NIOS PYQ's SOLUTIONS

PREVIOUS YEARS' QUESTIONS & ANSWERS

APRIL-2025

Your Path to Success

SECTION - A

Q1 - The most commonly used measure of central tendency is

(A) arithmetic mean **(B) median**

(C) mode **(D) quartile**

Answer – (A) arithmetic mean

Q2 – The symbol σ stands for

(A) mean deviation **(B) standard deviation**

(C) average deviation **(D) step deviation**

Answer - (B) standard deviation

Q3 - The distribution of output relates to which of the following central problems?

(A) What to produce **(B) How to produce**

(C) For whom to produce **(D) None of these**

Answer - (C) For whom to produce

Q4 - Resources grow when their

(A) physical availability increases **(B) quality improves**

(C) Both (A) and (B) **(D) Neither (A) nor (B)**

Answer - (C) Both (A) and (B)

Q5 - Production possibility curve slopes

(A) downwards **(B) upwards**

(C) parallel to X-axis **(D) parallel to Y-axis**

Answer - (A) downwards

Q6 - When income changes, demand for a good

(A) may rise **(B) may fall**

(C) may rise or may fall **(D) None of these**

Answer - (C) may rise or may fall

Q7 - The measure of price elasticity of demand of a normal good

(A) is positive **(B) is negative**

(C) can be positive or can be negative **(D) is perfectly elastic**

Answer - (B) is negative

Q8 - The average fixed cost curve is

(A) parallel to X-axis **(B) parallel to Y-axis**

(C) downward sloping **(D) upward sloping**

Answer - (C) downward sloping

Q9 - The law of supply is based on the assumption that supply changes only due to change in

(A) price of the given good **(B) cost**

(C) price of other goods **(D) All of these**

Answer - (A) price of the given good

Q10 - The marginal cost curve is

(A) U-shaped **(B) inverse U-shaped**

(C) downward sloping **(D) upward sloping**

Answer - (A) U-shaped

Q11 - 'Homogeneous product' is the feature of

(A) perfect competition **(B) monopoly**

(C) monopolistic competition **(D) oligopoly**

Answer - (A) perfect competition

Q12 - In case of excess demand of a product

(A) price rises

(B) demand contracts

(C) supply expands

(D) All of these

Answer - (A) price rises

Q13 - 'Group behaviour' is the feature of?

(A) oligopoly

(B) monopolistic competition

(C) perfect competition

(D) None of these

Answer - (A) oligopoly

Q14 - Interest which is included in national income is the income of those who provide funds to

(A) production units

(B) individuals

(C) government

(D) All of these

Answer - (A) production units

Q15 - As per psychological law of consumption, as income increases, consumption also increases but at a

(A) lower rate

(B) higher rate

(C) same rate

(D) Any one of these

Answer - (A) lower rate

Q16 - The value of multiplier equals

(A) $\frac{1}{1-MPC}$

(B) $\frac{1}{1-MPS}$

(C) $\frac{1}{MPC}$

(D) $\frac{1}{MPS-1}$

Answer - (A) $\frac{1}{1-MPC}$

Q17 - The most important measure of money supply is

(A) M_1

(B) M_2

(C) M_3

(D) M_4

Answer - (C) M_3

Q18 - Current account deposits are generally maintained by

(A) firms **(B) households**

(C) both firms and households **(D) individuals**

Answer - (A) firms

Q19 - Which one is direct tax?

(A) Value-added tax **(B) GST**

(C) Gift tax **(D) Sales tax**

Answer - (C) Gift tax

Q20 - The major source of non-tax revenue of the government is

(A) commercial revenue **(B) administrative revenue**

(C) Both (A) and (B) **(D) None of these**

Answer - (C) Both (A) and (B)

Q21 - Fill in the blanks :

(a) Conventionally, index numbers are expressed in terms of ____.

(b) The value of base period in index number is ____.

Answer –

(a) Percentage

(b) 100

Q22 - Fill in the blanks :

Quartile is the measure which divides the distribution into ____ equal parts, and so the number of quartiles is ____.

Answer – Four, Three.

Q23 - Fill in the blanks :

____ and ____ are the values of perfect correlation.

Answer – +1, -1

Q24 - Fill in the blanks :

When the quantity demanded of a good rises due to fall in ____ only, it is called ____ of demand.

Answer – price, extension.

Q25 - State True or False :

(a) Price elasticity of demand (–)2 is less than price elasticity of demand (–)1.

(b) When price elasticity of demand is zero, it is called perfectly elastic demand.

Answer - (a) False

(b) False

Q26 - State True or False :

(a) Rental value of a firm's own office is explicit cost.

(b) Normal profit is part of economic cost.

Answer - (a) False

(b) True

Q27 - Fill in the blanks :

(a) Implicit cost is also called ____ cost.

(b) Contraction in supply means ____ movement along the supply curve.

Answer – (a) opportunity

(b) downward

Q28 - Fill in the blanks :

Besides primary sector, other sectors of the economy are ____ and ____ sectors.

Answer - Secondary and Tertiary (Service).

