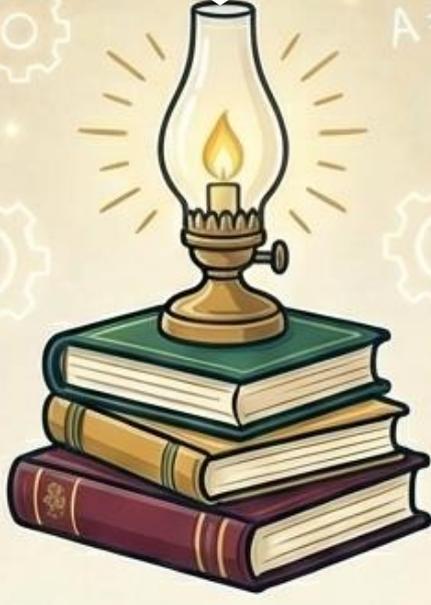




$$A = \frac{m}{(m^2 + c)^2}$$



NIOS PYQ's SOLUTIONS

$$fa = bc^2$$

$$\sqrt{h-x^2}$$

PREVIOUS YEARS' QUESTIONS & ANSWERS



APRIL-2024

Your Path to Success

SECTION - A

A.
B.
C.



Q1 - Which of the following is not a characteristic of arithmetic mean?

- (A) It is easy to calculate
- (B) It is not affected by extreme items
- (C) It cannot be calculated in the open-ended frequency distribution
- (D) All values in the series are used in its calculation

Answer - (B) It is not affected by extreme items.

Q 2 - The value that is repeated the highest number of times in a series is called

- (A) median
- (B) mode
- (C) mean
- (D) None of the above

Answer – (B) mode

Q 3 - Upward shift of production possibility curve shows

- (A) better utilisation of resources
- (B) growth of resources
- (C) fuller utilisation of resources
- (D) None of the above

Answer – (B) Growth of resources

Or

As we move to the right on a production possibility curve, the marginal rate of transformation

- (A) increases
- (B) decreases
- (C) remains constant
- (D) first increases then decreases

Answer – (A) increases.



Q 4 - Economic problems are faced by

- (A) only poor economies
- (B) developing economies
- (C) all economies
- (D) small economies

Answer – (C) all economies.

Q 5 - Which of the following statements about demand is correct?

- (A) Ram wants 1 kg of apples.
- (B) Ram purchased 2 kg of apples last week.
- (C) Ram purchased 2 kg of apples at a price of ₹ 10 per kg.
- (D) Last week Ram purchased 2 kg of apples at a price of ₹ 10 per kg.

Answer – (D) Last week Ram purchased 2 kg of apples at a price of ₹ 10 per kg.

Q 6 - Movement along a demand curve results due to

- (A) change in income of its buyer
- (B) change in price of the commodity
- (C) change in price of substitute goods
- (D) All of the above

Answer – (B) change in price of the commodity.

Q 7 - On a straight-line demand curve, elasticity of demand of its mid-point is

- (A) zero
- (B) greater than 1
- (C) less than 1
- (D) equal to 1

Answer – (D) equal to 1



Q 8 - Which of the following is a flow?

- (A) National Income (B) Wealth
(C) Money supply (D) All of the above

Answer – (A) National Income.

Or

Which of the following is a factor income?

- (A) Bonus (B) Wages
(C) Gifts (D) Both (A) and (B)

Answer – (D) Both (A) and (B).

Q 9 - In an economy, which of the following is consuming sector?

- (A) Household (B) Firm
(C) Rest of the world (D) All of the above

Answer – (A) Household.

Or

Which of the following is called marginal propensity to consume?

- (A) $\frac{C}{Y}$ (B) $\frac{\Delta C}{\Delta Y}$
(C) $\frac{\Delta Y}{\Delta C}$ (D) $\frac{\Delta C}{Y}$

Answer – (B) $\frac{\Delta C}{\Delta Y}$

Q 10 - Which of the following affects propensity to consume?

- (A) Rate of interest (B) Wealth
(C) Distribution of income (D) All of the above

Answer – (D) All of the above

Or



Which of the following is a correct measure of average propensity to save?

(A) $\frac{\Delta S}{\Delta Y}$

(B) $\frac{S}{Y}$

(C) $\frac{S}{\Delta Y}$

(D) None of the above

Answer – (B) $\frac{S}{Y}$

Q 11 - A movement to the right on a production possibility curve shows

- (A) better utilisation of resources
- (B) underutilisation of resources
- (C) fall in marginal rate of transformation
- (D) arise in marginal rate of transformation

Answer – (A) Better utilisation of resources

Q 12 - Market demand of a commodity is affected by

- (A) price of good
- (B) number of its buyers
- (C) distribution of income and wealth
- (D) All of the above

Answer – (D) All of the above

Or

Which of the following is an assumption of law of demand?

- (A) Price of other goods change
- (B) Income of the buyers does not change
- (C) Tastes of buyers change
- (D) Preferences of buyers change

Answer – (B) Income of the buyers does not change.



Q 13 - A movement along a demand curve takes place when

- (A) income of its buyers change (B) price of the commodity changes
(C) number of its buyers change (D) tastes of its consumers change

Answer – (B) Price of the commodity changes

Or

When price of a commodity and total expenditure on it are inversely related, then the demand for that commodity is

- (A) inelastic (B) more than unit elastic
(C) less than unit elastic (D) having to infinity

Answer – (B) More than unit elastic

Q 14 - Which of the following is an exception of law of demand?

- (A) Giffen goods (B) Status symbol goods
(C) Necessities (D) All of the above

Answer – (D) All of the above

Or

Which of the following will cause a rightward shift of demand curve?

- (A) Rise in income of its buyer (B) Fall in price of the good
(C) Fall in price of substitute good (D) None of the above

Answer – (A) Rise in income of its buyer.

Q 15 - Which of the following is not a fixed cost?

- (A) Purchase of raw material (B) Excise duty
(C) Transport charges (D) All of the above

Answer – (D) All of the above



Or

Average variable cost curve is

- (A) parallel to OX-axis (B) parallel to OY-axis
(C) negatively sloped (D) U-shaped

Answer – (D) U-shaped

Q 16 - Average cost rises when

- (A) marginal cost rises
(B) variable cost rises
(C) marginal cost is greater than average cost
(D) average fixed cost rises

Answer – (C) Marginal cost is greater than average cost

Or

Which of the following is the definition of supply of a commodity?

