



BK BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY | CO-ED DAY CUM BOYS' RESIDENTIAL
SCHOOL



MID-TERM EXAMINATION

CLASS XI – ECONOMICS

DATE: 11/10/2023

ANSWER KEY

1. (d) There is no opportunity cost. 1)
 2. (d) 33 units 1)
 3. (a) substitute goods 1)
 4. (C) If Assertion is true, but reason is false. 1)
 - 5.(A) If Both assertion and reason are true, and reason is the correct explanation of assertion. 1)
 6. (a) (-) 50% 1)
 7. d 1)
 8. (a) If Both assertion and reason are true, and reason is the correct explanation of assertion. 1)
 9. (c) Rs. 56 1)
 10. B 1)
 11. (b) Increase in supply 1)
 12. (b) rises 1)
 13. (b) Increase in supply 1)
- OR
- (d) All of these
 14. (c) Both (a) and (b) 1)
 15. (i) 0 quantity of tanks 1 + 1 + 1)
(ii) PPC will shift outward and combination G is now attainable
(iii) Combination F

OR

1. Microeconomics is the branch of Economics that is related to the study of individual, household and firm's behaviour in decision making and allocation of the resources. It comprises markets of goods and services and deals with economic issues.

Macroeconomics is the branch of Economics that deals with the study of the behaviour and performance of the economy in total. The most important factors studied in macroeconomics involve gross domestic product (GDP), unemployment, inflation and growth rate etc.

2. Microeconomics studies the particular market segment of the economy.

Macroeconomics studies the whole economy, that covers several market segments

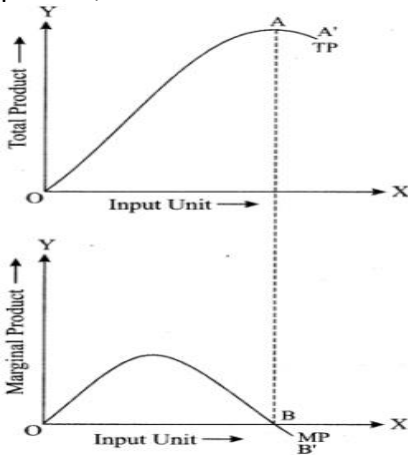
3. Microeconomics deals with various issues like demand, supply, factor pricing, product pricing, economic welfare, production, consumption, and more.

Macroeconomics deals with various issues like national income, distribution, employment, general price level, money, and more.

16. (i) TRUE. It is a case of perfectly inelastic demand 3)

(ii) FALSE. A rise in price of tea will increase the demand for coffee and the demand curve for coffee will shift towards the right.

17. (a) When TP of a variable factor reaches the maximum, the MP of the variable factor becomes zero. It is shown in the diagram below. When TP of a variable factor becomes maximum at point A, the MP of the variable factor touches the X-axis at point B.



(b) When TP of a variable factor falls, the MP of the variable factors becomes negative and the negative returns to factor set in. The situation is shown in the diagram. The TP falls between point A and A', and MP becomes negative between point B and B'.

18. Factors causing increase in demand. 4)

Any four points.

- a) Increase in the price of the substitute good.
- b) Fall in the price of the complementary good
- c) Increase in income of the consumer
- d) Favourable tastes and preferences
- e) Expectation of increase in price in future

19. Degrees of elasticity of demand: 4)

Price Elasticity of Demand

1. Perfectly elastic

2. Perfectly inelastic

3. Unitary elastic

4. Relatively elastic

5. Relatively inelastic

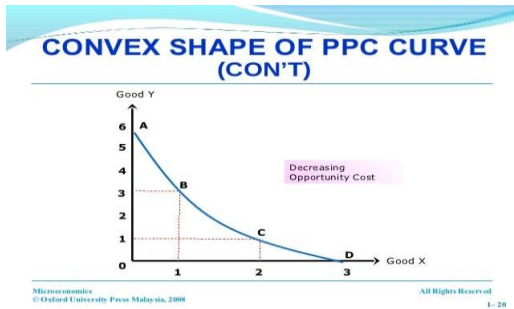
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20. (a)

1 X 4)

Possibility	A	B	C	D	E	F
Commodity X	20	14	9	5	2	0
Commodity Y	0	1	2	3	4	5
MRT	-	6:1	5:1	4:1	3:1	2:1

(b)



(c) PPF is convex due to decreasing MRT.

