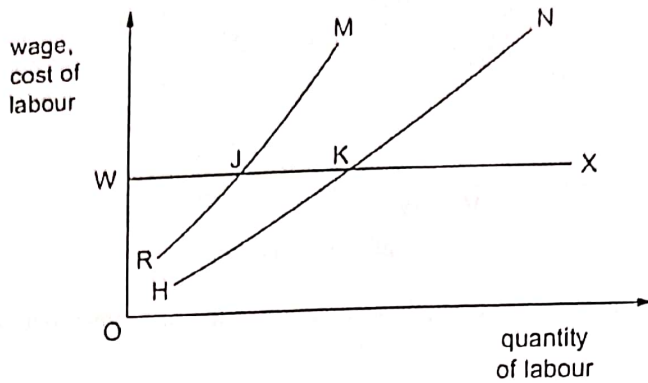
The marginal cost of employing one extra worker is \$112 per day.

By how much will the firm have to increase the daily wage in order to increase its labour force from 30 to 31 workers?

- A \$2      B \$4      C \$62      D \$112

**Q58** [O/N 2018/Q17]

In the diagram, HN is the initial supply of labour curve faced by a firm, and RM is its initial marginal cost of labour curve.



What will be the firm's new labour supply curve if the workers join a trade union and achieve a union negotiated wage, OW?

- A RJX      B HKX      C WJM      D WKN

**Q59** [O/N 2018/Q18]

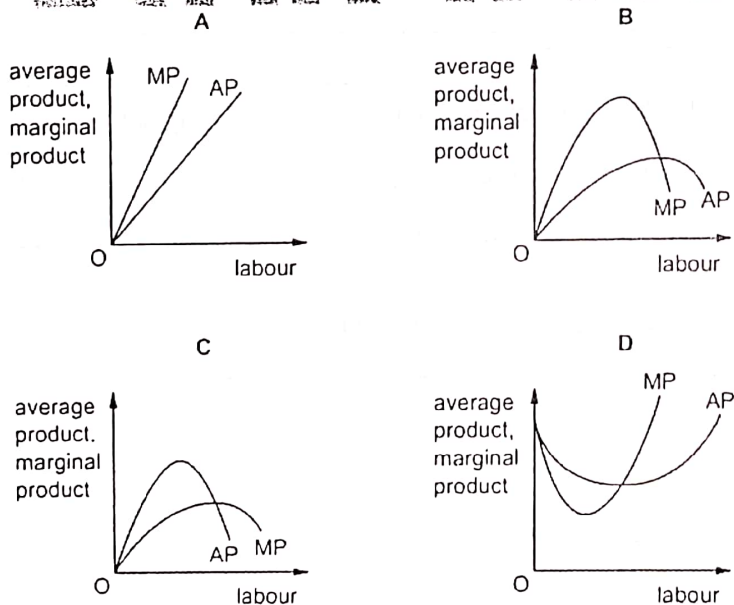
Output per worker in an industry increases more slowly than the industry's total output.

What could explain this?

- A a decrease in labour productivity  
 B an increase in employment  
 C an increase in overtime working  
 D an increase in the hourly wage rate

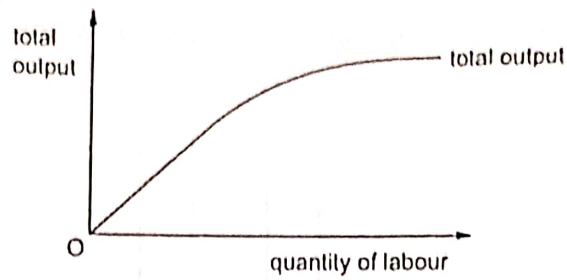
**Q60** [M/J 2019/Q16]

Which diagram correctly shows the relationship between the average product (AP) and the marginal product (MP) of labour, given that the quantities of other factor inputs remain constant?



**Q61** [M/J 2019/Q17]

The diagram shows the short-run relationship between the total output of a firm and the quantity of labour.



What can be concluded about the firm?

- A It is experiencing increasing returns to scale.
- B It is experiencing constant returns to scale.
- C The marginal physical product of capital is constant.
- D The marginal physical product of labour eventually diminishes.

**Q62** [M/J 2019/Q18]

Company X reduces its number of workers from 250 to 200 and as a result its output decreases from 5000 to 4800 units per day.