Q29 - State True or False :

(a) Indian Embassy in Nepal is part of domestic territory of Nepal.

(b) Machine purchased for installation in a factory is intermediate good.

Answer - (a) False

(b) False

Q30 - State True or False :

(a) GNP is national income.

(b) GNP less GDP is net factor income from abroad.

Answer – (a) False

(b) True

Q31 - Fill in the blanks :

In the context of inclusion in national income, vegetables purchased by a hotel is a ____ product but when purchased by household is ____.

Answer – Intermediate, Final

Q32 - Fill in the blanks :

The two parts of disposable income are ____ and ____.

Answer – Consumption and Saving.

Q33 - Fill in the blanks :

(a) When change in income equals change in investment, the value of multiplier is ____.

(b) The result of excess demand in an economy is ____.

Answer – (a) 1

(b) Inflation

Q34 - State True or False :

(a) Routine expenditure of government is plan expenditure.

(b) Regulation of wages is a fiscal measure.

Answer – (a) False

(b) False

Q35 - Fill in the blanks :

The major sources of non-tax revenue of the Central Government are ____ revenue and ____ revenue.

Answer – Commercial, Administrative.

SECTION - B

Q36 - State the difference between linear correlation and non-linear correlation.

Answer –

	Linear Correlation	Non-linear Correlation
1.	When the change in the values of two variables takes place in a 'constant ratio', the correlation between them is linear.	When the ratio of change in the values of two variables is not constant (it changes), it is called non-linear or curvilinear correlation.
2.	Its graph forms a straight line.	Its graph forms a curve.

Q37 - Name two mathematical averages.

Answer -

1. **Simple Arithmetic Mean**
2. **Weighted Arithmetic Mean**

OR

State the formula for calculating mode.

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

- Where L_1 = Lower limit of the modal class
- f_1 = Frequency of the modal class
- f_0 = Frequency of the class preceding the modal class
- f_2 = Frequency of the class succeeding the modal class
- i = Class interval

Q38 - Explain the purpose of index number issue in the construction of index number.

Answer – The purpose of an index number must be clear before it is constructed. It helps decide which items to include, which base year to choose, and which prices to use. A clear purpose ensures that the index number gives correct and meaningful results.

Q39 - Name any two factors affecting market demand only.

Answer - 1. Size and composition of population : If the population increases, market demand increases.

2. Distribution of income : If income distribution is equitable, the market demand for normal goods will be higher.

Q40 - Explain the relation between 'share of total expenditure' on a good and its price elasticity of demand.

Answer – If a consumer spends a very small proportion of their income on a commodity (e.g., matchbox, salt), the demand for that commodity is inelastic, because a change in price does not significantly affect the consumer's budget. Conversely, if a large proportion of income is spent (e.g., clothes, TV), the demand is elastic.

OR

State the formula for calculating price elasticity of demand through the percentage method.

Answer – Price elasticity of Demand ***(e_d)*** = $(-)\frac{\text{Percentage change in Quantity Demanded}}{\text{Percentage change in Price}}$

Q41 - Explain private cost.

Answer – Private Cost is the cost that a producer has to bear directly for the production of a good or service. It includes both explicit costs (e.g., raw material, wages) and implicit/imputed costs (e.g., rent of own land).

OR

Explain social cost.

Answer - Social Cost is the total cost borne by society in return for the production of a commodity. It includes the producer's private cost plus the external costs borne by society (e.g., pollution, noise, health loss).

Formula: Social Cost = Private Cost + External Cost.

Q42 - How do 'prices of inputs' influence supply?

Answer – If the prices of factors of production (inputs) such as wages or raw materials increase, the cost of production rises. Increased cost reduces the producer's profit, causing them to decrease supply (supply curve shifts to the left). Conversely, if input prices fall, supply increases.

OR

How does 'technique of production' affect supply?

Answer - Improvement in production technique (advanced technology) reduces the cost of production and increases productivity. This makes the producer willing to sell more quantity at the same price, thereby increasing the supply of the commodity (supply curve shifts to the right). Outdated technology reduces supply.

Q43 - Draw a production possibility curve. Mark axes and curve clearly. What does a point on the curve imply?

Answer –

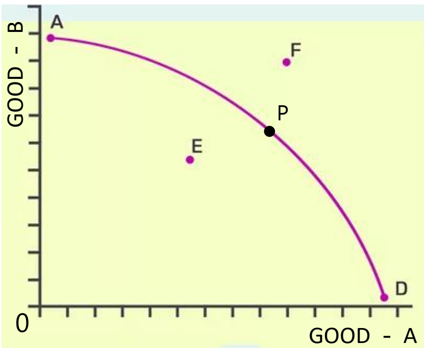


Diagram Description : Draw a graph with 'Good A' on the X-axis and 'Good B' on the Y-axis. The curve will be concave to the origin.

Meaning of the point : Any point on the Production Possibility Curve (PPC) (e.g., Point P) shows that the available resources and technology are being **fully and efficiently utilized**. It represents the maximum possible production combination of two goods given the amount of resources.