(d) State of technology remains fixed

All resources are fully and efficiently utilised

Resources are not equally efficient in the production of all products.

21. Complete the following table:

(4)

OUTPUT	AVC	TC	MC
1	20	60	20
2	18	76	16
3	18	94	18
4	20	120	26
5	22	150	30

22. (i) TRUE

2 + 2

When MC is less than AVC, AVC is falling.

(ii) TRUE

TFC is positive even at zero level of output.

OR

The following is the relationship between AR and MR under imperfect competition:

4)

1. AR and MR curves will be downward sloping from left to right.
2. MR is less than AR.
3. MR can be zero or negative but AR can never be zero or negative.
4. Rate of fall of MR is double to that of AR.

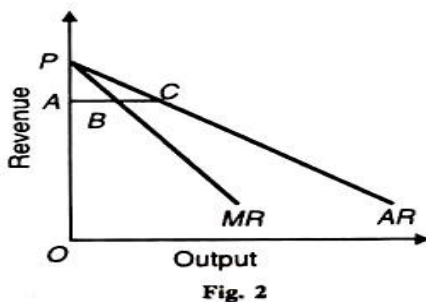


Table 32.1 : Under Pure Competition

Q	AR (=P) Rs	TR Rs	MR Rs
1	20	20	20
2	20	40	20
3	20	60	20
4	20	80	20
5	20	100	20
6	20	120	20

Table 32.2 : Under Monopoly

Q	AR (=P) Rs	TR Rs	MR Rs
1	20	20	20
2	18	36	16
3	16	48	12
4	14	56	8
5	12	60	4
6	10	60	0
7	8	56	-4

(3)

23. LAW OF DEMAND :The prices of the goods or services and their quantity demanded are inversely related when the other factors remain constant. (4)

This 'other things remaining the same' is called the assumptions of the law of demand.

1. No change in price of related commodities.
2. No change in income of the consumer.
3. No change in taste and preferences, customs, habit and fashion of the consumer.
4. No change in size of population
5. No expectation regarding future change in price

Exceptions of law of demand

Inferior goods/ Giffen goods

Some special varieties of inferior goods are termed as giffen goods. Cheaper varieties of goods like low priced rice, low priced bread, etc. are some examples of Giffen goods.

This exception was pointed out by Robert Giffen who observed that when the price of bread increased, the low paid British workers purchased lesser quantity of bread, which is against the law of demand. Thus, in case of Giffen goods, there is indirect relationship between price and quantity demanded.

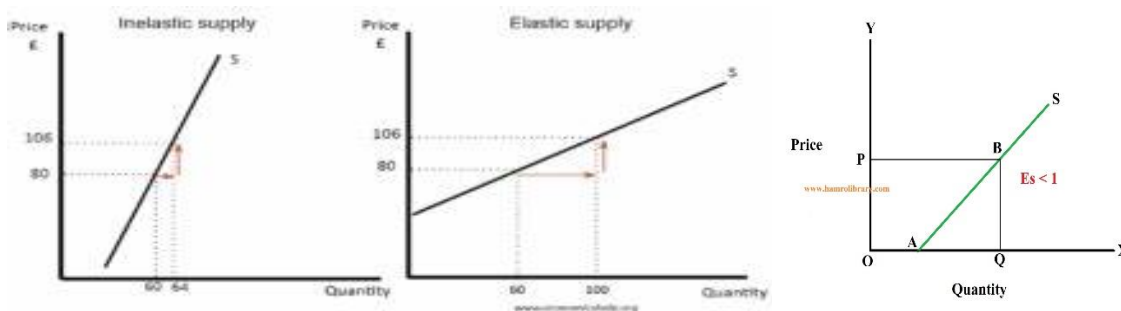
Goods having prestige value

This exception is associated with the name of the economist, T.Velben and his doctrine of conspicuous conception. Few goods like diamond can be purchased only by rich people. The prices of these goods are so high that they are beyond the capacity of common people. The higher the price of the diamond the higher the prestige value of it.