Company Y increases its number of workers from 800 to 1000 and as a result its output increases from 2000 to 2200 units per day.

What happens to labour productivity of the workers in the two companies?

	company X	company Y
A	falls	rises
B	rises	falls
C	rises	rises
D	falls	falls

**Q63** [O/N 2019/Q13]

The table shows the output of chairs at a factory when different numbers of workers are employed.

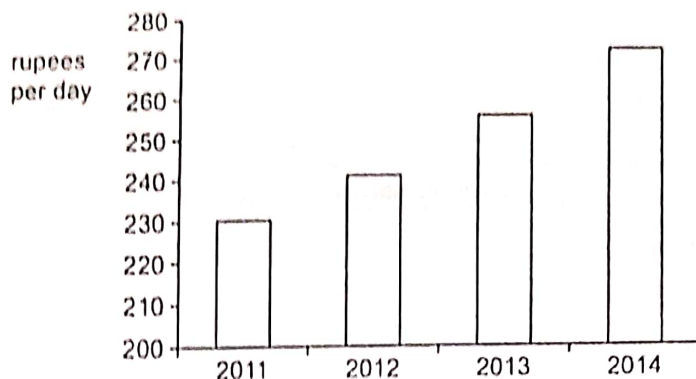
number of workers	0	1	2	3	4	5
number of chairs produced	0	7	17	26	34	40

When will diminishing marginal returns to labour set in?

- A When the second worker is employed.
- B When the third worker is employed.
- C When the fourth worker is employed.
- D When the fifth worker is employed.

**Q64** [O/N 2019/Q14]

The chart gives information about the average daily wage rate for all industries in India.



What could have caused this trend in wage rates?

- A an increase in capital-intensive production
- B an increase in the number of industrial workers
- C an increase in the number of people unemployed
- D an increase in the productivity of labour

**Q65** [O/N 2019/Q16]

There is a fixed supply of skilled workers in an industry. Firms can no longer find enough workers to meet their demand for labour.

What could be a solution to the problem?

- A Allow wage rates to fall as the market demands.
- B Introduce work-sharing and reduce working hours.
- C Make offices more attractive by adding air-conditioning.
- D Provide more training courses for new recruits.

**Q66** [O/N 2019/Q17]

A government is worried about the increasing monopsony power of employers in the wage bargaining process.

Which policy combination is most likely to improve the wages and employment prospects of workers?

	trade union powers	immigration controls	national minimum wage
A	strengthen	relax	cut
B	strengthen	strengthen	raise
C	weaken	relax	cut
D	weaken	strengthen	raise



# A2 – ECONOMICS (9708)

**MICRO**

**CHAPTER 5**

**Labor Market**

**ANSWERS**

## TOPIC 1: LABOR MARKET

Q1 | D

A profit maximizing firm would hire different inputs where:

$$[MPP_x / P_x] = [MPP_y / P_y]$$

Current employment gives the following

$2/5 < 8/10$ . Both the fractions are less than the value at which the firm sells its product hence we hire less of both the factors.

**Key Point:**

1. We hire more of that factor of production which has greater sign towards it. Like in the example above the greater sign was facing Y hence we hired more Y and less X.
2. Always check that the value of at least once fraction need to be above the market selling price which in this question is \$1, if that is not the case then we hire less of both the factors of production.

[M/J 2008/Q4]

Q2 | A

The excess that recording artists are paid over earnings from alternative occupation is going to decrease. In other words the economic rent that they were earning will fall.

**Key Point:**

1. Economics Rent: This is the amount paid to a factor of production above that which is necessary to keep it in its current use. In other words it is the amount over and above the transfer earning.
2. Transfer Earnings: This is the amount a factor of production must earn to keep it in its present usage.

[M/J 2008/Q5]

Q3 | A

STEP 1: Calculate the initial Total Cost:  $30 \times 40 = \$1200$

STEP 2: Calculated the new Total cost = \$1302 [ $1200 + 102$ ]. This is done by adding the marginal cost of extra labor into the total initial cost.

STEP 3: Since Wage Rate is equal to Average cost divide the new total cost by the amount of workers which are now 31: Wage Rate = AC, hence  $1302 / 31 = \$42$  the new wage rate.

Hence the daily wage rate needs to be increased by \$2.