Q44 - Define 'cross' elasticity of demand. Suppose demand for a commodity falls by 8% due to 4% fall in the price of its substitute, calculate 'cross' elasticity of demand.

Answer – Definition : Cross elasticity of demand measures the percentage change in the quantity demanded of one commodity (X) due to a change in the price of a related commodity (Y) (substitute or complementary).

Calculation : Cross Elasticity $(e_d) = \frac{\text{\% change in demand of commodity}}{\text{\% change in price of related commodity}}$

Given : Fall in price of substitute = -4%

Fall in demand of commodity = -8%

$E_d = \frac{-8}{-4} = 2$

The cross elasticity of demand is 2 (Positive).

Q45 - A firm sells 70 units of a commodity at a price of ₹7 per unit. When price rises by ₹1, he sells 80 units. Calculate price elasticity of supply.

Answer - Initial Price (P) = ₹7

Initial Quantity (Q) = 70

New Price (P_1) = ₹7 + ₹1 = ₹8

New Quantity (Q_1) = 80

Change in Price (ΔP) = ₹1

Change in Quantity (ΔQ) = 80 - 70 = 10

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

$E_s = \frac{10}{1} \times \frac{7}{70}$

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

Price elasticity of supply is 1 (Unitary Elastic).

Q46 - Draw a diagram showing national income equilibrium through consumption and investment. Mark axes and curves clearly.

Answer –

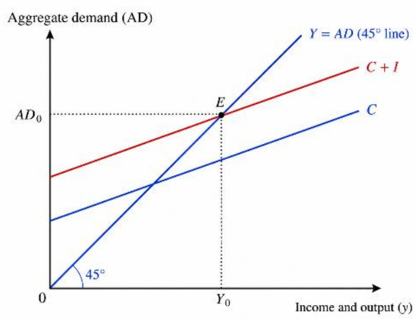


Diagram Description :

- Show 'Income/Output' on the X-axis and 'Aggregate Demand' (C+I) on the Y-axis.
- The 45-degree line represents 'Aggregate Supply' (AS = Y).
- The 'C+I' line (Consumption + Investment) starts from a positive point on the Y-axis and goes upward.
- Where the C+I line intersects the 45-degree line (Point E) is the Equilibrium Point. Here, Aggregate Demand = Aggregate Supply.

OR

If marginal propensity to save is 0.1 and increase in national income is ₹100, calculate increase in investment.

Answer – Given :

MPS = 0.1, Change in Income (ΔY) = ₹100

Multiplier (*K*) = $\frac{1}{MPS} = \frac{1}{0.1} = 10$

We know: ΔY = K × ΔI

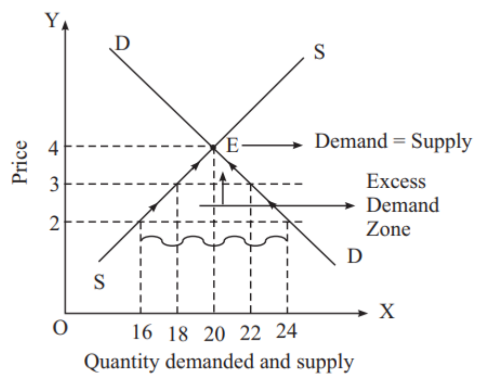
100 = 10 × ΔI

ΔI = $\frac{100}{10} = 10$

The increase in investment will be ₹10.

Q47 - Draw a diagram showing 'excess demand' of a product. Mark axes and curves clearly.

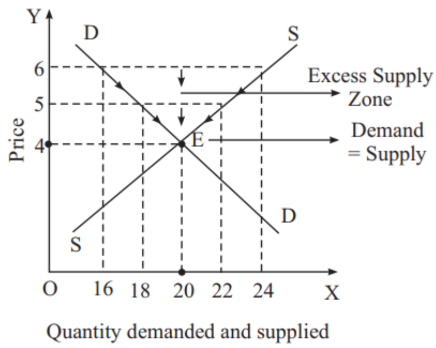
Answer –



OR

Draw a diagram showing 'excess supply' of a product. Mark axes and curves clearly.

Answer –



Q48 - Explain 'lack of common unit of measurement' as a demerit of barter system.

Answer - Lack of a Common Measure of Value as a Difficulty of Barter System :-

1. In the barter system, there was no common or universally accepted unit to measure the value of goods.
2. The value of one good was expressed in terms of another good, such as exchanging wheat for cloth, which made comparison of values difficult.
3. Since different goods had different exchange ratios, it was hard to decide which exchange was fair.
4. The value of goods changed according to time, place, and need, leading to instability in exchange.
5. It was not possible to fix a proper ratio between high-value and low-value goods, which made transactions complicated.

OR

Explain 'providing employment opportunities' of government budget.

Answer - Objective of Government Budget to 'Provide Employment Opportunities' :-

1. One of the major objectives of the government budget is to increase employment opportunities in the country.
2. Through the budget, the government spends on public works such as construction of roads, bridges, schools, hospitals, etc., which provides jobs to people.
3. To encourage industries and small enterprises, the government offers tax concessions, subsidies, and loan facilities, which help in generating new employment.
4. By spending on agriculture, education, health, and rural development programmes, employment opportunities are increased in rural areas.
5. An increase in employment leads to a rise in people's income, which improves their standard of living.