In this case, a consumer will buy less of the diamonds at a low price because with the fall in price, its prestige value goes down. On the other hand, when price of diamonds increase, the prestige value goes up and therefore, the quantity demanded of it will increase.

(b) $E.d = -(0.2) = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in price}}$ (2)
 $-(0.2) = X/ 5 = - 1\%$ Answer

24. (a) (2)



(b) The causes of increasing returns to a factor are as follows: (2)

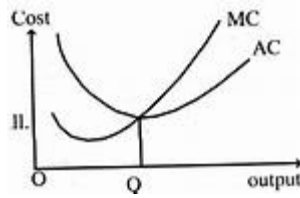
1. Complete utilisation of the fixed factor
2. Better coordination between factors
3. Division of labour and increase in efficiency of variable factors

(c) Perfect competition. Products are homogeneous and prices remain the same. (2)

OR

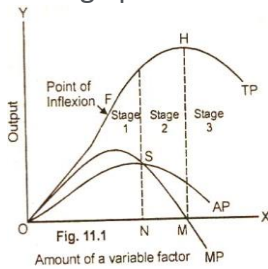
(4)

(a) (3)



They are U shaped due to the Law of variable proportions.
Returns and costs are two sides of the same coin.

(b) The point F where the total product stops increasing at an increasing rate and starts increasing at the diminishing rate is called the point of inflexion. At this point of inflexion marginal product is maximum, after which it slopes downward. The stage 1 ends where the average product curve reaches its highest point. (2)



(c) Average revenue is the revenue per unit of output sold. $AR = TR / Q$... (i) and that, $TR = P \times Q$... (ii) Where, $P =$ Price per unit and $Q =$ Quantity sold. Thus, AR is always equal to price. Q. (1)

SECTION – B STATISTICS

25. b) 11 (1)

26. (b) Median (1)

27. (b) Both the statements are false (1)

28. (b) $\sum X$ (1)

29. (c) 435 (1)

30. (b) If Both assertion and reason are true, but reason is not the correct explanation of assertion. (1)

31. (3)

Marks (X)	Mid-value $\left(m = \frac{l_1 + l_2}{2}\right)$	Frequency (f)	fm
0-10	5	5	25
10-20	15	7	105
20-30	25	18	450
30-40	35	15	525
40-50	45	5	225
		$\sum f = 50$	$\sum fm = 1330$

$$\bar{X} = \frac{\sum fm}{\sum f} = \frac{1330}{50} = 26.6$$

Arithmetic mean = 26.6

OR

Marks	Mid-value (m)	Frequency (f)	fm
0-2	1	5	5
2-4	3	15	45
4-6	5	10	50
6-8	7	10	70
8-10	9	10	90
		$\Sigma f = 50$	$\Sigma fm = 260$

$$\bar{X} = \frac{\Sigma fm}{\Sigma f} = \frac{260}{50} = 5.2$$

Thus, mean marks = 5.2

32. Mean = $\bar{x} = \frac{\Sigma x}{N}$

(4)

$$265 = \frac{\Sigma x}{40} = \frac{\Sigma x(\text{wrong})}{40} = 265 \times 40 = \underline{10600}$$

Correct value = 115

Incorrect value = 150

$$\frac{10600 + 115 - 150}{40} = \frac{10565}{40} = \underline{265.12} \text{ Answer}$$

OR

Here $N = 56$

$$M = \text{Size of } \left(\frac{N}{2}\right) \text{th item}$$

$$= \text{Size of } \left(\frac{56}{2}\right) \text{th item} = \text{Size of 28th item}$$

28th item lies in the group 30-60, hence median class is 30-60.

