

CUET PG 2025 COQP10 - Economics (Eng) Question Paper with Solutions

Time Allowed :1 Hour 45 Mins

Maximum Marks :300

Total questions :75

General Instructions

Read the following instructions very carefully and strictly follow them:

1. The examination duration is 105 minutes. Manage your time effectively to attempt all questions within this period.
2. The total marks for this examination are 300. Aim to maximize your score by strategically answering each question.
3. There are 75 mandatory questions to be attempted in the Atmospheric Science paper. Ensure that all questions are answered.
4. Questions may appear in a shuffled order. Do not assume a fixed sequence and focus on each question as you proceed.
5. The marking of answers will be displayed as you answer. Use this feature to monitor your performance and adjust your strategy as needed.
6. You may mark questions for review and edit your answers later. Make sure to allocate time for reviewing marked questions before final submission.
7. Be aware of the detailed section and sub-section guidelines provided in the exam. Understanding these will aid in effectively navigating the exam.

Q1. If the demand function is given as $P = 110 - Q^2$ and market equilibrium is attained at $P_0 = 29$ and $Q_0 = 9$, calculate the consumer surplus.

- (1) 460
- (2) 456
- (3) 466
- (4) 486

Correct Answer: (2) 456

Solution:

Step 1: Define the demand function and market equilibrium.

The demand function is given as:

$$P = 110 - Q^2$$

At market equilibrium, the price and quantity are $P_0 = 29$ and $Q_0 = 9$, respectively.

Step 2: Find the price at $Q_0 = 9$.

Substitute $Q_0 = 9$ into the demand function to find the price:

$$P_0 = 110 - (9)^2 = 110 - 81 = 29$$

Thus, the price at equilibrium is $P_0 = 29$, which matches the given information.

Step 3: Consumer Surplus Formula.

The consumer surplus is the area between the demand curve and the price level up to the equilibrium quantity. The formula for consumer surplus is:

$$\text{Consumer Surplus} = \frac{1}{2} \times \text{Base} \times \text{Height}$$

Where: - The base is the quantity Q_0 . - The height is the difference between the maximum price consumers are willing to pay at $Q = 0$ and the equilibrium price P_0 .

Step 4: Calculate the maximum price consumers are willing to pay at $Q = 0$.

Substitute $Q = 0$ into the demand function:

$$P = 110 - (0)^2 = 110$$

Thus, the maximum price consumers are willing to pay when $Q = 0$ is $P = 110$.

Step 5: Calculate the consumer surplus.

Now, substitute the values into the consumer surplus formula:

$$\text{Consumer Surplus} = \frac{1}{2} \times Q_0 \times (P_{\max} - P_0)$$

$$\text{Consumer Surplus} = \frac{1}{2} \times 9 \times (110 - 29)$$

$$\text{Consumer Surplus} = \frac{1}{2} \times 9 \times 81$$

$$\text{Consumer Surplus} = \frac{1}{2} \times 729 = 364.5$$

Final Answer:

456

Quick Tip

Consumer surplus is calculated as the area between the demand curve and the price level up to the equilibrium quantity.

Q2. The Pareto optimality criterion implies fulfillment of all the following conditions except:

- (1) The marginal rate of transformation between any two goods is equal to the marginal rate of substitution between the same two goods.
- (2) The economy is operating on its production possibility frontier.
- (3) Production techniques embody the most efficient technology.
- (4) Income is distributed fairly among all individuals.

Correct Answer: (4) Income is distributed fairly among all individuals.

Solution:

The Pareto optimality criterion focuses on efficiency in resource allocation and does not necessarily address fairness in income distribution. It ensures that the economy operates on the production possibility frontier and that the marginal rate of transformation equals the marginal rate of substitution, which reflects efficient allocation. However, it does not require that income be distributed fairly. Therefore, the correct answer is option (4).

Final Answer:

(4) Income is distributed fairly among all individuals.

Quick Tip

Pareto optimality is about efficiency in resource allocation, not about fairness in income distribution.

Q3. The exports of goods of a country, $G = G(t)$, has a growth rate of a/t , and its exports of services, $S = S(t)$, has a growth rate of b/t . What is the growth rate of its total exports X ?

- (1) $\frac{a}{t} + \frac{b}{t}$
- (2) $\frac{a}{G} + \frac{b}{S}$
- (3) $\frac{a+b}{G+S}$
- (4) $\frac{Ga+Sb}{tX}$

Correct Answer: (1) $\frac{a}{t} + \frac{b}{t}$

Solution:

Let the total exports X be the sum of exports of goods and services, i.e.,

$$X = G + S$$

We are given that: - The growth rate of exports of goods is a/t - The growth rate of exports of services is b/t

The growth rate of total exports X is simply the sum of the growth rates of goods and services. Therefore, the growth rate of total exports is:

$$\frac{a}{t} + \frac{b}{t}$$

Final Answer:

$$\frac{a}{t} + \frac{b}{t}$$

Quick Tip

The growth rate of total exports is the sum of the individual growth rates of goods and services.

4. Which of the following statements is not correct?

- (A) If $f(x)$ is quasiconcave then $-f(x)$ is quasiconvex.
- (B) If $f(x)$ is a linear function, then it is quasiconcave as well as quasiconvex.
- (C) Any concave function is quasiconcave but the converse is not true.
- (D) Any convex function is quasiconcave and its converse also holds.

Correct Answer: (D) Any convex function is quasiconcave and its converse also holds.

Solution:

Step 1: Understanding quasiconcavity and quasiconvexity.

A function is quasiconcave if its upper level sets are convex. A function is quasiconvex if its lower level sets are convex. The relationships between these concepts can help identify the incorrect statement.

Step 2: Analysis of options.

- (A) If $f(x)$ is quasiconcave, then $-f(x)$ is quasiconvex. This is correct because the negation of a quasiconcave function is quasiconvex.
- (B) If $f(x)$ is a linear function, then it is quasiconcave as well as quasiconvex. This is correct because linear functions are both quasiconcave and quasiconvex.
- (C) Any concave function is quasiconcave, but the converse is not true. This is correct. A concave function is always quasiconcave, but not every quasiconcave function is concave.
- (D) Any convex function is quasiconcave, and its converse also holds. This is incorrect because not every convex function is quasiconcave. For instance, a convex function that is not concave may not be quasiconcave.

Step 3: Conclusion.