- (A) Quantity of a commodity that a firm wants to sell
(B) Quantity of a commodity that a firm wants to sell at a given price
(C) Quantity of a commodity that a firm wants to sell during a given period
(D) Quantity of a commodity that a seller is willing to sell at a given price during a given period

Answer – (D) Quantity of a commodity that a seller is willing to sell at a given price during a given period



Q 17 - Which of the following is not a cause of shift in supply curve to the right?

- (A) Increase in excise duty
- (B) Fall in prices of inputs
- (C) Use of better technology in production
- (D) Fall in the price of other related goods

Answer – (A) Increase in excise duty.

Q 18 - Which of the following factors affects the elasticity of supply of a commodity?

- (A) Nature of the good
- (B) Cost of production of additional unit of a good
- (C) Time period
- (D) All of the above

Answer – (D) All of the above

Q 19- A supply curve is parallel to OX-axis. The elasticity of supply on a point on it is

- (A) infinity
- (B) less than 1
- (C) zero
- (D) more than 1

Answer – (A) infinity

Q 20- Equilibrium price is the price at which

- (A) firms get maximum profit
- (B) buyers buy maximum quantity
- (C) demand and supply of the good are equal
- (D) maximum number of firms exists in the market

Answer – (C) Demand and supply of the good are equal



Q 21- Fill in the blanks with appropriate word :

- (a) Index number measures _____ changes. (relative, absolute)
- (b) In a weighted index number, weights are assigned to _____ items in the series. (all, selected)

Answer – (a) relative

(b) all

Q 22- Fill in the blanks with appropriate word(s) :

- (a) The measure of dispersion that is most influenced by _____ is called the range.
(extreme values, low values)
- (b) Median is _____ on all the values of a distribution. (based, not based)

Answer – (a) extreme values

(b) not based

Q 23- Fill in the blanks with appropriate word(s) :

- (a) When the demand of a commodity is _____, then its demand curve is rectangular hyperbola. (inelastic, unit elastic)
- (b) A fall in the price of good X results in a fall in demand of good Y. X and Y are _____. (substitute goods, complementary goods)

Answer – (a) unit elastic

(b) complementary goods.

Q 24- State whether the following statements are True or False :

- (a) Demand curve of a good shifts to the right when the price of the good falls.
- (b) When a fall in the price of a goods results in fall in total expenditure on it, then its elasticity of demand is less than one.



Answer – (a) False

(b) True

Q 25- State whether the following statements are True or False :

(a) TC curve and TFC curve start from the same point of OY-axis.

(b) When MC becomes equal to AC, then AC becomes constant and minimum.

Answer – (a) True

(b) True

Q 26- Fill in the blanks with appropriate word(s) :

(a) If two supply curves intersect each other, then the elasticity of supply at a _____ supply curve is more. (steeper, flatter)

(b) When supply of the commodity rises without a change in its price, then it is called _____. (expansion of supply, increase in supply)

Answer – (a) flatter

(b) increase in supply

Or

Categorize the following statements into True and False :

(a) Supply curve of a commodity can never be negatively sloped.

(b) Expansion of supply means a rightward shift of supply curve.

Answer – (a) True

(b) False

Q 27- Fill in the blanks with appropriate word :

(a) Expenditure on defence is _____ expenditure. (revenue, capital)

(b) Repayment of loans is _____ expenditure. (revenue, capital)



Answer – (a) revenue

(b) capital

Or

Fill in the blanks with appropriate word(s) :

(a) Bank rate is determined by _____. (Central Bank, Commercial Bank)

(b) _____ in LRR reduces the credit creation capacity of banks. (Increase, Decrease)

Answer – (a) Central Bank

(b) Increase

Q 28- State whether the following statements are True or False :

(a) Fiscal deficit equals total budgeted expenditure less total budgeted receipts.

(b) Primary deficit equals revenue deficit in interest payments.

Answer – (a) True

(c) False

Or

Classify the following statements into True or False :

(a) Commercial banks are controlled by the government.

(b) An increase in bank rate reduces money supply.

Answer – (a) False

(b) True

Q 29- State whether the following statements are True or False :

(a) Difference between National Income and Domestic Income is called factor income from abroad.

(b) National Income is the sum of factor incomes and non-factor incomes.



Answer – (a) True

(b) False

Or

Fill in the blanks with appropriate word :

(a) Expenditure on purchase of furniture by household is _____ expenditure.

(consumption, investment)

(b) Taxes are _____ payments. (factor, transfer)

Answer – (a) Consumption

(b) Transfer

Q 30- Write for each of the following whether it is included or not included in the calculation of National Income :

(a) Purchase of sewing machine by a household

(b) Sale of old newspapers

Answer – (a) It Will be included in national income.

(b) It Will not be included in national income.

Or

State whether the following statements are True or False :

(a) Salary by a foreigner working in India is treated as factor income to abroad.

(b) Salary of an Indian working in a branch of Foreign Bank in India is a part of domestic income.

Answer – (a) True

(b) True



Q 31- Fill in the blanks with appropriate word(s) :

- (a) Whether a good is a final good or an intermediate good depends on its_____.
(quality, use)
- (b) Value added = Value of output- _____. (Depreciation, Intermediate consumption expenditure)

Answer – (a) use

(b) Intermediate consumption expenditure

Or

State whether the following equations are correct or wrong :

- (a) Net factor income from abroad = Foreign income - Domestic income
- (b) Net value added at market tax = Gross value added at market price - Indirect taxes

Answer – (a) Wrong

(b) Wrong

Q 32- Which of the following should be included in calculation of National Income?

- (a) Commission paid to the broker for purchase and sale of second-hand goods.
- (b) Production for self-consumption

Answer – (a) Included

(b) Included

Or

Fill in the blanks with appropriate word(s) :

- (a) Expenditure on intermediate goods _____ included in National Income.
(should be, should not be)
- (b) Employing a domestic servant is a part of _____ sector. (secondary, tertiary)



Answer – (a) should not be

(b) tertiary

Q 33- Fill in the blanks with appropriate word :

(a) Under _____, demand curve of a firm is perfectly elastic.

(b) Under _____, sellers are interdependent.

Answer – (a) Perfect competition

(b) Oligopoly

Or

Classify the following statements into True and False :

(a) Product is homogenous under all types of markets.

(b) Demand curve of a firm is negatively sloped under all types of markets.

Answer – (a) False

(b) False

Q 34 - Fill in the blanks with appropriate word(s)/number :

(a) If 50% of additional income is spent on consumption, MPC equals (1, 0.5)

(b) If both income and savings increase by 100%, then APC _____. (remains constant, changes)

Answer – (a) 0.5

(b) remains constant

Q 35 - Classify the following statements into True or False :

(a) When Y is zero, C is also zero.