$$L_1 = 30, c.f = 20, f = 25, i = 30 (60 - 30 = 30)$$

$$M = L_1 + \frac{\frac{N}{2} - c.f}{f} \times i$$

$$= 30 + \left(\frac{28 - 20}{25}\right) \times 30 = 30 + \frac{240}{25} = 30 + 9.6 = 39.6$$

\therefore Median = 39.6

33. (a)

(3)

Marks in Mathematics		Marks in Economics		$D = (R_1 - R_2)$	D^2
X	R_1	Y	R_2		
85	2	60	2	0	0
60	5	48	6	-1	1
55	6	49	5	1	1
65	4	50	4	0	0
75	3	55	3	0	0
90	1	62	1	0	0
				$\Sigma D = 0$	$\Sigma D^2 = 2$

$$r_k = 1 - \frac{6 \Sigma D^2}{N^3 - N} = 1 - \left(\frac{6 \times 2}{6^3 - 6}\right) = 1 - \left(\frac{12}{210}\right) = 1 - 0.057 = 0.94$$

(6)

(b)

(3)

Marks in Economics			Marks in English			
X	$x = X - \bar{X}$	x^2	Y	$y = Y - \bar{Y}$	y^2	xy
4	-4	16	6	-4	16	16
6	-2	4	8	-2	4	4
8	0	0	10	0	0	0
10	2	4	12	2	4	4
12	4	16	14	4	16	16
$\Sigma X = 40$		$\Sigma x^2 = 40$	$\Sigma Y = 50$		$\Sigma y^2 = 40$	$\Sigma xy = 40$

$$\bar{X} = \frac{\Sigma X}{N}$$

$$= \frac{40}{5} = 8$$

$$\bar{Y} = \frac{\Sigma Y}{N}$$

$$= \frac{50}{5} = 10$$

Coefficient of correlation

$$r = \frac{\Sigma xy}{\sqrt{\Sigma x^2 \times \Sigma y^2}} = \frac{40}{\sqrt{40 \times 40}} = \frac{40}{40} = 1$$

34. (a)

(4)

Marks (X)	No. of Students (f)	In two's		In three's		
	Column I (f)	Column II (1+2)	Column III (2+3)	Column IV (1+2+3)	Column V (2+3+4)	Column VI (3+4+5)
0-10	5	5+6=11	6+10=16	5+6+10=21	6+10+4=20	10+4+7=21
10-20	6					
20-30	10					
30-40	4	10+4=14	4+7=11	4+7+3=14		
40-50	7					
50-60	3	7+3=10				

Table 2 : Analysis Table

Column No.	0-10	10-20	20-30	30-40	40-50	50-60
I			✓			
II			✓	✓		
III		✓	✓			
IV	✓	✓	✓			
V		✓	✓	✓		
VI			✓	✓	✓	
Total	1	3	6	3	1	-

Therefore, modal class is (20-30) as it is repeated for the maximum number of times i.e., for 6 times.

$$\text{Now, Mode}(Z) = L_1 + \frac{f_1 - f_0}{2f_1 - f_0 - f_2} \times i$$

where $L_1 = 20$, $f_1 = 10$, $f_0 = 6$, $f_2 = 4$, $i = 10$

$$Z = 20 + \left(\frac{10 - 6}{2 \times 10 - 6 - 4} \right) \times 10 = 20 + 4 = 24$$

So, Mode = 24

(7)

(b) (i) Mean = $A + \frac{\sum fd'}{\sum f} \times C$ **(2)**

(ii) Mode = 3Median – 2Mean

OR

(i) Mean = $\frac{\sum fm}{\sum f} = \frac{820}{26} = 31.5$ Answer **(2)**

(ii) Median = $L_1 + \frac{\frac{N}{2} - c.f}{f} \times i = 30 + \frac{(13-9)}{7} \times 10 = 30 + \frac{40}{7} = 30 + 5.71 = 35.71$ Answer **(2)**

(iii) Mode = 3 Median – 2 Mean **(2)**

$3(35.71) - 2(31.5)$

$107.13 - 63 = 44.13$ Answer

*****END*****