[O/N 2008/Q5]

Q4 | C

When the industry's cost structure is capital intensive, because this shows that the labor costs are a small part of the total cost structure, hence trade unions enjoy bargaining power. Option A, B & D would weaken the bargain position. Option A will lead to companies shift to fire workers as they cannot afford to raise prices. Option B is incorrect because if the company faces foreign competition it cannot afford to fight with workers as they might restrict the production. Option D is incorrect because unskilled workers can be easily replaced.

[O/N 2008/Q6]

Q5 | C

Marginal cost is the different between the total cost of labor. Total Cost = No. of workers x wage

Total Cost before:  $100 \times \$400 = \$40,000$

Total Cost after:  $101 \times \$405 = \$40,905$

Hence the difference of \$905 is the marginal cost.

[M/J 2009/Q4]

Q6 | B

The demand curve for labor is also the marginal revenue product of labor  $MRP = MPP \times MR$ . A decrease in productivity reduces MPP hence shifts the demand curve. Option A is incorrect because if the immigration decreases the supply of labor falls as less people would enter the country. Option C is irrelevant. Option D is incorrect because wages cannot shift the curve (y-axis variable) they only cause movement on the curve.

[M/J 2010/Q3]

Q7 | D

An increase in supply will be due to decrease in the preference for leisure means a decrease in opportunity cost of work hence would increase the supply of labor. Option A is incorrect would result in a movement on the supply curve. Option B & C would shift the supply curve to the left.

[M/J 2010/Q4]

Q8 | B

Only when the firm is a monopsonist a bargain can result in an increase in wage rate and employment simultaneously. Option A & C are incorrect because they make the bargaining power of workers weak. In a perfectly competitive market trade unions negotiate a wage increase at the expense of workers. Option D is incorrect because the firms can easily replace workers with machines hence reducing the workers bargaining power.

[M/J 2010/Q5]

Q9 | B

A profit maximizing firm would hire different inputs where: \_\_\_\_\_

$$[MPP_x / P_x] = [MPP_y / P_y]$$

Current employment gives the following

$2/2.5 < 8/6$ . In order to equate the values the firm should hire less of X which increases  $MP_x$  and hence the value of left hand fraction and more of Y to decrease the  $MP_y$  and to decrease the value of the fraction.

**Key Point:**

1. We hire more of that factor of production which has greater sign towards it. Like in the example above the greater sign was facing Y hence we hired more Y and less X.
2. Always check that the value of at least once fraction need to be above the market selling price which in this question is \$1, if that is not the case then we hire less of both the factors of production.

[O/N 2010/Q4]

Q10 | D

Marginal cost is the different between the total cost of labor. Total Cost = No. of workers x wage

Total Cost before:  $100 \times \$300 = \$30,000$

Total Cost after:  $101 \times \$302 = \$30,502$

Hence the difference of \$502 is the marginal cost.

[O/N 2010/Q6]

Q11 | A

Economic rent is measured by the area above the supply curve and below the wage rate. At OW wage rate the worker obtains economic rent marked as X but triangle y remains unattainable at OW.

[O/N 2010/Q7]

Q12 | C

This is the wage rate adjusted for inflation. In other words the purchasing power of money wages.

**Key Point:** Any value that is "real" is adjusted for inflation.

[O/N 2010/Q15]

Q13 | D

Non-pecuniary benefits are also called non-monetary/on-financial rewards such as duration of annual leave, average length of working week or job security. From the data we can conclude that there are greater non-pecuniary advantages associated with occupation Y than X.

[M/J 2011/Q3]

Q14 | A

Whenever a minimum wage is introduced and it is above the equilibrium it is effective. On the wage curve OW the demand for labor is OL and the supply of labor is ON. Hence the distance between LN is the unemployment and since previously the employment was at OM and now it is OL.

[M/J 2011/Q6]

Q15 | B

Both a tax on wealth and proportional income tax are likely to affect the choices of number of hours people work and the proportion of income they save. Hence option A & D are incorrect. Option C is incorrect because an indirect tax on specific goods will distort the choices of goods.

[M/J 2011/Q12]

Q16 | A

Transfer earnings = 60,000  
Economic rent = 40,000 [100,000 – 60,000]

**Key Point:**

1. Economic Rent: This is the amount paid to a factor of production above that which is necessary to keep it in its current use. In other words it is the amount over and above the transfer earnings.
2. Transfer Earnings: This is the amount a factor of production must earn to keep it in its present usage.