(b) Savings can never be negative.

Answer – (a) False

(c) False



SECTION - B

Q 36 - Why does an economic problem arise in an economy? Explain.

Answer – An economic problem arises in an economy because human wants are unlimited while resources are limited. Since resources have alternative uses (e.g., land for farming or a factory), society must choose the best possible use.

Or

What happens to the production possibility curve when there is growth of resources in an economy? Explain.

Answer – When there is growth of resources in an economy, the Production Possibility Curve shifts outward (to the right).

- **Increase in Production Capacity** : More resources like labor, capital, or natural resources increase production ability.
- **Rightward Shift**: PPC shifts outward (to the right), indicating more goods and services can be produced.

Q 37 - Explain any two properties of production possibility curve.

Answer – **Two properties of Production Possibility Curve (PPC):**

1. **Downward Sloping**: It slopes from left to right because resources are limited. To produce more of one good, some of the other must be sacrificed.
2. **Concave to the Origin**: Its curved shape is due to **increasing opportunity cost**, as resources are not equally efficient for all goods.

Or

Explain the problem of 'what to produce'.

Answer – An economy must decide which goods consumer, capital, or war-related to produce and in what quantities, given the limited nature of resources. Striking a balance

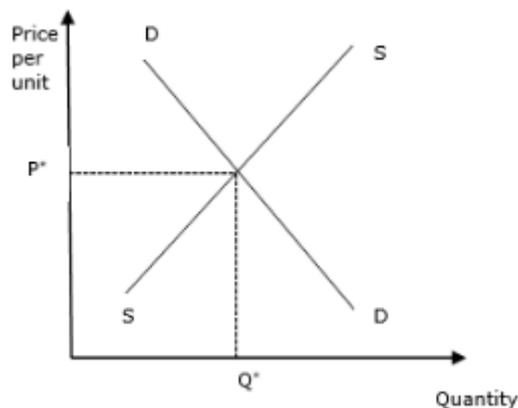


between immediate needs and future development is vital, as increasing the output of one good inevitably reduces the availability of others.

Q 38 - Under perfect competition, who determines the price of the product and what is the shape of the demand curve?

Answer –

In a perfectly competitive market, the industry determines the price where demand meets supply. Individual firms are "**price takers**" and must follow this rate. Consequently, their demand curve is a horizontal straight line, showing perfectly elastic demand at the fixed market price.



Q 39 - When does a situation of excess supply of a commodity arise in the market? What is its effect on price of a commodity?

Answer – Excess supply occurs when the quantity supplied of a commodity exceeds the quantity demanded at a given price. This leads to unsold goods in the market, prompting sellers to reduce prices to clear surplus stock, resulting in a fall in the commodity's price.

Or

How an equilibrium price of a commodity determined under perfect competition?

Answer – Under perfect competition, the equilibrium price is determined at the level where the quantity **demand by buyers is equal to the quantity supplied** by sellers. At this price, the market is balanced and there is no surplus or shortage of the commodity.



Q 40 - State any two factors that influence the elasticity of supply of a commodity.

Answer– Two factors that influence the elasticity of supply of a commodity are:

1. **Nature of the commodity:** Perishable goods (**like vegetables**) have inelastic supply as they cannot be stored, whereas durable goods have more elastic supply.
2. **Time period:** Supply is inelastic in the short run but becomes more elastic in the long run as producers adjust resources.

Or

State any two causes of a rightward shift of supply curve of a commodity.

Answer– Two causes of a rightward shift of the supply curve of a commodity are:

1. **Decrease in production costs** – cheaper raw materials or wages allow producers to make more at the same price.
2. **Better technology** – improved methods or machines increase production efficiency, boosting supply.

Q 41 - There are two Sections A and B of Class X in a school. In Section A has 20 students and their average age is 15 years. Section B also has 20 students and their average age is 17 years. These two Sections are merged into one. What is the average age of students in the combined Section?

Answer– 1. **Given :**

- **Section A:** 20 students, average age = 15 years
- **Section B:** 20 students, average age = 17 years

2. Find total age of each section:

- Section A total age = $20 \times 15 = 300$ years
- Section B total age = $20 \times 17 = 340$ years

3. Combine the two sections:

- Total students = $20 + 20 = 40$



- Total age = 300 + 340 = 640 years

4. Average age of combined section:

$$\text{Average age} = \frac{\text{Total age}}{\text{Total students}} = \frac{640}{40} = 16 \text{ years}$$

Answer : 16 years

Q 42 - Find the mode of 12, 15, 18, 17, 18, 19, 18, 9.

Answer– Given :

12, 15, **18**, 17, **18**, 19, **18**, 9

Count how many times each number appears:

9 → 1 time

12 → 1 time

15 → 1 time

17 → 1 time

18 → 3 times

19 → 1 time

- 18 appears 3 times, more than any other number.

Mode = 18

Q 43 - State the relationship between total expenditure and price elasticity of demand.

Answer– The relationship between total expenditure and price is that total expenditure changes depending on the price elasticity of demand:

The relationship can be broken down into three distinct cases:

1. Elastic Demand ($E_d > 1$) : TE and price move in opposite directions; a price drop increases total spending..



2. Inelastic Demand ($E_d < 1$): TE and price move in the same direction; consumers spend more when price rises.

3. Unitary Elastic Demand ($E_d = 1$)

When demand is unitary, the percentage change in quantity exactly offsets the percentage change in price.

Or

State the law of demand and three reasons for its operation.

Answer– The Law of Demand states that, all other factors being equal, price and quantity demanded have an inverse relationship.

Three Reasons for its Operation:

- 1. Law of Diminishing Marginal Utility:** Extra satisfaction falls with each additional unit, so consumers buy more only if price drops.
- 2. Income Effect:** Lower prices increase real income, allowing more purchases without extra money.
- 3. Substitution Effect:** Cheaper goods replace costlier alternatives; e.g., Pepsi cheaper than Coke.

Q 44 - What was Barter system of exchange? State any three demerits of the system.

Answer– **Barter System of Exchange:**

It was a system in which people exchanged goods and services directly for other goods and services without using money.

Three demerits (disadvantages) of the Barter System:

- 1. Double coincidence of wants:** Trade occurs only if both want each other's goods.
- 2. Difficult to measure value:** It's hard to decide how much of one thing is equal to another thing.