Thus, through the government budget, employment generation plays an important role in the economic and social development of the country.

Q49 - The average income of three batches of workers having 10, 20 and 30 workers respectively, are R400, R300 and R200 respectively. Find the combined average wage of all the 60 workers together.

Answer –

First group = 10 workers, average income = ₹400

Second group = 20 workers, average income = ₹300

Third group = 30 workers, average income = ₹200

Step 1: Calculate total income of each group

First group = 10 × 400 = ₹4,000

Second group = 20 × 300 = ₹6,000

Third group = 30 × 200 = ₹6,000

Step 2 : Total income of all workers

Total income = 4,000 + 6,000 + 6,000 = ₹16,000

Step 3 : Total number of workers

Total workers = 10 + 20 + 30 = 60

Step 4 : Calculate combined average income

Combined average income = Total income ÷ Total workers

= 16,000 ÷ 60

= ₹266.67 (approximately)

The combined average income of all 60 workers is **₹266.67 (approximately)**.

Q50 - Explain any three precautions necessary for estimating national income through the production method.

Answer – Difficulties in Measuring National Income by Production Method :-

1. **Problem of Double Counting :** While using the production method, it is necessary to ensure that the value of a commodity is not added more than once. Intermediate goods (such as raw materials) are already included in the value of final goods. If the value of both intermediate and final goods is added, national income will be overstated. Therefore, only the value of **final goods** should be included, or the **value added method** should be used.

2. **Production for Self-Consumption :** Especially in the agricultural sector, farmers keep a part of their production for their own family consumption. This production is also a part of national income and should be included at its **estimated market value**. However, it is difficult to estimate its correct value, which affects the accurate measurement of national income.

3. **Sale of Old Goods :** The sale and purchase of old or second-hand goods should not be included in national income because these goods were not produced in the current year. Including them would wrongly increase national income. Only the **commission earned by agents or traders**, if any, is included in national income.

OR

Explain the steps in estimating national income by income method.

Answer -

1. **Identification of Production Units :** Identifying productive enterprises in all sectors of the economy (Primary, Secondary, Tertiary).
2. **Classification of Factor Income :** Estimating and classifying the factor income paid by each sector:
   - Compensation of Employees (wages, salaries, social security contributions).
   - Operating Surplus (rent, interest, profit).
   - Mixed Income of Self-employed.
3. **Calculation of Domestic Income (NDP at FC) :** Net domestic income is found by summing up the factor incomes from all sectors.

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

4. **Calculation of National Income (NNP at FC) :** National Income is obtained by adding 'Net Factor Income from Abroad' (NFIA) to domestic income.

$$\text{National Income} = NDP_{FC} + NFIA.$$

NIOS PYQ's SOLUTIONS

PREVIOUS YEARS' QUESTIONS & ANSWERS

OCTOBER-2025

Your Path to Success

SECTION - A

Q1 - The correlation between two variables A and B is positive. This means if A increases, then B:

(A) May increase

(B) May not increase

(C) Will increase

(D) None of the above

Answer - (C) Will increase

Q2 – Which of the following is not a characteristic of arithmetic average ?

(A) It is easy to calculate.

(B) All values in the series are used to calculate it.

(C) Both (A) and (B)

(D) Neither (A) Nor (B)

Answer - (D) Neither (A) Nor (B)

Q3 - Growth of resources in the economy results in:

(A) Change in shape of production possibility curve

(B) Downward shift of production possibility curve

(C) Upward shift of production possibility curve

(D) None of the above

Answer - (C) Upward shift of production possibility curve

Q4 - A point inside production possibility curve shows:

(A) Inefficient utilization of resources

(B) Overemployment of Resources

(C) Better utilization of resources

(D) None of the above

Answer - (A) Inefficient utilization of resources

Q5 - Which of the following is an example of growth of resources?

(A) Increase in Population

(B) Increase in Natural Resources

(C) Improvement in quality of resources

(D) All the above

Answer - (D) All the above

Q6 - The reason for movement along a demand curve is

(A) Change in income of buyer

(B) Change in price of the goods

(C) Change in price of substitute goods

(D) None of the above

Answer - (B) Change in price of the goods

Q7 - When a demand curve is parallel to OX axis, then price elasticity of demand is:

(A) 1

(B) 0

(C) ∞

(D) > 1

Answer - (C) ∞

Q8 - Which of the following is implicit cost?

(A) Unpaid family labour used on farms

(B) Farming on own land

(C) Use of tractor owned by farmer

(D) All the above

Answer - (D) All the above

Q9 - Which of the following statements is true?

(A) MC rises only when AC is greater than it.

(B) MC curve cuts both AC and AVC curves at their minimum points.

(C) Both (A) and (B)

(D) Neither (A) Nor (B)

Answer - (B) MC curve cuts both AC and AVC curves at their minimum points.