[O/N 2011/Q5]

Q17 | C

The point where  $W = MRP$  would be the equilibrium point. Hence ON3

[M/J 2012/Q4]

Q18 | A

1. No. of Workers employed: A point where  $MC = MRP$  [N1]
2. Wage rate is determined: At a point where that quantity cuts the AC (S) curve. [W1]

**Key Point:**

1. Always remember first to check the equilibrium and then the wage rate.
2.  $W = S = AC$  [This will be the same for all market structures.]

[O/N 2012/Q4]

Q19 | C

A positive substitution effect outweighs the negative income effect.

**Common Mistake:** Some students choose option B because in the upper half the  $IE > SE$ . However this was incorrect. Which effect is greater has nothing to do with the nature of the effect. Substitution effect is always positive and income effect is always negative. In the upper half the negative effect is just stronger it does not change its nature.

[O/N 2012/Q5]

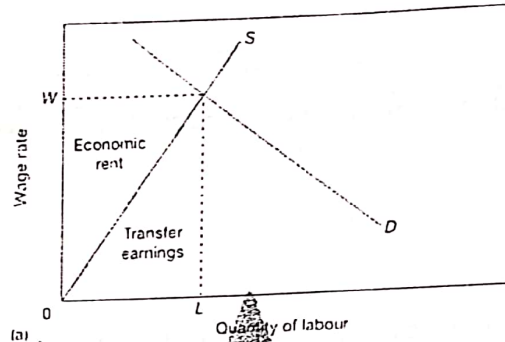
Q20 | B

Economic rent before the shift: Triangle RTX  
 Economics rent after the shift: Triangle RUZ

The net increase would be TXZU

**Key Point:**

1. Economics Rent: This is the amount paid to a factor production above that which is necessary to keep it in its current use. In other words it is the amount over and above the transfer earning.
2. Transfer Earnings: This is the amount a factor of production must earn to keep it in its present usage.



[O/N 2012/Q6]

Q21 | C

A profit maximizing firm would hire different inputs where:

$$[MPP_x / P_x] = [MPP_y / P_y]$$

Current employment gives the following

$3/5 < 12/10$ . In order to equate the values the firm should hire less of X which increases  $MP_x$  and hence the value of left hand fraction and more of Y to decrease the  $MP_y$  and to decrease the value of the fraction.

**Key Point:**

1. We hire more of that factor of production which has greater sign towards it. Like in the example above the greater sign was facing Y hence we hired more Y and less X.
2. Always check that the value of at least once fraction need to be above the market selling price which in this question is \$1, if that is not the case then we hire less of both the factors of production.

[M/J 2013/Q4]

Q22 | A

For questions that involve MRP and you are asked to calculate the missing value always remember to first write the MRP equation and try to find the missing values:

$$MRP = MPP \times MR$$

$$3.2 = 2 \times MR$$

$$MR = 1.6$$

Since in perfect competition the  $MR = AR = P$  hence the price of the product was \$1.6.

**Key Point:**

1. The  $MRP = W$  [Always true in perfect competition]
2.  $MR = AR = P$  [Always true in perfect competition]

[M/J 2013/Q5]

Q23 | B

Transfer earnings = 60,000  
 Economics rent = 40,000 [100,000 – 60,000]

**Key Point:**

1. Economics Rent: This is the amount paid to a factor production above that which is necessary to keep it in its current use. In other words it is the amount over and above the transfer earning.
2. Transfer Earnings: This is the amount a factor of production must earn to keep it in its present usage.

[M/J 2013/Q6]

Q24 | C

For questions that involve MRP and you are asked to calculate the missing value always remember to first write the MRP equation and try to find the missing values:

$$\text{MRP} = \text{MPP} \times \text{MR}$$

$$6.4 = \text{MPP} \times 1.6$$

$$\text{MPP} = 4$$

Since the MPP is 4 we will look at the graph and see that the number of man hours at 4 MPP would be 3000 man-hours.

**Key Point:**

1. The  $\text{MRP} = W$  [Always true in perfect competition]
2.  $\text{MR} = \text{AR} = P$  [Always true in perfect competition]

[O/N 2013/Q4]

Q25 | A

Increase in paid holidays would lead to increase labor cost thus shift the demand curve to the left. However more workers will be willing to work hence S curve will shift to the right.