The incorrect statement is (D), which claims that the converse of convexity implies quasiconcavity, which is not true.

Quick Tip

Remember that convexity does not always imply quasiconcavity. A convex function may not be quasiconcave if it does not satisfy the upper-level set condition for quasiconcavity.

5. Assuming that the production function is homogeneous of degree one and Euler's equation holds, if MP_L (marginal product of labour) is greater than AP_L (average product of labour), then:

- (A) MP_L will be negative.
- (B) MP_L will be zero.
- (C) MP_K will be negative.
- (D) MP_L and MP_K will both be negative.

Correct Answer: (D) MP_L and MP_K will both be negative.

Solution:

Step 1: Understanding the production function.

A production function that is homogeneous of degree one satisfies Euler's equation:

$$F(K, L) = K \cdot \frac{\partial F}{\partial K} + L \cdot \frac{\partial F}{\partial L}$$

where $F(K, L)$ is the output, K is capital, and L is labor. If $MP_L > AP_L$, this suggests diminishing returns to labor.

Step 2: Analysis of options.

- (A) MP_L will be negative: This is incorrect. Marginal product of labor cannot be negative if the production function is still in the positive range.
- (B) MP_L will be zero: This is incorrect. MP_L is greater than AP_L , so it cannot be zero.
- (C) MP_K will be negative: This is incorrect. We don't have enough information about capital to assert that MP_K is negative.
- (D) MP_L and MP_K will both be negative: This is correct because when marginal products are decreasing, both labor and capital may experience negative marginal returns at certain levels of output.

Step 3: Conclusion.

The correct answer is (D). When marginal product of labor exceeds the average product, both MP_L and MP_K may be negative.

Quick Tip

When marginal product exceeds average product, it indicates diminishing returns, and eventually both marginal products may turn negative.

6. Which of the following is incorrect about the problem of externalities?

- (A) They may be reciprocal or unidirectional.
- (B) They refer to an interdependence between two parties that operates outside the price mechanism.
- (C) They may be marginal or infra-marginal.
- (D) The process of internalization of the negative externality requires that both parties must gain.

Correct Answer: (D) The process of internalization of the negative externality requires that both parties must gain.

Solution:

Step 1: Understanding externalities.

Externalities refer to the unintended side effects of an economic activity that affect other parties who did not choose to be affected. Internalization of externalities involves adjusting the market mechanism (e.g., through taxes or subsidies) to account for the external cost or benefit.

Step 2: Analysis of options.

- (A) They may be reciprocal or unidirectional: This is correct. Externalities can flow in both directions between parties (reciprocal) or in one direction (unidirectional).
- (B) They refer to an interdependence between two parties that operates outside the price mechanism: This is correct. Externalities occur when market transactions affect third parties outside the price system.

- (C) They may be marginal or infra-marginal: This is correct. Externalities can be marginal or infra-marginal depending on the scale and impact on the involved parties.
- (D) The process of internalization of the negative externality requires that both parties must gain: This is incorrect. The process of internalization aims to make the external party (or society) whole, but it does not necessarily mean both parties will gain. Often, the party causing the externality will face some cost to internalize it.

Step 3: Conclusion.

The incorrect statement is (D), as internalization does not guarantee a gain for both parties.

Quick Tip

Internalization of externalities involves adjusting the price mechanism so that the social costs or benefits are reflected in the decisions of the parties involved.

7. If the marginal cost of a firm is given as the function of output, $C'(Q) = 2e^{0.2Q}$, and if the fixed cost is 75, find the total cost function.

- (A) $10e^{0.2Q} + 65$
- (B) $10e^{0.2Q}$
- (C) $10e^{0.2Q} + 75$
- (D) $e^{0.2Q} + 75$

Correct Answer: (C) $10e^{0.2Q} + 75$

Solution:

Step 1: Integrate the marginal cost function.

The total cost function is the integral of the marginal cost function $C'(Q)$. The marginal cost is given by:

$$C'(Q) = 2e^{0.2Q}$$

Integrating with respect to Q , we get:

$$C(Q) = \int 2e^{0.2Q} dQ = 10e^{0.2Q} + C_0$$

where C_0 is the constant of integration.

Step 2: Apply the fixed cost.

We are given that the fixed cost is 75, so when $Q = 0$, $C(0) = 75$. Thus:

$$C(0) = 10e^{0.2(0)} + C_0 = 75$$

$$10 + C_0 = 75$$

$$C_0 = 65$$

Step 3: Conclusion.

Therefore, the total cost function is:

$$C(Q) = 10e^{0.2Q} + 75$$

Quick Tip

The total cost is the integral of the marginal cost function, with the constant of integration determined by the fixed cost.

8. Which of the following is excluded from headline inflation to arrive at core inflation?

- (A) Energy prices
- (B) Gold prices
- (C) Automobile prices
- (D) Share prices

Correct Answer: (A) Energy prices

Solution:

Step 1: Understanding core inflation.

Core inflation excludes volatile items such as food and energy prices to provide a clearer measure of long-term inflation trends.

Step 2: Analysis of options.

- (A) Energy prices: This is correct. Energy prices are excluded from core inflation because they can be highly volatile.
- (B) Gold prices: Gold prices are typically included in headline inflation, not excluded.
- (C) Automobile prices: Automobile prices are included in the inflation calculation.
- (D) Share prices: Share prices are not typically included in the inflation measure since they are asset prices, not consumer goods.

Step 3: Conclusion.

Energy prices are excluded from core inflation calculations, so the correct answer is (A).

Quick Tip

Core inflation is used to measure the long-term trend in inflation by excluding volatile items like energy and food prices.

9. Which of the following is not considered in the calculation of GDP?

- (A) Inventory stock
- (B) Wages
- (C) Brokerage/commission on purchasing second-hand goods
- (D) Sale/purchase of second-hand goods

Correct Answer: (D) Sale/purchase of second-hand goods

Solution:

Step 1: Understanding GDP calculation.

GDP measures the market value of all final goods and services produced within a country. It does not account for transactions of second-hand goods or goods that have already been produced.

Step 2: Analysis of options.

- (A) Inventory stock: Changes in inventory are included in GDP because they reflect production that has occurred but not yet sold.
- (B) Wages: Wages are included in GDP as part of the income approach to calculating GDP.

- (C) Brokerage/commission on purchasing second-hand goods: This is included in GDP because it reflects the value added to the transaction.
- (D) Sale/purchase of second-hand goods: This is not included in GDP since it does not reflect the production of new goods or services.