Q10 - Supply of a commodity increases when :

(A) There is fall in price of other commodities.

(B) Taxes on it are increased.

(C) Number of buyers of the commodity increase.

(D) Any of above changes takes place.

Answer - (A) There is fall in price of other commodities.

Q11 - Situation of excess supply of a commodity exists in the market when

(A) market price > equilibrium price

(B) market price < Equilibrium price

(C) more substitutes of the commodity are available

(D) None of the above

Answer - (A) market price > equilibrium price

Q12 - In which market there are no close substitutes of the commodity available?

(A) Monopoly

(B) Perfect Competition

(C) Oligopoly

(D) Monopolistic competition

Answer - (A) Monopoly

Q13 - In which market firm is a price-taker?

(A) Monopoly

(B) Monopolistic competition

(C) Oligopoly

(D) Perfect Competition

Answer - (D) Perfect Competition

Q14 - Which of the following statements is incorrect?

(A) National Income can be equal to Domestic Income.

(B) National Income can be greater than Domestic Income.

(C) National Income can be less than Domestic Income.

(D) None of the above

Answer - (D) None of the above

Q15 - The slope of the saving curve measures

(A) APS

(B) MPS

(C) Both (A) and (B)

(D) None of the above

Answer - (B) MPS

Q16 - Which of the following statements are correct?

(A) There is inverse relationship between marginal propensity to save (mps) and investment multiplier.

(B) There is inverse relationship between average propensity to save and investment multiplier.

(C) There is inverse relationship between average propensity to consume and investment multiplier.

(D) None of the above

Answer - (A) There is inverse relationship between marginal propensity to save (mps) and investment multiplier

Q17 - Which of the following is not a function of Money?

(A) Encourage Savings

(B) Medium of exchange

(C) Measure of value

(D) Store of Value

Answer - (A) Encourage Savings

Q18 - Every commercial bank has to keep a certain percentage of its deposits in cash and it is called :

(A) CRR

(B) LRR

(C) SLR

(D) None of the above

Answer - (A) CRR

Q19 - Which of the following statements is correct ?

(A) Primary deficit less interest payments is fiscal deficit.

(B) Calculation of fiscal deficit does not include borrowings.

(C) All indirect taxes are levied by State Governments.

(D) Property tax is direct tax.

Answer - (D) Property tax is direct tax.

Q20 - Which of the following is a Revenue Expenditure ?

(A) Repayment of loans

(B) Salaries of Government employees

(C) Maintenance of Government property

(D) Construction of roads

Answer - (B) Salaries of Government employees

Q21 - Fill in the blanks :

Laspeyre's price index number uses _______ year quantities as weights whereas Paasche's price index number uses _______ year quantities as weights.

Answer – Base, Current

Q22 - Fill in the blanks :

(i) If in an economy production is obtained under constant returns, then production possibility curve will be a downward sloping _______ line.

(ii) PPC is _______ to the point of origin.

Answer – (i) Straight

(ii) Concave

Q23 - Fill in the blanks :

(i) Production Possibility Curve is also called _______ curve.

(ii) PPC assumes _______ employment.

Answer – (i) Transformation

(ii) Full

Q24 - Which two of the following are not assumptions of law of demand?

(i) Price of the goods does not change.

(ii) Income of the buyers do not change.

(iii) Tastes and preferences of buyers change.

Answer – (i) Price of the goods does not change.

(iii) Tastes and preferences of buyers change.

Q25 - State True or False :

(i) When a fall price of a goods results in fall total expenditure on it then elasticity of demand $(e_d) < 1$.

(ii) When total expenditure on a commodity does not change with change in price then elasticity of demand $(e_d) < 1$.

Answer – (i) True

(ii) False

Q26 - Fill in the blanks:

(i) 'Increase in demand takes place when quantity demanded rises at the same _______.

(ii) Movement along the demand curve takes place when _______ changes.

Answer – (i) Price

(ii) Price

Q27 - Which two of the following are not determinant of supply of a commodity by a firm ?

(i) Income of the buyers **(ii) Prices of related goods**

(iii) Taxation Policy **(iv) Tastes of consumers**

Answer – (i) Income of the buyers

(iv) Tastes of consumers

Q28 - Which two of the following causes a rightward shift of supply curve of a commodity ?

(i) Fall in price of the commodity **(ii) Fall in taxes**

(iii) Improvement in technology **(iv) Change in number of buyers**

Answer - (ii) Fall in taxes

(iii) Improvement in technology

Q29 - Fill in the blanks:

Straight line upward sloping supply curve passing through the _______ is elastic throughout while passing throughout the _______ is inelastic throughout.

Answer – Y-axis, X-axis

Q30 - State True or False :

(i) AVC Curve lies above the ATC curve.

(ii) Both TFC curve and TC curve start from Y-axis.

Answer – (i) False

(ii) True

Q31 - Fill in the blanks :

Equilibrium price of a commodity is determined by the _______ and can be changed by _______.

Answer – market demand and supply, changes in demand or supply.

Q32 - Fill in the blanks :

(i) NDP at Factor Cost equals the sum of compensation of employees, rent, interest and _______.