[O/N 2013/Q5]

Q26 | D

Original Supply Curve = KHN

New Supply Curve = WKN

This is because when a wage is fixed till the point K the same wage would be charged hence

$W = AC = MC$ , however after this point the curve will resume its original form.

[O/N 2013/Q6]

Q27 | D

A decreased preference for leisure suggests an increased preference for work. Option A will bring a movement along the curve while B & C will shift the curve to the left.

[M/J 2014/Q4]

Q28 | C

The firm employs till the point where the  $W = \text{MRP}$  in perfect competition hence 5 labor.

[M/J 2014/Q5]

Q29 | C

An increase in minimum wage leads to unemployment, unless somehow the demand for labor is increased. Hence if the labor productivity is increased with it then the employment will increase.

[M/J 2014/Q6]

Q30 | B

Minimum acceptable amount is the transfer earnings and that is the area below the supply curve. Hence  $V + X$ .

[M/J 2014/Q8]

Q31 | A

**Pecuniary (Monetary) Advantages = \$750**  
Income = \$750

**Non-Pecuniary (Non-Monetary) Advantages = \$350**  
High Prestige of the Job = \$200  
Opportunity of Travel = \$100  
Short-Holidays = \$50

**Non-Pecuniary (Non-Monetary) Disadvantages = \$900**  
Dangerous working conditions = \$500  
Long working hours = \$250  
Cost of providing own uniform = \$150

Hence even though the non-pecuniary disadvantages are greater the person values the monetary rewards more.

**Key Point:** For a question like this always remember to separate the pecuniary, non-pecuniary advantages and disadvantages and then read the statements of the questions otherwise you will confuse yourself with the question.

[O/N 2014/Q4]

Q32 | D

Marginal cost is the difference between the total cost of labor. Total Cost = No. of workers x wage  
Total Cost before:  $100 \times \$500 = \$50,000$   
Total Cost after:  $101 \times \$502 = \$50,702$

Hence the difference of \$702 is the marginal cost

[O/N 2014/Q5]

Q33 | A

The supply curve indicates that at OW wage rate the worker chooses less than 40 hours therefore avoids triangular area X that represents negative economic rent at 40-hours week.

[O/N 2014/Q6]

Q34 | B

Only when the firm is a monopsonist a bargain can result in an increase in wage rate and employment simultaneously. Option A & C are incorrect because they make the bargaining power of workers weak. In a perfectly competitive market trade unions negotiate a wage increase at the expense of workers. Option D is incorrect because the firms can easily replace workers with machines hence reducing the workers bargaining power.

[O/N 2014/Q7]

Q35 | B

The unemployment level falls as now firms would be more inclined to hire these workers. The wages will increase as well as their demand will go up.

**Common Mistake:** Kindly read the question carefully it is only asking the impact on the workers under 21. The effect in both on their wages and the level of "unemployment".

[O/N 2014/Q16]

Q36 | D

For questions that involve MRP and you are asked to calculate the missing value always remember to first write the MRP equation and try to find the missing values:

$$\begin{aligned} \text{MRP} &= \text{MPP} \times \text{MR} \\ \text{MRP} &= 4 \times 1.6 \\ \text{MRP} &= 6.4 \end{aligned}$$

Since the  $\text{MRP} = \text{W}$  hence it would be \$6.4

**Key Point:**

1. The  $\text{MRP} = \text{W}$  [Always true in perfect competition]
2.  $\text{MR} = \text{AR} = \text{P}$  [Always true in perfect competition]

[M/J 2015/Q5]

Q37 | B

The area under the supply curve is the transfer earnings which is  $x + y$

**Key Point:**

1. Economics Rent: This is the amount paid to a factor of production above that which is necessary to keep it in its current use. In other words it is the amount over and above the transfer earning.
2. Transfer Earnings: This is the amount a factor of production must earn to keep it in its present usage.

[M/J 2015/Q6]

Q38 | D

A minimum wage above the market equilibrium wage causes demand for labor to contract therefore results in less employment. Hence these workers would lose their jobs.

[M/J 2015/Q15]

Q39 | B

Lower wages are compensated by non-monetary advantages; otherwise wage differentials will be eliminated by the movement of labor from low wage markets to those offer higher wages.

[O/N 2015/Q4]

Q40 | C

Because it will help to identify which produces how much in a given time.