3. Problem of storing wealth: Some goods can't be kept for a long time because they spoil or decay.

Or

State the difference between quantitative and qualitative methods of credit control. State any two instruments of each of these methods.

Answer– Difference between Quantitative and Qualitative Methods of Credit Control:

1. Quantitative methods control total money/credit in the economy, affecting all.

Two instruments of quantitative:

- **Bank Rate:** Interest rate set by central bank to control credit.
- **Cash Reserve Ratio (CRR):** Banks must keep portion of deposits with central bank.

2. Qualitative methods control credit use, targeting specific sectors or purposes.

Two instruments of qualitative methods:

- **Credit Rationing:** Limiting loans to specific sectors to control credit usage.
- **Directives to Banks:** Central bank instructs banks whom and how to lend.

Q 45 - Explain any four factors that determine supply of a commodity.

Answer– Factors Determining Supply :

The supply of a commodity is determined by the following four factors:

1. Price of the Commodity: Higher prices increase supply, while lower prices reduce it.

2. Price of Inputs (Production Costs): Rising production costs lower profits, decreasing supply.

3. State of Technology: Improved technology reduces costs, making production more profitable and increasing supply.

4. Government Policy (Taxes & Subsidies): Higher taxes reduce supply, while subsidies lower costs and encourage producers to increase supply.



Or

A supply curve of a commodity passes through the origin. Prepare a supply schedule of such a commodity.

Answer– When a supply curve passes through the point of origin (0,0) (and is a straight line), it means that the price elasticity of supply is equal to unity ($E_s = 1$). This implies that the quantity supplied of a commodity increases in the exact same proportion as its price increases.

A hypothetical supply schedule for this situation is given below :

Price of Commodity (₹ per unit)	Quantity Supplied (Units)
0	0
10	100
20	200
30	300
40	400

Verification of Unitary Elasticity

We can verify this schedule using the formula of the percentage method :

$$E_s = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

If we observe the change between the price of ₹10 and ₹20 :

- $\Delta P = 10$
- $\Delta Q = 100$
- $P = 10$
- $Q = 100$

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



Since the answer is 1, it proves that this is a unitary elastic supply curve passing through the origin.

Q 46 - What is fiscal policy? Explain any two fiscal measures.

Answer– Fiscal policy is the government’s budget policy. It uses taxation and government spending to control demand in the economy and maintain stability, employment, and control inflation.

Two Fiscal Measures:

- 1. Taxation Policy:** Taxes are the primary source of revenue for the government. The government can change tax rates to regulate the disposable income of citizens.
- 2. Government Expenditure (Public Spending):** This refers to the money spent by the government on public works (roads, bridges), subsidies, health, and education.

Q 47 - In an economy, minimum consumption expenditure ₹ 500 crores and MPS = 0.2. If the income in this economy is ₹ 5,000 crores, what will be the consumption expenditure?

Answer – Given :

1. Minimum Consumption Expenditure (Autonomous Consumption, \bar{C}) : ₹ 500 Crores
2. Marginal Propensity to Save (MPS) : 0.2
3. Income (Y) : ₹ 5,000 Crores

Step 1 : To find the Marginal Propensity to Consume (MPC)

We know that $MPC + MPS = 1$.

$$MPC = 1 - MPS$$

$$MPC = 1 - 0.2 = 0.8$$



Step 2: To calculate Consumption Expenditure (C) The formula for the Consumption Function is :

$$C = \bar{C} + (MPC \times Y)$$

By putting the values :

$$C = 500 + (0.8 \times 5000)$$

$$C = 500 + 4000$$

$$C = 4500$$

Answer : The total consumption expenditure in the economy will be ₹ 4,500 Crores.

Q 48 - From the following data, calculate Paasche's index number :

$$\Sigma p_1 q_0 = 200, \quad \Sigma p_0 q_0 = 80, \quad \Sigma p_1 q_1 = 192, \quad \Sigma p_0 q_1 = 60$$

Answer –

The formula for finding Paasche's Price Index is as follows :

$$P_{01} = \frac{\Sigma p_1 q_1}{\Sigma p_0 q_1} \times 100$$

Given Data :

$$\Sigma p_1 q_1 = 192$$

$$\Sigma p_0 q_1 = 60$$

By putting the values :

$$P_{01} = \frac{192}{60} \times 100$$

$$P_{01} = 3.2 \times 100$$

$$P_{01} = 320$$

Answer : The Paasche's Index is 320.



Q 49 - Calculate National Income from the following data :

	₹
	(in '00 crore)
(i) Compensation of employees	2,000
(ii) Profits	400
(iii) Rent	75
(iv) Interest	90
(v) Dividends	50
(vi) Mixed income of self-employe	3,000
(vii) Net factor income from abroad	-80
(viii) Net indirect taxes	60

Answer – Calculation of National Income

According to the Income Method, we first calculate the Net Domestic Product at Factor Cost (NDP_{FC}) and then add the Net Factor Income from Abroad (NFIA) to obtain the National Income (NNP_{FC}).

Step 1: Calculation of Net Domestic Product at Factor Cost (NDP_{FC})

$NDP_{FC} = \text{Compensation of Employees} + \text{Operating Surplus} + \text{Mixed Income of Self-Employed}$

Here, Operating Surplus = Profit + Rent + Interest

- Compensation of Employees = 2,000
- Operating Surplus (400 + 75 + 90) = 565
- Mixed Income of Self-Employed = 3,000

$$NDP_{FC} = 2,000 + 565 + 3,000$$

$$NDP_{FC} = 5,565 \text{ (in hundred crores)}$$



Step 2: Calculation of National Income (NNP_{FC})

National Income = NDP_{FC} + Net Factor Income from Abroad (NFIA)

- NDP_{FC} = 5,565
- Net Factor Income from Abroad = -80

$$\text{National Income} = 5,565 + (-80)$$

$$\text{National Income} = 5,565 - 80$$

$$\text{National Income} = 5,485$$

Answer : The National Income is ₹ 5,485 hundred crores (or ₹ 5,48,500 crores).

Or

From the following data, calculate Personal Disposable Income :

	₹ (in '00 crore)
(i) Private income	3,000
(ii) Net factor income from abroad	-100
(iii) Corporation tax	70
(iv) Savings of private corporate sector	50
(u) Direct taxes paid by household	60
(vi) Other miscellaneous receipts of the Government	10

Administrative Departments**Answer – Steps of Calculation**

To arrive at Personal Disposable Income, we must first convert 'Private Income' into 'Personal Income' and then deduct the relevant taxes.