(ii) GDP at factor cost is the sum of NDP at factor cost and _______.

Answer – (i) Profit and Mixed Income

(ii) Depreciation

Q33 - Fill in the blanks :

(i) The point where income and consumption are equal is called _______ point in the economy.

(ii) In macro economics investment can be categorized into autonomous and _______.

Answer – (i) Break-even

(ii) Induced

Q34 - Fill in the blanks:

In case of _______ tax the burden of payment can be shifted, while in case of _______ tax the burden cannot be shifted.

Answer – Indirect, Direct

Q35 - Fill in the blanks :

(i) Bank rate is fixed by _______ bank.

(ii) Credit creation is done by _______ bank.

Answer – (i) Central

(ii) Commercial

SECTION - B

A. B. C.

Q36 - Fill in the missing number :

Marks	Number of Students
10	10
____	25
50	15
$\bar{X}$=22	

Answer – To find the missing mark (let's call it A), we use the Arithmetic Mean formula: $\bar{X} = \frac{\Sigma fx}{\Sigma f}$.

Marks (X)	Number of Students (f)	fX (Marks × Students)
10	10	100
A	25	25A
50	15	750
Total	$\sum f = 50$	$\sum fX = 850 + 25A$

Given Mean $\bar{X} = 22$.

$$22 = \frac{850 + 25A}{50}$$

$$1100 = 850 + 25A$$

$$250 = 25A \implies A = 10$$

The missing mark is **10**.

Q37 - Calculate Paasche's index number from the following data:

$\sum p_1 q_1 = 96$

$\sum p_0 q_1 = 60$

Answer – Paasche's Price Index uses current year quantities as weights:

$$P_{01} = \left(\frac{\sum p_1 q_1}{\sum p_0 q_1}\right) \times 100$$

$$P_{01} = \frac{96}{60} \times 100$$

$$\boxed{\boldsymbol{P_{01} = 160}}$$

OR

Calculate Laspeyre's index number from the following data:

$\boldsymbol{\sum p_1 q_0 = 400}$

$\boldsymbol{\sum p_0 q_0 = 220}$

Answer – Laspeyre's Price Index uses base year quantities as weights:

$$L_{01} = \left(\frac{\sum p_1 q_0}{\sum p_0 q_0}\right) \times 100$$

$$L_{01} = \frac{400}{220} \times 100$$

$$\boxed{\boldsymbol{L_{01} = 181.81}}$$

Q38 - In a factory there are 6 male and 4 female workers. The average wage of male workers is ₹ 500 per day and of female workers it is ₹ 300 per day. Find the combined average wage rate.

Answer – To find the combined mean, we use the formula:

$$\bar{X}_{12} = \frac{N_1\bar{X}_1 + N_2\bar{X}_2}{N_1 + N_2}$$

Males (N_1) = 6, Mean Wage $(\bar{X}_1)$ = ₹ 500

Females (N_2) = 4, Mean Wage $(\bar{X}_2)$ = ₹ 300

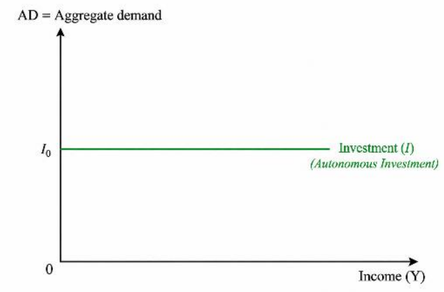
$$\bar{X}_{12} = \frac{(6 \times 500) + (4 \times 300)}{6 + 4}$$

$$\bar{X}_{12} = \frac{3000 + 1200}{10} = \frac{4200}{10} = 420$$

The combined average wage rate is **₹ 420**.

Q39 - Draw diagram of autonomous investment. Mark clearly the curve and axes.

Answer -



Q40 - Explain the reasons for the inverse relationship between price of a commodity and its quantity demanded in the context of Law of Diminishing Marginal Utility.

Answer – According to the Law of Diminishing Marginal Utility, as a consumer buys more of a good, the satisfaction (utility) from each extra unit drops. Therefore, a consumer will only agree to buy more quantity if the price of the good falls to match the lower satisfaction. Hence, there is an inverse relationship between price of commodity and its quantity demanded.

OR

Explain the exceptions to the law of demand in context of necessities.

Answer – For basic necessities like salt, medicine, or basic food grains, the demand stays the same even if the price increases, they are called necessary goods. People must buy these items to survive, so they do not follow the normal law of demand.

Q41 - When will there be a situation of excess supply of a commodity? What will be its effect on price of the commodity?

Answer – Excess supply happens when the market price is set higher than the equilibrium price. At this high price, producers want to sell more, but buyers want to buy less. This creates extra unsold stock. To sell the extra stock, sellers will compete and drop the price back down to the equilibrium level.

Q42 - In an economy income (y) increased by ₹10,000 due to an increase in investment of ₹2,000. Calculate the value of mpc.

Answer – Given: Increase in Income (ΔY) = 10,000; Increase in Investment (ΔI) = 2,000.