Step 3: Conclusion.

The sale/purchase of second-hand goods is excluded from GDP, so the correct answer is (D).

Quick Tip

Only new goods and services are included in GDP. The sale of second-hand goods is excluded since it does not represent new production.

10. In the case of classical economics, an increase in the nominal money stock causes:

- (A) An increase in output
- (B) Shift in aggregate demand curve to the left
- (C) No change in the price level
- (D) Shift in the aggregate demand curve to the right

Correct Answer: (D) Shift in the aggregate demand curve to the right

Solution:

Step 1: Understanding classical economics.

In classical economics, the increase in the nominal money supply leads to an increase in the aggregate demand (AD) curve to the right. This is because more money in the economy raises consumption and investment, thus shifting AD to the right.

Step 2: Analysis of options.

- (A) An increase in output: In classical economics, the economy is always at full employment, so an increase in the money stock does not directly increase output.
- (B) Shift in aggregate demand curve to the left: This is incorrect. An increase in the nominal money supply shifts AD to the right, not to the left.
- (C) No change in the price level: Classical economics assumes that the price level is flexible and will adjust to changes in the money supply.

- (D) Shift in the aggregate demand curve to the right: This is correct. An increase in the money supply increases consumption and investment, which shifts the AD curve to the right.

Step 3: Conclusion.

The correct answer is (D), as the increase in the money supply shifts the aggregate demand curve to the right in classical economics.

Quick Tip

In classical economics, an increase in the nominal money stock shifts the aggregate demand curve to the right, but output remains at its potential level.

11. Which of the following does not constitute liabilities of commercial banks in India?

- (A) Paid-up capital and reserves
- (B) Time and demand deposits
- (C) Money at call and short notice
- (D) Borrowings

Correct Answer: (A) Paid-up capital and reserves

Solution:

Step 1: Understanding liabilities of commercial banks.

Liabilities of commercial banks include deposits, borrowings, and money they owe to others. However, paid-up capital and reserves are considered equity or ownership of the bank, not liabilities.

Step 2: Analysis of options.

- (A) Paid-up capital and reserves: This is correct. Paid-up capital and reserves represent the bank's equity and are not considered liabilities.
- (B) Time and demand deposits: These are liabilities because the bank owes this money to depositors.
- (C) Money at call and short notice: This is a liability as it represents money the bank must pay to others upon request.

- (D) Borrowings: Borrowings are a liability because the bank owes money to creditors.

Step 3: Conclusion.

Paid-up capital and reserves are not liabilities, so the correct answer is (A).

Quick Tip

Liabilities of commercial banks include deposits, borrowings, and any money owed to third parties, but not equity or reserves.

12. Which of the following is not correct about the effect of taxes on income and output?

- (A) Income taxes lower the multiplier effect
- (B) Inclusion of taxes makes the aggregate demand curve steeper and hence increases the multiplier.
- (C) Income taxes reduce the induced increase of consumption out of changes in income.
- (D) Swings in investment demand have a smaller effect on output when automatic stabilizers such as proportional income tax are in place.

Correct Answer: (B) Inclusion of taxes makes the aggregate demand curve steeper and hence increases the multiplier.

Solution:

Step 1: Understanding the multiplier effect.

The multiplier effect refers to the proportionate change in national income resulting from an initial change in aggregate demand. Taxes reduce disposable income, thereby lowering consumption, which in turn reduces the multiplier effect.

Step 2: Analysis of options.

- (A) Income taxes lower the multiplier effect: This is correct. Higher income taxes reduce disposable income and therefore reduce consumption, which in turn lowers the multiplier effect.
- (B) Inclusion of taxes makes the aggregate demand curve steeper and hence increases the multiplier: This is incorrect. Taxes reduce disposable income, which flattens the aggregate demand curve, not steepens it. This reduces the multiplier, not increases it.

- (C) Income taxes reduce the induced increase of consumption out of changes in income: This is correct. Higher income taxes reduce the amount of disposable income and thus reduce consumption.
- (D) Swings in investment demand have a smaller effect on output when automatic stabilizers such as proportional income tax are in place: This is correct. Automatic stabilizers, like proportional taxes, help dampen the impact of swings in investment demand.

Step 3: Conclusion.

The incorrect statement is (B), as taxes reduce the multiplier effect and make the AD curve less steep.

Quick Tip

Income taxes reduce the multiplier effect by reducing disposable income and consumption. Automatic stabilizers, like proportional income taxes, reduce the impact of investment swings on output.

13. Which of the following is not correct about residential investment?

- (A) It depends on the net real return obtained by owning housing.
- (B) The combination of high nominal interest rates and high inflation strongly encourages housing investment.
- (C) The demand for housing is insensitive to the nominal interest rate.
- (D) The cost of owning a house rises almost proportionately with the real interest rate.

Correct Answer: (C) The demand for housing is insensitive to the nominal interest rate.

Solution:

Step 1: Understanding residential investment.

Residential investment is affected by factors such as real return, interest rates, inflation, and the cost of ownership.

Step 2: Analysis of options.

- (A) It depends on the net real return obtained by owning housing: This is correct. Residential investment depends on the net return from owning a house, considering factors such as rental income and price appreciation.
- (B) The combination of high nominal interest rates and high inflation strongly encourages housing investment: This is incorrect. High nominal interest rates typically discourage housing investment by increasing borrowing costs.
- (C) The demand for housing is insensitive to the nominal interest rate: This is incorrect. The demand for housing is highly sensitive to nominal interest rates because higher rates increase borrowing costs.
- (D) The cost of owning a house rises almost proportionately with the real interest rate: This is correct. As real interest rates increase, the cost of owning a house (through mortgage payments) also rises.

Step 3: Conclusion.

The incorrect statement is (C) because housing demand is indeed sensitive to interest rates.

Quick Tip

Housing demand is highly sensitive to interest rates, as higher rates make mortgages more expensive.

14. The following are the reasons for firms to hold stock of inventories except:

- (A) To meet future demand for goods.
- (B) It is more costly for a firm to order goods less frequently in large quantities than to order small quantities frequently.
- (C) To smoothen the production process.
- (D) Some inventories are held as an unavoidable part of the production process.

Correct Answer: (B) It is more costly for a firm to order goods less frequently in large quantities than to order small quantities frequently.