Step 1 : Calculation of Personal Income

Personal Income is obtained by deducting Corporation Tax and Corporate Savings (Undistributed Profits) from Private Income.

Personal Income = Private Income – Corporation Tax – Savings of Private Corporate Sector

- Private Income = 3,000
- Corporation Tax = 70
- Savings of Private Corporate Sector = 50

$$\text{Personal Income} = 3,000 - 70 - 50$$

$$\text{Personal Income} = 2,880 \text{ (in hundred crores)}$$

Step 2 : Calculation of Personal Disposable Income

Disposable income is obtained by deducting direct personal taxes and other miscellaneous administrative receipts (fees, fines, etc.) from Personal Income.

Personal Disposable Income = Personal Income – Direct Taxes Paid by Households - Miscellaneous Receipts of Govt. Departments

- Personal Income = 2,880
- Direct Taxes paid by Households = 60
- Miscellaneous Receipts of Government Departments = 10

$$\text{Personal Disposable Income} = 2,880 - 60 - 10$$

$$\text{Personal Disposable Income} = 2,810$$

Final Answer

The Personal Disposable Income is **₹ 2,810 hundred crores** (or ₹ 2,81,000 crores).



Q 50 - Calculate Arithmetic Mean from the following data :

Marks	Number of Students
0-20	30
20-40	36
40-60	45
60-80	27
80-100	12

Answer – Calculation of Arithmetic Mean

To calculate the Mean (\bar{X}), we will use the Direct Method. The formula is :

$$\bar{X} = \frac{\sum fm}{N}$$

Where :

- m = Mid-point of the class interval
- f = Number of students (Frequency)
- N = Total frequency ($\sum f$)

Calculation Table :

Marks (Class Interval)	Mid-point (m)	Number of Students (f)	$f \times m$
0 - 20	10	30	300
20 - 40	30	36	1080
40 - 60	50	45	2250
60 - 80	70	27	1890
80 - 90	90	12	1080
Total		$N = 150$	$\sum fm = 6600$

Calculation :

1. Total Frequency (N) : $30 + 36 + 45 + 27 + 12 = 150$
2. Sum of fm ($\sum fm$) : $300 + 1080 + 2250 + 1890 + 1080 = 6600$



By putting the values in the formula :

$$\bar{X} = \frac{6600}{150}$$

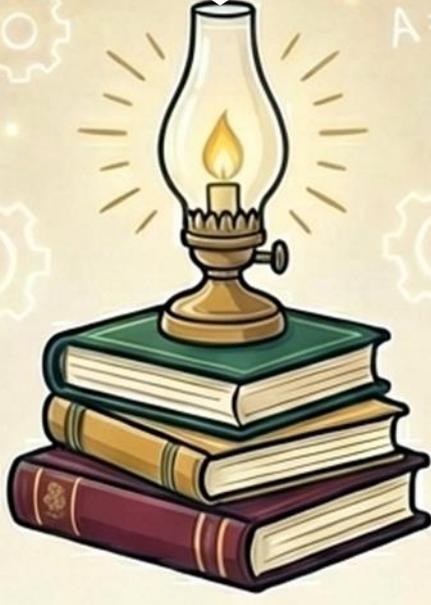
$$\bar{X} = 44$$

Answer: The Arithmetic Mean of this data is **44**.





$$A = \frac{m}{(m^2 + c)^2}$$



NIOS PYQ's SOLUTIONS

$$\sqrt{a} = bc^2$$

$$\sqrt{h-x^2}$$

PREVIOUS YEARS' QUESTIONS & ANSWERS



OCTOBER-2024

Your Path to Success

SECTION -A



Q1 - A and B are substitute goods. An increase in price of A will lead to _____.

- (A) increase in demand for B.
- (B) decrease in demand for B.
- (C) a very little change in demand for B.
- (D) no change in demand for B.

Answer - (A) increase in demand for B.

Q 2 - Supply curve of a commodity is normally :

- (A) positively sloped
- (B) negatively sloped
- (C) parallel to OX-axis
- (D) parallel to OY-axis

Answer – (A) positively sloped.

Q 3 - If A and B are complementary goods then increase in price of A will lead to :

- (A) increase in demand for B
- (B) decrease in demand for B
- (C) no change in demand for B
- (D) any one of the above

Answer – (B) decrease in demand for B

Or



Q 4 - Average propensity to consume is equal to :

- (A) $\frac{C}{Y}$ (B) $\frac{Y}{C}$ (C) $\frac{\Delta C}{\Delta Y}$ (D) $\frac{\Delta Y}{\Delta C}$

Answer – (A) $\frac{C}{Y}$

Q 5 - Which of the following is included in National Income ?

- (A) Receipts from sale of old newspapers
(B) Sale of old house
(C) Gifts received from employer
(D) None of the above

Answer – (D) None of the above

Q 6 - Which of the following is a country's National Income ?

- (A) GNP @ f.c (B) NNP @ mp
(C) NDP @ f.c (D) NNP @ f.c

Answer – (D) NNP @ f.c

Q 7 - Which of the following statements are true ?

- (A) Consumption expenditure can never be zero.
(B) Value of investment multiplier (k) can never be less than 1.
(C) Consumption curve touches OY-axis.
(D) All the above.

Answer – (D) All the above.



Q 8 - Which of the following equations is correct ?

- (A) Indirect Taxes-Direct Taxes=Subsidies
- (B) Indirect Taxes-Subsidies=Net Indirect Taxes
- (C) Direct Taxes +Subsidies = Net Direct Taxes
- (D) None of the above

Answer – (B) Indirect Taxes-Subsidies=Net Indirect Taxes

Q 9 - Revenue expenditure creates :

- (A) Liability
- (B) Asset
- (C) Both asset and liability
- (D) None of the above

Answer – (D) None of the above.

Q 10 - Which of the following is a Stock ?

- (A) Income
- (B) Savings
- (C) Wealth
- (D) None of the above

Answer – (C) Wealth.

Q 11 - Which of the following supply curves have elasticity of supply > 1 ?

- (A) Supply curve passing through the origin
- (B) Supply curve cutting OX-axis
- (C) Supply curve cutting OY-axis
- (D) None of the above

Answer – (C) Supply curve cutting OY-axis



Q 12 - Product is homogenous under :

- (A) Perfect competition (B) Monopolistic competition.
(C) Both (A) and (B) (D) None of the above.

Answer – (A) Perfect competition.

Q 13 - When the demand of a goods 'increases', demand curve :

- (A) Shifts to the right.
(B) Shifts to the left.
(C) Does not shifts but there is downward movement along the curve.
(D) there is no change in demand curve.