First, find the Investment Multiplier (k):

$$k = \frac{\Delta Y}{\Delta I} = \frac{10{,}000}{2{,}000} = 5$$

Now, use the multiplier formula to find Marginal Propensity to Consume (MPC):

$$k = \frac{1}{1 - MPC}$$

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

$$1 - MPC = \frac{1}{5} = 0.2$$

$$\boxed{\boldsymbol{MPC = 0.8}}$$

Q43 - Complete the following table :

Output	Total Cost	Total Variable Cost	Marginal Cost
0	**24**		
1	**40**		
2	**48**		
3	**60**		
4	**88**		

Answer – Total Fixed Cost (TFC) is the cost at 0 output.

Here, at 0 output, Total Cost (TC) is 24, so **TFC = 24** for all levels.

Formulas used: Total Variable Cost (TVC) = TC – TFC. Marginal Cost (MC) = Change in TC.

Output	Total Cost (TC)	Total Variable Cost (TVC)	Marginal Cost (MC)
0	24	24 – 24 = **0**	**-**
1	40	40 – 24 = **16**	40 – 24 = **16**
2	48	48 – 24 = **24**	48 – 40 = **8**
3	60	60 – 24 = **36**	60 – 48 = **12**
4	88	88 – 24 = **64**	88 – 60 = **28**

Q44 - Explain the precautions that should be taken while estimating national income by income method.

Answer – When using the income method, remember these precautions:

1. **Ignore transfer incomes :** Money like old-age pensions or gifts should not be added because no productive work is done for them.
2. **Ignore illegal income :** Money from smuggling or gambling is excluded.
3. **Include imputed rent :** If an owner lives in their own house, its estimated rent must be included.

OR

Explain the difference between value of output and value-added.

Answer –

Feature	Value of Output	Value Added
Meaning	It is the total market value of all goods and services produced by an enterprise.	It is the actual addition of value to the raw materials by the enterprise.
Formula	Sales + Change in Stock	Value of Output – Intermediate Consumption
Inclusion	It includes the cost of raw materials (intermediate goods).	It strictly excludes the cost of raw materials to avoid double counting.

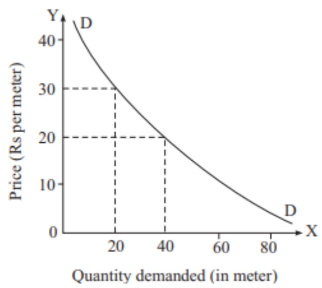
Q45 - Draw:

(i) Unit elastic demand curve

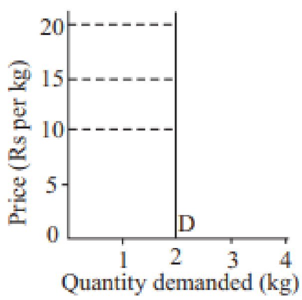
(ii) Perfectly inelastic demand curve

Mark axes and curves clearly.

Answer - (i) Unit Elastic Demand $(e_d = 1)$: When percentage change in quantity demanded of a commodity equals percentage change in its price, the demand for the commodity is called unit elastic.

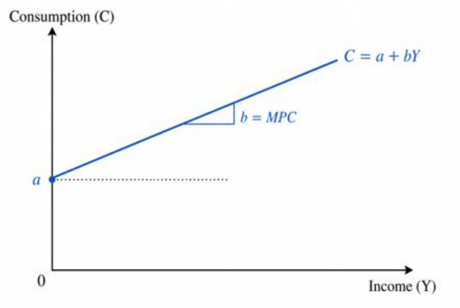


(ii) Perfectly Inelastic Demand $(e_d = 0)$: The demand for a commodity is called perfectly inelastic when quantity demanded does not change at all in response to change in its prices.



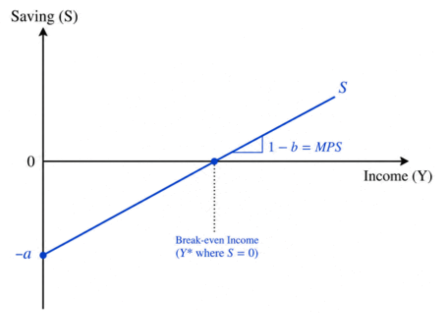
Q46 - Draw a consumption curve and a savings curve. Explain their points of origin.

Answer – Consumption Curve :



Origin of Consumption Curve : It starts from a positive point on the Y-axis (above zero) because even if a person earns zero income, they still consume some basic goods to survive. This is called autonomous consumption.

Saving Curve :



Origin of Savings Curve : It starts from the negative Y-axis (below zero) because at zero income, a person has to borrow or use old savings to survive, which creates "negative savings."

Q47 - Define standard deviation. State its properties.

Answer – Standard Deviation is a statistical tool used to measure how much the values in a dataset differ from the mean (average). It is the square root of the arithmetic mean of the squared deviations.

Properties:

1. It is based on all the items in the data.

2. It is capable of further mathematical treatment.

3. It gets heavily affected by extreme, large values.

OR

State the method of calculating standard deviation.