[O/N 2015/Q6]

Q41 | B

$$\begin{aligned} \text{Transfer earnings} &= 100,000 \\ \text{Economics rent} &= 400,000 [500,000 - 100,000] \end{aligned}$$

**Key Point:**

1. Economics Rent: This is the amount paid to a factor of production above that which is necessary to keep it in its current use. In other words it is the amount over and above the transfer earning.
2. Transfer Earnings: This is the amount a factor of production must earn to keep it in its present usage.

[O/N 2015/Q7]

Q42 | D

When employing a successive worker and the next worker adds less than the previous one this is called the law of diminishing returns.

[M/J 2016/Q14]

Q43 | B

Marginal cost is the different between the total cost of labor. Total Cost = No. of workers x wage  
 Total Cost before:  $10 \times \$8 = \$80$   
 Total Cost after:  $11 \times \$8.5 = \$93.5$

Hence the difference of \$13.5 is the marginal cost.

[M/J 2016/Q15]



Q44 | C

MRP always equals to marginal physical product multiplied by the marginal revenue. This is true for all market structures.  
 $MRP = MPP \times MR$

[M/J 2016/Q16]

Q45 | C

MRP is the additional revenue which results from employing one additional unit of a factor of production.

**Common Mistake:** Some students choose option B thinking that additional revenue is the marginal revenue this was incorrect because marginal revenue is the revenue a firm gains from selling an additional unit, not by employing an additional quantity of labor.

[O/N 2016/Q17]

Q46 | B

Economic rent is the area above the supply curve and below the wage rate. Hence area 1 & 4.

[O/N 2016/Q18]

Q47 | B

For this question all the values need to be worked out:

No. of workers	Total Output	Wage	Total Cost	Labor Cost/unit
1	10	50	50	$50/10 = 5$
2	20	50	100	$100/20 = 5$
3	40	50	150	$150/40 = 3.75$
4	50	50	200	$200/50 = 4$
5	60	50	250	$250/60 = 4.16$

Hence at 3 number of workers the labor cost per unit was the lowest.

[O/N 2016/Q19]

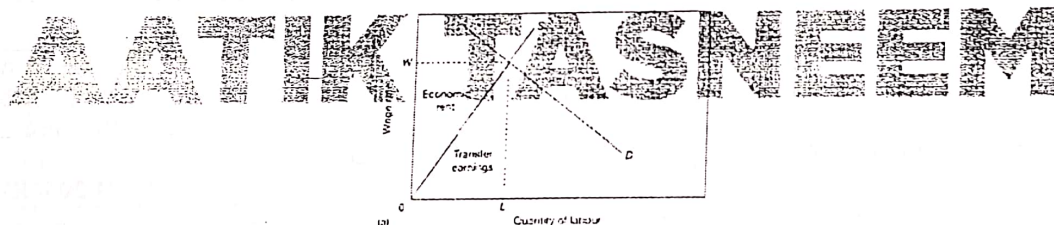
Q48 | C

Overtime wage rate is usually higher than the normal time wage rate hence the average earnings increased than in hourly wage rate.

[O/N 2016/Q20]

Q49 | B

**Economic Rent:** The triangle between the price and the supply curve. JML.  
**Transfer Earnings:** The area below the supply curve. OKLJ.



[M/J 2017/Q17]

Q50 | B

If the cost of labor is a small percentage then the union would have an advantage in negotiation as the union can argue that keeping workers does not affect the company's profits significantly.

Option A is incorrect because it keeps the demand for oil When the demand for oil is price inelastic the labor would also be inelastic and it would be easy for the union to exploit labor.

[M/J 2017/Q18]

Q51 | B

Economic Rent: Falls  
 Transfer Earnings: Rises

**Key Point:** Always remember the more inelastic the supply gets the high the higher the economic rent and lower the transfer earnings and vice versa.

[O/N 2017/Q18]

Q51 | D

Economic Rent: Falls  
Transfer Earnings: Rises

**Key Point:** Always remember the more inelastic the supply gets the higher the economic rent and lower the transfer earnings and vice versa.