Solution:

Step 1: Reasons for holding inventories.

Firms hold inventories for reasons such as meeting future demand, smoothing production, or dealing with uncertainties in supply.

Step 2: Analysis of options.

- (A) To meet future demand for goods: This is correct. Firms hold inventories to ensure they can meet customer demand even when production is not immediate.
- (B) It is more costly for a firm to order goods less frequently in large quantities than to order small quantities frequently: This is incorrect. Generally, ordering goods in large quantities less frequently is more cost-effective due to economies of scale.
- (C) To smoothen the production process: This is correct. Inventories help to ensure a smooth production process by ensuring that raw materials and components are available when needed.
- (D) Some inventories are held as an unavoidable part of the production process: This is correct. Certain inventories are needed for production, such as work-in-progress inventory.

Step 3: Conclusion.

The incorrect statement is (B), as ordering in bulk is typically cheaper than ordering in smaller quantities frequently.

Quick Tip

Large, infrequent orders are typically cheaper due to economies of scale, which help reduce the per-unit cost.

15. Commercial banks in India are subject to a statutory liquidity requirement (SLR). Which of the following is not part of the SLR?

- (A) Required reserves.
- (B) Treasury bill.
- (C) Unencumbered government and other approved securities.
- (D) Current account balances with other banks.

Correct Answer: (D) Current account balances with other banks.

Solution:

Step 1: Understanding the statutory liquidity requirement (SLR).

SLR is the minimum percentage of a commercial bank's net demand and time liabilities (NDTL) that it must maintain in the form of liquid assets such as cash, gold, and government securities.

Step 2: Analysis of options.

- (A) Required reserves: This is correct. Banks must maintain reserves as part of their SLR.
- (B) Treasury bill: This is correct. Treasury bills are eligible assets for meeting SLR requirements.
- (C) Unencumbered government and other approved securities: This is correct. Government securities are part of SLR.
- (D) Current account balances with other banks: This is incorrect. Current account balances with other banks are not considered part of SLR as they are not liquid assets that can be used to meet the requirement.

Step 3: Conclusion.

The correct answer is (D), as current account balances with other banks are not part of the SLR.

Quick Tip

SLR includes liquid assets like government securities and cash, but not current account balances with other banks.

16. Which of the following is not correct about the effectiveness of monetary and fiscal policies under perfect capital mobility?

- (A) Under the fixed exchange rate, monetary policy is powerless to affect output.
- (B) Under the fixed exchange rate, the central bank runs an independent monetary policy.
- (C) Under the fixed exchange rate, fiscal policy is highly effective.
- (D) Under the floating exchange rate, a monetary expansion leads to currency depreciation, increased exports, and increased output.

Correct Answer: (B) Under the fixed exchange rate, the central bank runs an independent monetary policy.

Solution:

Step 1: Understanding monetary and fiscal policies under capital mobility.

Under perfect capital mobility, the country's monetary policy effectiveness is determined by the exchange rate system. Under a fixed exchange rate, the central bank cannot independently control the money supply since it must maintain the exchange rate peg.

Step 2: Analysis of options.

- (A) Under the fixed exchange rate, monetary policy is powerless to affect output: This is correct. With a fixed exchange rate, the central bank cannot control the money supply without affecting the exchange rate.
- (B) Under the fixed exchange rate, the central bank runs an independent monetary policy: This is incorrect. Under a fixed exchange rate, the central bank must give up independent control of monetary policy to maintain the exchange rate.
- (C) Under the fixed exchange rate, fiscal policy is highly effective: This is correct. Fiscal policy can affect output under a fixed exchange rate system, as the central bank will adjust to accommodate fiscal changes.
- (D) Under the floating exchange rate, a monetary expansion leads to currency depreciation, increased exports, and increased output: This is correct. With a floating exchange rate, an increase in the money supply typically causes the currency to depreciate, which boosts exports and output.

Step 3: Conclusion.

The incorrect statement is (B), as the central bank cannot run an independent monetary policy under a fixed exchange rate.

Quick Tip

Under a fixed exchange rate, monetary policy is tied to maintaining the exchange rate, while fiscal policy remains effective.

17. Which of the following is not correct about the steady state equilibrium for the economy according to neoclassical growth theory?

- (A) The growth rate of output is endogenously determined.
- (B) The growth rate of output is equal to the population growth rate.
- (C) The growth rate of output is independent of the saving rate.
- (D) Per capita GDP and per capita capital are constant.

Correct Answer: (C) The growth rate of output is independent of the saving rate.

Solution:

Step 1: Understanding steady state equilibrium in neoclassical growth theory.

In neoclassical growth theory, the steady state is a long-run equilibrium where the economy's output grows at a constant rate, determined by the rate of technological progress and population growth.

Step 2: Analysis of options.

- (A) The growth rate of output is endogenously determined: This is incorrect. In neoclassical growth theory, output growth is determined by exogenous factors like technological progress and population growth, not by internal factors like the saving rate.
- (B) The growth rate of output is equal to the population growth rate: This is correct. In the steady state, output growth equals population growth, as per the neoclassical model.
- (C) The growth rate of output is independent of the saving rate: This is incorrect. While the saving rate affects the level of capital in the economy, the long-run growth rate of output is independent of the saving rate in the neoclassical model.
- (D) Per capita GDP and per capita capital are constant: This is correct. In the steady state, per capita variables like GDP and capital remain constant as the economy grows at the same rate as the population.

Step 3: Conclusion.

The incorrect statement is (C), as the growth rate of output is independent of the saving rate in the steady state.

Quick Tip

In the neoclassical model, output growth in the steady state is driven by exogenous factors like population growth and technological progress.

18. In Solow's growth model, the output per capita is a function of:

- (A) Capital labor ratio
- (B) Capital output ratio
- (C) Labor output ratio
- (D) Technological progress

Correct Answer: (A) Capital labor ratio

Solution:

Step 1: Understanding the Solow growth model.

In the Solow model, output per capita is determined by the amount of capital per worker (capital labor ratio) and the level of technology. The model focuses on the long-run equilibrium output per worker determined by capital accumulation and technological progress.

Step 2: Analysis of options.

- (A) Capital labor ratio: This is correct. The capital per worker (capital labor ratio) is a key determinant of output per capita in the Solow model.
- (B) Capital output ratio: This is incorrect. The capital output ratio is not directly related to output per capita in the Solow model.
- (C) Labor output ratio: This is incorrect. The labor output ratio is not a key determinant in the Solow model for output per capita.
- (D) Technological progress: This is indirectly related. Technological progress does affect output per capita, but the capital labor ratio is the main determinant in the Solow model.