Answer – Method to calculate Standard Deviation (Direct Method):

1. First, find the mean $(\bar{X})$ of the given data series.
2. Find how far each value is from the mean to get the deviation $(x = X - \bar{X})$.
3. Square all these deviations to remove negative signs (x^2).
4. Add all the squared values together $(\sum x^2)$.
5. Divide the total by the number of items and find its square root: $SD = \sqrt{\frac{\sum x^2}{N}}$.

Q48 - Explain Banker to the Banks function of Central Bank.

Answer - Banker to the Banks:

The Central Bank acts as a regular bank, but it strictly serves other commercial banks. It keeps a specific portion of their cash reserves safe to ensure financial stability. Whenever commercial banks face a severe shortage of money or a financial crisis, the Central Bank steps in to provide them with emergency loans. Because of this helpful role, it is often called the "lender of last resort" for the banks.

OR

Explain 'Banker to the Government' function of Central Bank.

Answer - Banker to the Government:

The Central Bank acts as the official banker, agent, and financial advisor to the government. It maintains the accounts of the government, keeps its money safe, and makes payments or collects deposits on its behalf. Furthermore, it provides short-term loans to the government during financial emergencies and expertly manages the public debt to keep the economy stable.

Q49 - Calculate National Income:

	(in 000)
(i) Gross domestic capital formation	**4,000**
(ii) Net exports	**(-) 200**
(iii) Factor income from abroad.	**300**
(iv) Private final consumption expenditure	**50,000**
(v) Net Indirect Taxes	**1000**
(vi) Factor income to abroad	**600**

(vii) Government Final Consumption expenditure	**25,000**
(viii) Consumption of fixed capital	**300**

Answer – To calculate National Income (NNP at Factor Cost), we first find GDP at Market Price using the **Expenditure Method**:

Step 1: Calculate GDP at Market Price (GDP_{MP})

GDP_{MP} = Private Final Consumption (iv) + Government Final Consumption (vii) + Gross Domestic Capital Formation (i) + Net Exports (ii)

GDP_{MP} = 50,000 + 25,000 + 4,000 + (-200)

GDP_{MP} = ₹ 78,800

Step 2: Calculate National Income (NNP_{FC})

NNP_{FC} = GDP_{MP} – Depreciation (viii)} + Net Factor Income from Abroad (NFIA) – Net Indirect Taxes (v)

Note: NFIA = Factor income from abroad (iii) - Factor income to abroad (vi)

NFIA = 300 - 600 = -300

Now, put all values in the formula:

NNP_{FC} = 78,800 - 300 + (-300) – 1000

NNP_FC = 78,800 – 1,600 = ₹ 77,200

The National Income is ₹ 77,200 (in '000).

Q50 - Calculate coefficient of correlation from the following data:

(i) Number of observation = 4

(ii) $\sum xy$ = 12

Where $x = (X - \overline{X})$ and $y = (Y - \overline{Y})$

(iii) Standard deviation of $X = \sigma_x = 2.25$

(iv) Standard deviation of $Y = \sigma_y = 2.75$

Answer – Given:

Number of observations (N) = 4,

Sum of product of deviations ($\sum xy$) = 12,

Standard Deviation of X (σ_x) = 2.25,

Standard Deviation of Y (σ_y) = 2.75.

Using the direct standard deviation formula for correlation (r) :

$$r = \frac{\sum xy}{N \times \sigma_x \times \sigma_y}$$

$$r = \frac{12}{4 \times 2.25 \times 2.75}$$

$$r = \frac{12}{4 \times 6.1875} = \frac{12}{24.75}$$

$$r = 0.4848 \approx 0.48$$

The coefficient of correlation is **0.48**.

OR

The following table shows the marks obtained by 5 students in Economics and English.

Particulars	**1**	**2**	**3**	**4**	**5**
Marks in Economics	**17**	**15**	**16**	**19**	**8**
Marks in English	**12**	**14**	**9**	**17**	**10**

Calculate rank coefficient correlation.

Answer - First, we assign ranks from highest (1) to lowest (5) for both subjects. Then we find the difference in ranks (D) and square it (D^2).

Eco (X)	**Eng (Y)**	**Rank Eco (R_X)**	**Rank Eng (R_Y)**	**Diff $(D = R_X - R_Y)$**	D^2
19	17	1	1	0	0
17	12	2	3	-1	1
16	9	3	5	-2	4
15	14	4	2	2	4
8	10	5	4	1	1
					$\sum D^2 = 10$

Using Spearman's Rank Correlation formula (N = 5 items):

$$r_k = 1 - \frac{6\sum D^2}{N(N^2 - 1)}$$

$$r_k = 1 - \frac{6 \times 10}{5(5^2 - 1)}$$

$$r_k = 1 - \frac{60}{5(24)} = 1 - \frac{60}{120}$$

$$r_k = 1 - 0.5 = 0.5$$

The rank coefficient correlation is **0.5**.

Thank you!

We hope you found this material helpful. We wish you the very best for your examination.

Strive for Excellence – Your Path to Success