Answer – (A) Shifts to the right.

Q 14 - A supply curve parallel to OY-axis is :

- (A) elastic supply curve. (B) inelastic supply curve.
(C) perfectly elastic supply curve. (D) perfectly inelastic supply curve.

Answer – (D) perfectly inelastic supply curve.

Q 15 - The firm has to accept the price determined by the industry under :

- (A) Oligopoly (B) Perfect competition
(C) Monopolistic competition (D) All the above

Answer – (B) Perfect competition.

Q 16 - Which of the following is a direct tax ?

- (A) Excise duty (B) Wealth tax
(C) Income Tax (D) All of the above

Answer – (C) Income Tax



Q 17 - The value of Investment Multiplier (k) depends upon :

- (A) value of APC. (B) value of APS.
(C) value of MPC. (D) savings.

Answer – (C) value of MPC.

Q 18 - A point inside a production possibility curve shows :

- (A) growth of resources
(B) under utilisation of resources
(C) overutilisation of resources
(D) change in technique of productions

Answer – (B) under utilisation of resources

Q 19 - Which of the following correctly defines Law of demand ?

- (A) When price falls demand rises.
(B) Price and demand of a good are inversely related.
(C) Price and demand move in same direction.
(D) Other things remaining the same, there is inverse relationship between price and demand of a commodity.

Answer – (D) Other things remaining the same, there is inverse relationship between price and demand of a commodity.

Q 20 - 'Inter-dependence' is the feature of this type of market :

- (A) Perfect competition (B) Monopoly
(C) Monopolistic competition (D) Oligopoly

Answer – (D) Oligopoly.



Q 21 - Fill in the blanks :

In a government budget, the receipt that either creates a liability or reduces assets is called _____ receipt, while the one which neither creates a liability nor reduces assets is called _____.

Answer – Capital, Revenue

Q 22 - _____ is an example of direct tax while _____ is an example of indirect tax.

Answer – Income Tax, GST (Goods and Services Tax)

Q 23 - Measure of value is the _____ function while store of value is the _____ function

Answer – Primary, Secondary

Q 24 - _____ is an example of real flow while _____ is an example of money flow in an economy.

Answer – Flow of goods and services, Flow of Money

Q 25 - State True or False :

(i) Stationary purchased by an office is a final good.

(ii) Sugar purchased by a shopkeeper is an intermediate good.

Answer – (i) False

(ii) True

Q 26 - Fill in the blanks :

(i) Gross Indirect Tax-Net Indirect Tax = _____

(ii) Gross Domestic Product-Net Domestic Product = _____

Answer – (i) Subsidies

(ii) Consumption of fixed capital (Depreciation)



Q 27 - 'Increase' in demand of a good leads to _____ in equilibrium price and _____ in equilibrium demand.

Answer – Increase, Increases

Q 28 - State True or False :

(i) Demand curve of a firm under perfect competition is perfectly inelastic.

(ii) Demand curve of a firm under monopolistic competition is perfectly elastic.

Answer – (i) False

(ii) False

Q 29 - Excess demand in a perfectly competitive market occurs _____ the equilibrium price while excess supply occurs _____ the equilibrium price.

Answer – below, above

Q 30 - State True or False :

(i) Giffen goods do not follow the Law of Demand.

(ii) Normal goods follow the Law of Demand.

Answer – (i) True

(ii) True

Q 31 - When price of a commodity falls _____ income of the consumer _____.

Answer – Real, increases

Q 32 - Goods which are used together are called _____ goods, while the goods which can be used in place of one another are called _____ goods.

Answer – Complementary, Substitute



Q 33 - Fill in the blanks :

- (i) Demand curve parallel to X-axis shows perfectly _____ demand.
- (ii) Degree of responsiveness of demand to a price change is called price _____ of demand.

Answer – (i) Elastic

(ii) Elasticity

Q 34 - State True or False :

- (i) If with change in price total expenditure on the good also moves in the same direction, the demand for the good is elastic.
- (ii) Price elasticity of demand (-2) is higher than price elasticity (-1).

Answer – (i) False

(ii) True

Q 35 - Fill in the Blanks :

Supply of a commodity is the _____ offered for sale at a price during a _____ of time.

Answer – Quantity, period

SECTION - B

Q 36 - State the assumptions of law of Supply.

Answer – The Law of Supply assumes that "other things remain constant". Key assumptions are:

1. Price of related goods should not change.
2. Prices of factors of production (inputs) must remain constant.



3. Technology of production should not change.
4. Government taxation policy should remain unchanged.

Q 37 - State any four factors that can cause a rightward shift of supply curve.

Answer – A rightward shift (increase in supply) happens due to:

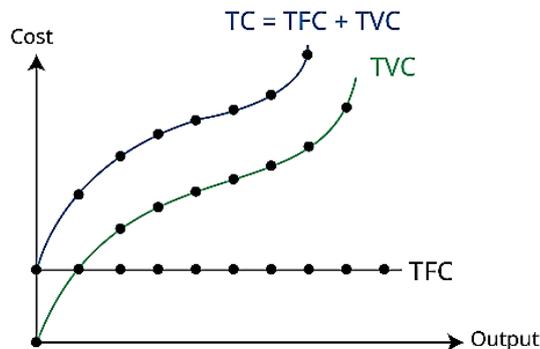
1. Fall in the price of inputs (raw materials, wages).
2. Improvement in technology (reduces cost).
3. Decrease in excise duty or taxes by the government.
4. Fall in the price of other related goods (making the current good more profitable).

Q 38 - Draw :

(i) Total cost curve.

(ii) Total variable cost curve of a firm in a single dia

Answer –



Q 39 - Explain the meaning of optimum utilisation resources.

Answer – Optimum utilisation means using resources in the most efficient way so that there is no wastage. It implies that resources are employed fully to produce the maximum possible output without being idle or under-utilised.

Or



Explain the meaning of growth of resources.

Answer – Growth of resources refers to increase in quantity or quality of resources like labour, capital and technology, which enables an economy to produce more goods and services and shifts the production possibility curve outward.

Q 40 - Define Median. Write the formula to calculate it in individual and Discrete series.

Answer – It is the middle value of a series when arranged in ascending or descending order. It divides the distribution into two equal parts.

Individual Series: Size of $\left(\frac{N+1}{2}\right)^{\text{th}}$ item.

Discrete Series: Value corresponding to the cumulative frequency of $\left(\frac{N+1}{2}\right)^{\text{th}}$ item.