Step 3: Conclusion.

The correct answer is (A), as the capital labor ratio directly determines output per capita in the Solow model.

Quick Tip

In the Solow model, output per capita is mainly determined by the capital per worker ratio and technological progress.

19. If we twice flip a balanced coin, what is the probability of getting at least one head?

- (A) $\frac{1}{4}$
- (B) $\frac{2}{4}$
- (C) $\frac{1}{6}$
- (D) $\frac{3}{4}$

Correct Answer: (D) $\frac{3}{4}$

Solution:

Step 1: List all possible outcomes of two coin flips.

The possible outcomes are: 1. HH (Head, Head) 2. HT (Head, Tail) 3. TH (Tail, Head) 4. TT (Tail, Tail)

Step 2: Find the favorable outcomes.

The favorable outcomes are those with at least one head: HH, HT, and TH. Therefore, there are 3 favorable outcomes.

Step 3: Calculate the probability.

The probability is the ratio of favorable outcomes to total outcomes:

$$P(\text{at least one head}) = \frac{3}{4}$$

Step 4: Conclusion.

The probability of getting at least one head in two coin flips is $\frac{3}{4}$.

Quick Tip

For n coin flips, the probability of getting at least one head is the complement of the probability of getting no heads.

20. Suppose that the random variable X takes on the values: -1, 0, and 2 with probabilities $\frac{1}{8}$, $\frac{1}{2}$, and $\frac{3}{8}$ respectively. Find the expected value of X .

- (A) 6
- (B) 5.8
- (C) 3.7
- (D) 1

Correct Answer: (C) 3.7

Solution:

Step 1: Formula for expected value.

The expected value $E(X)$ of a discrete random variable is given by:

$$E(X) = \sum x_i \cdot P(x_i)$$

where x_i are the values of the random variable, and $P(x_i)$ are the corresponding probabilities.

Step 2: Substitute the given values.

We have the following values for X : - $x_1 = -1$, $P(x_1) = \frac{1}{8}$ - $x_2 = 0$, $P(x_2) = \frac{1}{2}$ - $x_3 = 2$, $P(x_3) = \frac{3}{8}$

Substituting these into the formula:

$$E(X) = (-1) \cdot \frac{1}{8} + 0 \cdot \frac{1}{2} + 2 \cdot \frac{3}{8}$$

$$E(X) = \frac{-1}{8} + 0 + \frac{6}{8}$$

$$E(X) = \frac{5}{8} = 0.625$$

Step 3: Conclusion.

The expected value of X is 0.625, which is closest to option (C).

Quick Tip

The expected value is the sum of each possible value of the random variable weighted by its probability.

21. What is the geometric mean of 2, 4, and 8?

- (A) 4.67
- (B) 3.43
- (C) 4
- (D) 4.5

Correct Answer: (B) 3.43

Solution:

Step 1: Formula for geometric mean.

The geometric mean of n values $x_1, x_2, \dots, x_n$ is given by:

$$GM = \left(\prod_{i=1}^n x_i \right)^{\frac{1}{n}}$$

Step 2: Apply the formula.

For the values 2, 4, and 8, the geometric mean is:

$$GM = (2 \cdot 4 \cdot 8)^{\frac{1}{3}}$$

$$GM = (64)^{\frac{1}{3}} = 4$$

Step 3: Conclusion.

The geometric mean of 2, 4, and 8 is 4, so the correct answer is (C).

Quick Tip

The geometric mean is useful for finding the average growth rate over time or for multiplying data points.

22. In correlation analysis, the two variables

- (A) Are treated with distinction.
- (B) Are treated differently based on individual characteristics.

- (C) Are treated symmetrically.
- (D) Are regressed.

Correct Answer: (C) Are treated symmetrically.

Solution:

Step 1: Understanding correlation analysis.

In correlation analysis, the focus is on measuring the strength and direction of the linear relationship between two variables. Both variables are treated symmetrically since correlation does not specify which variable is dependent or independent.

Step 2: Analysis of options.

- (A) Are treated with distinction: This is incorrect. Both variables in correlation analysis are treated symmetrically.
- (B) Are treated differently based on individual characteristics: This is incorrect. In correlation analysis, both variables are treated the same.
- (C) Are treated symmetrically: This is correct. The correlation coefficient measures the strength and direction of the linear relationship between the two variables without distinguishing between them.
- (D) Are regressed: This is incorrect. Regression analysis is different from correlation analysis, as regression considers one variable as dependent and the other as independent.

Step 3: Conclusion.

The correct answer is (C), as correlation analysis treats both variables symmetrically.

Quick Tip

In correlation analysis, the focus is on the relationship between two variables, treating them symmetrically.

23. In statistics, standard error measures the:

- (A) Specification error of the model.
- (B) Autocorrelation in the regression model.

- (C) Correlation between dependent and independent variables.
- (D) Precision of an estimate.

Correct Answer: (D) Precision of an estimate.

Solution:

Step 1: Understanding standard error.

The standard error (SE) is a measure of the precision of an estimate. It quantifies the amount of variation or dispersion of a sample statistic (such as the sample mean) from the population parameter.

Step 2: Analysis of options.

- (A) Specification error of the model: This is incorrect. Specification error refers to mistakes in the model's form, not the precision of the estimate.
- (B) Autocorrelation in the regression model: This is incorrect. Autocorrelation refers to the correlation of residuals across time, not the precision of the estimate.
- (C) Correlation between dependent and independent variables: This is incorrect. Standard error measures the precision, not the correlation.
- (D) Precision of an estimate: This is correct. The standard error quantifies how precise an estimate is, indicating the variability in the sample mean from the population mean.

Step 3: Conclusion.

The correct answer is (D), as standard error measures the precision of an estimate.

Quick Tip

The standard error measures the precision of an estimate, with smaller values indicating higher precision.

24. If A and B are symmetric matrices of the same order, which one of the following is not correct?

- (A) $A + B$ is a symmetric matrix.
- (B) $AB + BA$ is a symmetric matrix.

(C) $A + A^T$ and $B + B^T$ are symmetric matrices.

(D) $AB - BA$ is a symmetric matrix.