[O/N 2017/Q18]

Q52 | A

Marginal cost is the different between the total cost of labor. Total Cost = No. of workers x wage

Total Cost before:  $10 \times \$6 = \$60$

Total Cost after a new worker =  $\$60 + \$11.5 = \$71.5$

Therefore  $71.5/11 = \$6.5$  is the new wage. Hence the wage rate needs to be increased by  $\$0.5$

[M/J 2018/Q14]

Q53 | B

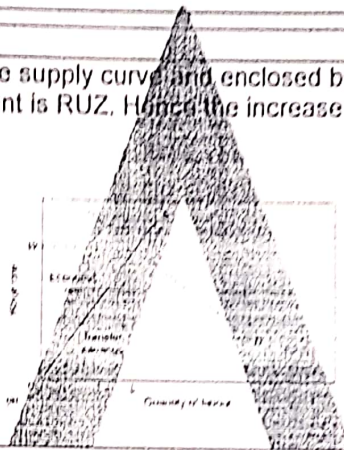
When the quality of capital improves the allows workers to specialize and hence with improve the labor productivity as well, Option A will reduce labor productivity, Option C & D are irrelevant.

[M/J 2018/Q15]

Q54 | B

Economic Rent is the area above the supply curve and enclosed by the price. Initially the economic rent was RTX. New the economic rent is RUZ. Hence the increase is TUZX.

**Key Point:**



[M/J 2018/Q16]

Q55 | C

A policy like minimum wage reduces the wage inequality. Option A is incorrect because a decline in share of wages will increase the inequality. Option B will make unions weak hence they won't be able to bargain which increases inequality. Option D will lead to more inequality because the later an individual retires higher the chance of pay increase due to experience.

[O/N 2018/Q14]

Q56 | A

$MRP = MPP \times MR$

[O/N 2018/Q15]

Q57 | A

Marginal cost is the different between the total cost of labor. Total Cost = No. of workers x wage

Total Cost before:  $30 \times \$50 = \$1500$

Total Cost after a new worker =  $\$1500 + \$112 = \$1612$

Therefore  $1612/31 = \$52$  is the new wage. Hence the wage rate needs to be increased by  $\$2$

[O/N 2018/Q16]

Q58 | D

The new supply would be a kink. It will remain flat till the point the new wage cuts the supply curve and then slope upwards. Hence it will be WKN.

[O/N 2018/Q17]

**Q59 | B**  
 This shows that the employment increased because, more the workers the greater the output however since output per worker was increasing more slowly this can only suggest that there were more workers which kept the ratio low. [O/N 2018/Q18]

**Q60 | B**  
 The relationship is where MP cuts the AP at its maximum. Hence option B. [M/J 2019/Q16]

**Q61 | D**  
 The gradient of the total product curve is the MPP. Hence we can see that total output rises with a constant rate and then eventually diminish. Hence if MPP is constant and then starts to fall. Hence option D is correct. Option A & B are incorrect because returns of scale cannot be calculated because for that we need % to input and % of respective output. Option C is incorrect because the TP starts to fall hence it can't remain constant for the entire output. [M/J 2019/Q17]

**Q62 | B**  
 Labor Productivity = Output / Labor  
 LP X Old = 5000/250 = 20  
 LP X New = 4800/200 = 24  
  
 LP Y Old = 2000/800 = 2.5  
 LP Y New = 2200/1000 = 2.2  
  
 Hence it increased for X and fell for Y. [M/J 2019/Q18]

**Q63 | B**  
 Diminishing marginal results set in when the marginal product starts to decline:

Number of Workers	Number of Chairs	Marginal Product
0	0	-
1	7	7
2	17	10
3	26	9
4	34	8
5	40	6

Hence when the third worker was employed the diminishing returns to labor set in. [O/N 2019/Q13]

**Q64 | D**  
 The trend shows that there is an increase in the wage rate every year. This could be because the labor has become more productive. Option A will decrease demand for labor and hence fall in wages. Option B will increase supply hence decrease in wages. Option C will reduce wages because there is excess supply. [O/N 2019/Q14]

**Q65 | D**  
 In times when the labor is limited the only way to meet the demand for labor is to improve the productivity of labor. Hence by training the same labor would be able produce the same level of output. Options A & B will not work because it will further enhance the problem because labor would be less productive. Option C will not work because the supply is limited and cannot increase. [O/N 2019/Q16]

Q66 | B

**Trade Union:** If trade unions are in power they will lead to an increase in wage rate and employment in the case of a monopsony.

**Immigration Controls:** Strengthen, because it will reduce the supply of labor and hence lead to a stronger wage rate.

**National Minimum Wage:** The government will increase it as this will improve the level of wages.

[O/N 2019/Q17]



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