Or

Explain two characteristic of Index Number.

Answer – Two characteristics of Index Numbers are :

- 1. Index numbers are specialised** averages used to measure relative changes in prices, quantities or values over a period of time.
- 2. They are expressed in percentage form** and are useful for comparing economic data between two different periods.

Q 41 - In a factory, there are 15 skilled and 10 unskilled workers. Their daily wage is Rs. 500 and Rs. 400 respectively. Find the average daily wage of these 25 workers.

Answer – Given : **Skilled Workers:** 15, **Wage:** 500

Unskilled Workers : 10, **Wage :** 400

$$\begin{aligned}\text{Total wages} &= (15 \times 500) + (10 \times 400) \\ &= 7500 + 4000 = 11,500\end{aligned}$$

$$\text{Total workers} = 25$$



Average daily wage = $11,500 \div 25 = ₹460$

Q 42 - Explain when can a production possibility curve be a straight line.

Answer – A production possibility curve is a straight line when the opportunity cost of producing goods is constant. This happens when resources are perfectly substitutable and equally efficient in production of both goods.

Q 43 - State any four precautions that should be taken while estimating National Income by production method.

Answer – Precautions while estimating National Income by production method are :

- 1. Sale of second-hand goods:** Should not be included as their value was counted when they were new.
- 2. Intermediate goods:** Value of intermediate goods (raw materials) must not be included to avoid double counting. Only final goods are counted.
- 3. Production for self-consumption:** Value of goods produced for self-consumption (like by farmers) should be included.
- 4. Imputed rent:** Imputed rent of owner-occupied houses should be included.

Q 44 - Calculate National Income :

	(₹ '000)
(i) Interest	100
(ii) Wages and Salaries	900
(iii) Compensation of Employees	1050
(iv) Rent	300
(v) Net Indirect Taxes	100
(vi) Net factor Income from abroad	(-)50
(vii) Profits	400
(viii) Consumption of fixed capital	50
(ix) Employees contribution to social security	150



Answer – Calculation of National Income

According to the Income Method, to calculate National Income (NNP_{FC}), we first determine the Net Domestic Product at Factor Cost (NDP_{FC}).

Step 1: Calculation of Net Domestic Product at Factor Cost (NDP_{FC}).

$NDP_{FC} = \text{Compensation of Employees} + \text{Operating Surplus} + \text{Mixed Income of Self-Employed}$

- Compensation of Employees** : 1,050 Wages & salaries and employers' contribution are already included in this).
- Operating Surplus** : Interest + Rent + Profit
 - प्रचालन अधिशेष = $100 + 300 + 400 = 800$
- Mixed Income of Self-Employed** : Not given in the question (assumed to be 0).

$$NDP_{FC} = 1,050 + 800 + 0$$

$$NDP_{FC} = 1,850 \text{ (in ₹ '000)}$$

Step 2: Calculation of National Income (NNP_{FC}).

National Income = $NDP_{FC} + \text{Net Factor Income from Abroad (NFIA)}$

- $NDP_{FC} = 1,850$
- Net Factor Income from Abroad (NFIA) = (-) 50

$$\text{National Income} = 1,850 + (-50)$$

$$\text{National Income} = 1,850 - 50$$

$$\text{National Income} = 1,800$$

Final Answer : The National Income is ₹ 1,800 ('000) or ₹ 18,00,000.

Q 45 - Calculate arithmetic mean from the following data :

Marks	Number of Students
0- 20	10
20 – 40	20
40 – 60	15
60 – 80	5



Answer –

Class (Marks)	Mid-Value (m)	Frequency (f)	fm
0-20	10	10	100
20-40	30	20	600
40-60	50	15	750
60-80	70	5	350
Total		$\Sigma f = 50$	$\Sigma fm = 1800$

Formula: $\bar{X} = \frac{\Sigma fm}{\Sigma f}$

Calculation = $\frac{1800}{50} = 36$

Arithmetic Mean is **36**.

Q 46 - Complete the following table :

Output	Total cost	Marginal cost	Average variable cost
0	20	---	---
1	30	---	---
2	38	---	---
3	44	---	---
4	52	---	---



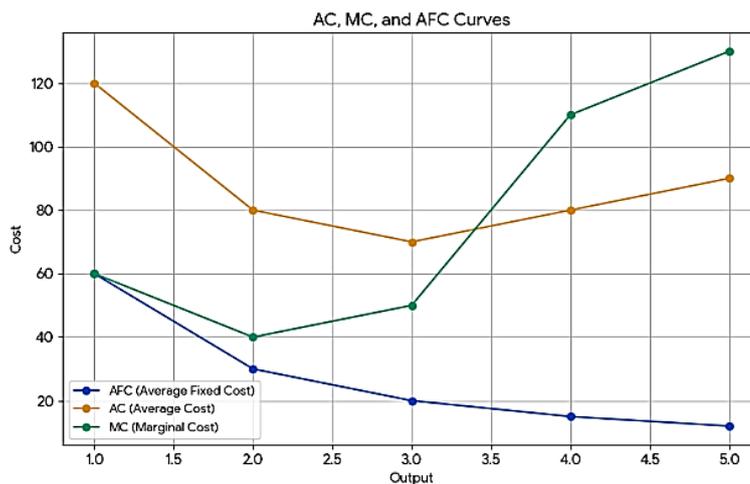
Answer –

Output	Total cost	Marginal cost	Average variable cost
0	20	-	-
1	30	$30 - 20 = 10$	$10/1 = 1$
2	38	$38 - 30 = 8$	$18/2 = 9$
3	44	$44 - 38 = 6$	$24/3 = 8$
4	52	$52 - 44 = 8$	$32/4 = 8$

Or

Draw a diagram showing AC curve, MC curve and AFC curve. Explain their relationship.

Answer – Relationship between AC, MC, and AFC



Explanation of Relationship:

1. AC and MC: The Marginal Cost (MC) curve cuts the Average Cost (AC) curve from below at its minimum point.

- When **MC < AC**, AC falls.
- When **MC > AC**, AC rises.
- When **MC = AC**, AC is at its minimum constant.

2. AC and AFC: AC is the sum of Average Fixed Cost (AFC) and Average Variable Cost (AVC) ($AC = AFC + AVC$). Therefore, the AC curve always lies above the AFC curve.



Q 47 - Explain the role of the Central bank as banker :**(i) To the Government****(ii) To the Commercial banks****Answer –**

(i) Banker to Government: The Central Bank (RBI) maintains accounts for the government, accepts deposits, and makes payments on its behalf. It also manages public debt and gives advice on financial matters.