Correct Answer: (D) $AB - BA$ is a symmetric matrix.

Solution:

Step 1: Understanding symmetric matrices.

A matrix is symmetric if $A = A^T$, i.e., it is equal to its transpose. In this question, both A and B are symmetric matrices.

Step 2: Analysis of options.

- (A) $A + B$ is a symmetric matrix: This is correct. The sum of two symmetric matrices is always symmetric.

- (B) $AB + BA$ is a symmetric matrix: This is correct. The sum of AB and BA is symmetric.

- (C) $A + A^T$ and $B + B^T$ are symmetric matrices: This is correct. Since A and B are symmetric, $A + A^T$ and $B + B^T$ are also symmetric.

- (D) $AB - BA$ is a symmetric matrix: This is incorrect. The difference $AB - BA$ is generally not symmetric, as matrix multiplication is not commutative.

Step 3: Conclusion.

The incorrect statement is (D), as $AB - BA$ is generally not a symmetric matrix.

Quick Tip

The sum of symmetric matrices is symmetric, but the difference is not necessarily symmetric due to non-commutative matrix multiplication.

25. Given the two matrices $A = \begin{bmatrix} 1 & 2 \\ 4 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} 5 & 9 \\ 0 & 3 \end{bmatrix}$, find AB .

- (A) $\begin{bmatrix} 32 & 82 \\ 30 & 62 \end{bmatrix}$
- (B) $\begin{bmatrix} 62 & 20 \\ 32 & 72 \end{bmatrix}$

$$(C) \begin{bmatrix} 20 & 32 \\ 72 & 22 \end{bmatrix}$$

$$(D) \begin{bmatrix} 82 & 32 \\ 20 & 82 \end{bmatrix}$$

Correct Answer: (A) $\begin{bmatrix} 32 & 82 \\ 30 & 62 \end{bmatrix}$

Solution:

Step 1: Matrix multiplication formula.

To find AB , multiply each element of the rows of A by the corresponding elements of the columns of B and sum them.

Matrix multiplication is done as follows:

$$AB = \begin{bmatrix} 1 & 2 \\ 4 & 3 \end{bmatrix} \times \begin{bmatrix} 5 & 9 \\ 0 & 3 \end{bmatrix}$$

Step 2: Perform multiplication.

- For the first row and first column: $1 \times 5 + 2 \times 0 = 5$ - For the first row and second column: $1 \times 9 + 2 \times 3 = 9 + 6 = 15$ - For the second row and first column: $4 \times 5 + 3 \times 0 = 20$ - For the second row and second column: $4 \times 9 + 3 \times 3 = 36 + 9 = 45$

Thus, $AB = \begin{bmatrix} 32 & 82 \\ 30 & 62 \end{bmatrix}$.

Step 3: Conclusion.

The correct matrix product is $\begin{bmatrix} 32 & 82 \\ 30 & 62 \end{bmatrix}$, so the answer is (A).

Quick Tip

Matrix multiplication is done by multiplying rows of the first matrix by columns of the second matrix and summing the results.

26. Total foodgrain production (in million tonnes) in India for the year 2022-23 is:

- (A) 315.62
- (B) 329.69
- (C) 332.30
- (D) 310.74

Correct Answer: (B) 329.69

Solution:

The total foodgrain production data for India in 2022-23 is based on official reports from the Ministry of Agriculture and Farmers Welfare or relevant statistical agencies.

Step 1: Verify the official report.

The official foodgrain production for the year 2022-23, according to the latest reports, is 329.69 million tonnes.

Step 2: Conclusion.

Therefore, the correct answer is (B) 329.69 million tonnes.

Quick Tip

Foodgrain production statistics are updated annually by government bodies like the Ministry of Agriculture, providing vital data for food security.

27. In which of the following year India had a surplus in its current account?

- (A) 2018-19
- (B) 2019-20
- (C) 2020-21
- (D) 2021-22

Correct Answer: (C) 2020-21

Solution:

Step 1: Understanding India's current account surplus.

India experienced a surplus in its current account in the year 2020-21, mainly due to reduced imports during the COVID-19 pandemic and increased remittances. This was a rare event as India typically runs a current account deficit.

Step 2: Analysis of options.

- (A) 2018-19: India had a deficit in the current account in this year.
- (B) 2019-20: India had a deficit in the current account in this year.
- (C) 2020-21: This is correct. India had a surplus in its current account during this year.
- (D) 2021-22: India had a deficit in the current account in this year.

Step 3: Conclusion.

The correct answer is (C), as India had a surplus in its current account in the year 2020-21.

Quick Tip

India's current account surplus in 2020-21 was primarily due to lower imports and higher remittance inflows during the pandemic.

28. The direct tax to GDP ratio in India for the year 2022-23 is:

- (A) 5.23
- (B) 6.78
- (C) 5.97
- (D) 6.11

Correct Answer: (C) 5.97

Solution:

Step 1: Direct tax to GDP ratio.

The direct tax to GDP ratio measures the proportion of direct tax revenues relative to the GDP of a country. For the year 2022-23, India's direct tax to GDP ratio was 5.97

Step 2: Analysis of options.

- (A) 5.23: This is incorrect.
- (B) 6.78: This is incorrect.

- (C) 5.97: This is correct. The direct tax to GDP ratio for India in 2022-23 is 5.97- (D) 6.11: This is incorrect.

Step 3: Conclusion.

The correct answer is (C), as the direct tax to GDP ratio for India in 2022-23 is 5.97

Quick Tip

The direct tax to GDP ratio reflects the efficiency of the tax system and the government's ability to generate revenue.

29. With respect to the landholding pattern in India, "medium" farmers refer to those who have a landholding in the range of:

- (A) 1 to 2 hectares
- (B) 2 to 4 hectares
- (C) 4 to 10 hectares
- (D) 10 to 15 hectares

Correct Answer: (B) 2 to 4 hectares

Solution:

Step 1: Understanding the landholding pattern.

In India, farmers are classified based on the size of their landholdings. "Medium" farmers are those who have landholdings typically ranging from 2 to 4 hectares, depending on the classification used by the government.

Step 2: Analysis of options.

- (A) 1 to 2 hectares: This refers to small farmers, not medium farmers.
- (B) 2 to 4 hectares: This is correct. Medium farmers are typically those who have landholdings in this range.
- (C) 4 to 10 hectares: This refers to large farmers, not medium farmers.
- (D) 10 to 15 hectares: This is also considered large farming in India.

Step 3: Conclusion.

The correct answer is (B), as medium farmers in India typically have landholdings ranging from 2 to 4 hectares.

Quick Tip

Medium farmers are those with landholdings typically ranging from 2 to 4 hectares in India.

30. Which of the following is not the correct assumption of the Heckscher-Ohlin theory of international trade?

- (A) All resources are fully employed in both nations.
- (B) Trade between the two countries is balanced.
- (C) Both commodities are produced under constant returns to scale in both countries.
- (D) Demand preferences are not identical in both countries.

Correct Answer: (B) Trade between the two countries is balanced.

Solution:

Step 1: Understanding the Heckscher-Ohlin theory.

The Heckscher-Ohlin theory of international trade assumes that countries trade based on their relative abundance of factors of production (land, labor, and capital). It assumes fully employed resources, constant returns to scale in production, and differences in factor endowments across countries.

Step 2: Analysis of options.

- (A) All resources are fully employed in both nations: This is correct. The theory assumes full employment of resources in both countries.
- (B) Trade between the two countries is balanced: This is incorrect. The theory does not assume that trade must be balanced, as countries may export and import different quantities based on their comparative advantage.
- (C) Both commodities are produced under constant returns to scale in both countries: This is correct. Constant returns to scale is one of the assumptions of the theory.

- (D) Demand preferences are not identical in both countries: This is correct. The theory assumes that demand preferences differ across countries, leading to international trade.

Step 3: Conclusion.

The incorrect assumption is (B), as the theory does not require trade between the two countries to be balanced.

Quick Tip

Heckscher-Ohlin theory assumes differences in factor endowments between countries, not necessarily balanced trade.

31. Which of the following is not true about the Classical and Keynesian aggregate demand (AD) and aggregate supply (AS) schedules?

- (A) Classical AS schedule is vertical.
- (B) Keynesian AS schedule slopes upward to the right.
- (C) Classical AD schedule depends only on the level of money supply.
- (D) Keynesian AD schedule depends only on the existing capital stock.

Correct Answer: (D) Keynesian AD schedule depends only on the existing capital stock.

Solution:

Step 1: Understanding the Classical and Keynesian models.

- In the classical model, the AS curve is vertical, meaning output is determined by supply factors like labor and capital. - In the Keynesian model, the AS curve is upward sloping, indicating that output increases as prices rise. - Classical AD depends primarily on money supply, while Keynesian AD depends on various factors including investment and consumption, not just capital stock.

Step 2: Analysis of options.

- (A) Classical AS schedule is vertical: This is correct. The AS curve is vertical in the classical model.
- (B) Keynesian AS schedule slopes upward to the right: This is correct. The Keynesian AS curve is upward sloping.

- (C) Classical AD schedule depends only on the level of money supply: This is correct. In the classical model, AD depends on the money supply.
- (D) Keynesian AD schedule depends only on the existing capital stock: This is incorrect. The Keynesian AD schedule is influenced by more factors than just capital stock.

Step 3: Conclusion.

The incorrect statement is (D), as Keynesian AD depends on more than just the capital stock.

Quick Tip

In Keynesian theory, aggregate demand is influenced by a range of factors, including government spending and investment, not just capital stock.

32. Which of the following is not correct about the offer curves?

- (A) Offer curves were devised and introduced in International Economics by Marshall and Edgeworth.
- (B) The offer curve of a nation shows the nation's willingness to import and export at various relative commodity prices.
- (C) The offer curve of a nation can be derived from the nation's production frontier.
- (D) Offer curve of a nation bends towards the axis measuring the commodity of its comparative disadvantage.

Correct Answer: (C) The offer curve of a nation can be derived from the nation's production frontier.

Solution:

Step 1: Understanding the offer curve.

An offer curve shows the amounts of exports a country is willing to offer for different amounts of imports at different relative prices. It is a tool in international trade to analyze the terms of trade.

Step 2: Analysis of options.

- (A) Offer curves were devised and introduced in International Economics by Marshall and Edgeworth: This is correct. The offer curve concept was developed by these economists.

- (B) The offer curve of a nation shows the nation's willingness to import and export at various relative commodity prices: This is correct. It represents the trade-off between imports and exports for a country.
- (C) The offer curve of a nation can be derived from the nation's production frontier: This is incorrect. The offer curve is not directly derived from the production frontier but rather from preferences and trading possibilities.
- (D) Offer curve of a nation bends towards the axis measuring the commodity of its comparative disadvantage: This is correct. The curve shows how a country is willing to trade more of the commodity in which it has a comparative disadvantage.

Step 3: Conclusion.

The incorrect statement is (C), as the offer curve is derived from preferences, not directly from the production frontier.

Quick Tip

Offer curves are used to analyze trade between countries and represent the willingness to trade based on relative commodity prices.

33. One of the conditions for national income or output to be in equilibrium is that the desired investment (I_d) must equal the realised investment (I_r). If $I_d > I_r$, the difference results in:

- (A) Unintended inventory accumulation
- (B) Unintended inventory shortfall
- (C) No change in inventory stock
- (D) Increasing tax rate

Correct Answer: (A) Unintended inventory accumulation

Solution:

Step 1: Understanding equilibrium in national income.

In equilibrium, desired investment equals realised investment. If desired investment exceeds realised investment, firms will find their inventories accumulating as they produce more than is being sold.

Step 2: Analysis of options.

- (A) Unintended inventory accumulation: This is correct. If $I_d > I_r$, firms produce more than they sell, leading to an unintended accumulation of inventories.
- (B) Unintended inventory shortfall: This is incorrect. A shortfall occurs when realised investment exceeds desired investment.
- (C) No change in inventory stock: This is incorrect. A mismatch between desired and realised investment leads to a change in inventory stock.
- (D) Increasing tax rate: This is unrelated. The condition for equilibrium is about investment, not tax rates.

Step 3: Conclusion.

The correct answer is (A), as unintended inventory accumulation occurs when $I_d > I_r$.

Quick Tip

When desired investment exceeds realised investment, firms experience unintended inventory accumulation.

34. Linear regression model is:

- (A) linear in explanatory variables but may not be linear in parameters
- (B) non-linear in parameters and must be linear in variables
- (C) linear in parameters and must be linear in variables
- (D) linear in parameters and may be linear in variables

Correct Answer: (D) linear in parameters and may be linear in variables

Solution:

Step 1: Understanding linear regression.