(ii) Banker to Commercial Banks:

- **Custodian of Cash Reserves:** Commercial banks keep a part of their deposits (CRR) with the Central Bank.
- **Lender of Last Resort:** If banks face a financial crisis and fail to get funds from anywhere else, the Central Bank provides them loans.

Or

Explain 'providing employment' objective of Budgetary policy**Answer – Employment objective of budgetary policy are :**

- 1. Increase in public expenditure** on development projects creates direct employment opportunities.
- 2. Reduction in taxes** increases purchasing power and demand, which encourages firms to expand production.
- 3. Promotion of infrastructure projects** like roads, railways and power generates large-scale employment.
- 4. Support to industries and MSMEs** through subsidies and incentives helps in creating long-term employment.



Q 48 - In an economy $mpc = 0.8$ and autonomous consumption is Rs. 500. Calculate its consumption expenditure if its level of income (Y) is Rs. 10,000.

Answer – Given:

MPC (b) = 0.8

Autonomous Consumption (a) = 500

Income (Y) = 10,000

Formula: $C = a + bY$

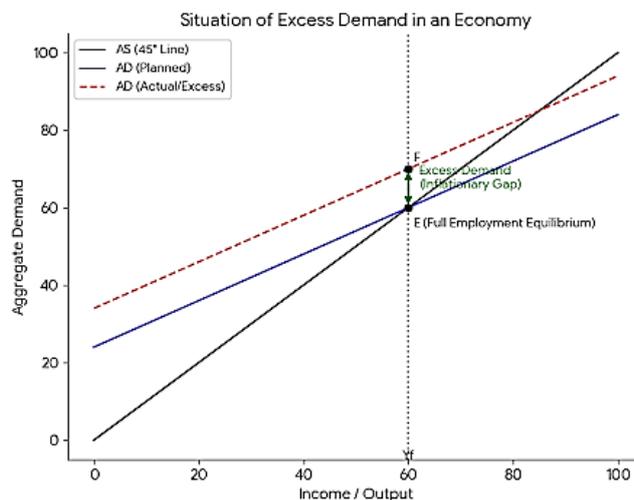
Calculation: $C = 500 + 0.8(10,000)$ $C = 500 + 8,000$ $C = 8,500$

Consumption Expenditure is **Rs. 8,500.**

Or

Show the situation of excess demand in an economy with the help of a diagram.

Answer – Excess Demand in an Economy:



1. Excess demand occurs when aggregate demand is greater than aggregate supply at a given price level.
2. At the prevailing price, quantity demanded exceeds quantity supplied.
3. Consumers compete for limited goods, which creates pressure on prices to rise.



4. Prices continue to increase until aggregate demand becomes equal to aggregate supply, restoring equilibrium.

Q 49 - Following table shows the marks obtained by 5 students in English and Economics.

	1	2	3	4	5
Marks in English	14	11	10	18	9
Marks in Economics	12	15	8	16	10

Calculate Rank correlation.

Answer –

Calculation Table :

Student	English (X)	Rank (R ₁)	Economics (Y)	Rank (R ₂)	Difference d = (R ₁ - R ₂)	d ²
1	14	2	12	3	-1	1
2	11	3	15	2	1	1
3	10	4	8	5	-1	1
4	18	1	16	1	0	0
5	9	5	10	4	1	1
Total						$\sum d^2 = 4$

Steps of Calculation :

1. Number of observations (n) : 5
2. Sum of squares of differences in ranks ($\sum d^2$) : 1 + 1 + 1 + 0 + 1 = 4

Formula for Rank Correlation :

$$r_s = 1 - \frac{6\sum d^2}{n(n^2 - 1)}$$

By putting the values :

$$r_s = 1 - \frac{6 \times 4}{5(5^2 - 1)}$$



$$r_s = 1 - \frac{24}{5(25 - 1)}$$

$$r_s = 1 - \frac{24}{5(24)}$$

$$r_s = 1 - \frac{1}{5}$$

$$r_s = 1 - 0.2$$

$$r_s = 0.8$$

Conclusion :

There is a high degree of positive rank correlation (0.8) between the marks obtained in English and Economics. This indicates that students who performed well in English also tended to perform well in Economics.

Q 50 - Calculate Laspeyer's Price Index.

Commodity	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	2	8	4	10
B	4	12	5	14
C	6	10	2	8
D	8	22	6	12

Answer – Calculation Table :

Commodity	P ₀	Q ₀	P ₁	Q ₁	P ₁ × Q ₀	P ₀ × Q ₁
A	2	8	4	10	32	16
B	4	12	5	14	60	48
C	6	10	2	8	20	60
D	8	22	6	12	132	176
Total					Σp ₁ q ₀ = 244	Σp ₀ q ₁ = 300

Laspeyres' Index Formula :

$$P_{01} = \frac{\Sigma p_1 q_0}{\Sigma p_0 q_0} \times 100$$



By putting the values :

$$P_{01} = \frac{244}{300} \times 100$$

$$P_{01} = \frac{244}{3}$$

$$P_{01} = 81.33$$

The Laspeyres' Price Index is **81.33**.

Or

Calculate Consumer Price Index for the year 2010 on the basis of year 2005

Commodity	Weight	Price (2005)	Price (2010)
A	20	30	45
B	30	20	25
C	50	10	15

Answer – Calculation Table :

First, we will calculate the **Price Relative (I)** for each commodity.

Formula for Price Relative (I) : $I = \frac{P_1}{P_0} \times 100$

Commodity	Weight (W)	Price 2005 (P ₀)	Price 2010 (P ₁)	Price Relative ($I = \frac{P_1}{P_0} \times 100$)	IW
A	20	30	45	$\frac{45}{30} \times 100 = 150$	$150 \times 20 = 3000$
B	30	20	25	$\frac{25}{20} \times 100 = 125$	$125 \times 30 = 3750$
C	50	10	15	$\frac{15}{10} \times 100 = 150$	$150 \times 50 = 7500$
Total	$\Sigma W = 100$				$\Sigma IW = 14250$



Formula for Consumer Price Index (CPI) :

$$CPI = \frac{\Sigma IW}{\Sigma W}$$

By putting the values :

$$CPI = \frac{14250}{100}$$

$$CPI = 142.5$$

The Consumer Price Index for the year 2010 is **142.5**.

Conclusion : This means that compared to the year 2005, there has been an increase of **42.5%** in consumer prices in 2010.