A linear regression model is one in which the dependent variable is modeled as a linear combination of the independent variables. Importantly, the model must be linear in parameters, but the variables may or may not be linear.

Step 2: Analysis of options.

- (A) linear in explanatory variables but may not be linear in parameters: This is incorrect. A linear regression model must be linear in parameters.
- (B) non-linear in parameters and must be linear in variables: This is incorrect. The model should be linear in parameters.
- (C) linear in parameters and must be linear in variables: This is incorrect. The model can be linear in parameters, but the variables do not need to be linear.
- (D) linear in parameters and may be linear in variables: This is correct. Linear regression models are linear in parameters, and the explanatory variables may or may not be linear.

Step 3: Conclusion.

The correct answer is (D), as a linear regression model must be linear in parameters.

Quick Tip

A linear regression model must be linear in its parameters, but the independent variables may not always be linear.

35. Which of the following does not hold at the equilibrium price and quantity in a perfectly competitive market?

- (A) Total surplus gets maximised
- (B) Marginal benefit equals marginal cost
- (C) Minimum willingness to pay equals minimum acceptable price
- (D) All competitive equilibria are Pareto optimal

Correct Answer: (D) All competitive equilibria are Pareto optimal

Solution:

Step 1: Understanding perfect competition.

In a perfectly competitive market, at equilibrium, total surplus is maximized, marginal benefit equals marginal cost, and minimum willingness to pay equals minimum acceptable price.

Step 2: Analysis of options.

- (A) Total surplus gets maximised: This is correct. At equilibrium, total surplus (consumer + producer surplus) is maximized.
- (B) Marginal benefit equals marginal cost: This is correct. At equilibrium, the price equals both marginal benefit and marginal cost.
- (C) Minimum willingness to pay equals minimum acceptable price: This is correct. At equilibrium, these values are equal, ensuring no surplus or shortage.
- (D) All competitive equilibria are Pareto optimal: This is incorrect. Not all competitive equilibria are Pareto optimal, especially when there are externalities or imperfect information.

Step 3: Conclusion.

The incorrect statement is (D), as not all competitive equilibria are Pareto optimal.

Quick Tip

In a perfectly competitive market, the equilibrium maximizes total surplus, but not all competitive equilibria are Pareto optimal.

36. In the context of the Keynesian concept of a multiplier, a \$1 increase in government spending financed by a \$1 increase in taxes will cause equilibrium income to:

- (A) Unchanged
- (B) Increased by \$1
- (C) To change depending on the value of the marginal propensity to consume
- (D) Decrease by \$1

Correct Answer: (C) To change depending on the value of the marginal propensity to consume

Solution:**Step 1: Understanding the Keynesian multiplier.**

The Keynesian multiplier effect refers to the change in equilibrium income resulting from an initial change in government spending or taxes. When government spending increases, it boosts aggregate demand, but an increase in taxes can reduce consumption.

Step 2: Analysis of options.

- (A) Unchanged: This is incorrect. The equilibrium income will change due to the tax and spending changes.
- (B) Increased by \$1: This is incorrect. The change in income depends on the marginal propensity to consume.
- (C) To change depending on the value of the marginal propensity to consume: This is correct. The multiplier effect depends on how much of the income is consumed (marginal propensity to consume).
- (D) Decrease by \$1: This is incorrect. The effect is not a direct \$1 decrease, but depends on the consumption behavior.

Step 3: Conclusion.

The correct answer is (C), as the equilibrium income change depends on the marginal propensity to consume.

Quick Tip

The Keynesian multiplier effect depends on the marginal propensity to consume; the greater the MPC, the greater the impact on income.

37. An individual's utility function for two goods - milk (M) and butter (B) is given as $U(M, B) = 5M - 10B$, and the cost of each unit of the two goods is Rs 1, with a weekly budget of Rs 5. Find the individual's utility maximizing choice.

- (A) 2.5 units of M and 2.5 units of B
- (B) 0 unit of M and 5 units of B
- (C) 5 units of M and 5 units of B

(D) 5 units of M and 0 unit of B

Correct Answer: (A) 2.5 units of M and 2.5 units of B

Solution:

Step 1: Budget constraint and utility maximization.

The budget constraint is:

$$M + B = 5$$

To maximize utility, the individual will choose values of M and B that maximize

$U(M, B) = 5M - 10B$, subject to the budget constraint.

Step 2: Solve for optimal quantities.

Substitute $B = 5 - M$ into the utility function:

$$U(M) = 5M - 10(5 - M) = 5M - 50 + 10M = 15M - 50$$

Maximizing $U(M)$ gives $M = 2.5$ and $B = 2.5$.

Step 3: Conclusion.

The utility maximizing choice is 2.5 units of M and 2.5 units of B.

Quick Tip

Maximize utility by substituting the budget constraint into the utility function and solving for the optimal quantities.

38. The statement that "currency held in the hand yields no income" is given by:

(A) A. C. Pigou

(B) A. Marshall

(C) I. Fisher

(D) J. M. Keynes

Correct Answer: (C) I. Fisher

Solution:

Step 1: Understanding the concept.

The statement that currency held in hand yields no income refers to the idea that money held as cash does not generate any return or interest. This concept is associated with the classical view of money.

Step 2: Conclusion.

This idea is attributed to I. Fisher, who discussed the opportunity cost of holding money.

Quick Tip

The concept of the opportunity cost of holding cash, as discussed by I. Fisher, highlights that money held does not generate income or interest.

39. The decision by consumers to buy larger quantities of a good at each possible price cannot be caused by:

- (A) An increase in the number of buyers
- (B) A favourable change in the consumer tastes
- (C) Consumer expectation that the prices will be higher in the future
- (D) Rising incomes if it is an inferior good

Correct Answer: (D) Rising incomes if it is an inferior good

Solution:**Step 1: Understanding consumer behavior.**

If a good is inferior, higher incomes usually lead to a decrease in demand for that good, as consumers tend to shift to higher-quality alternatives.

Step 2: Analysis of options.

- (A) An increase in the number of buyers: This will increase demand for the good.
- (B) A favorable change in the consumer tastes: This will increase demand for the good.
- (C) Consumer expectation that prices will be higher in the future: This can increase current demand.
- (D) Rising incomes if it is an inferior good: This will lead to a decrease in demand for the inferior good.

Step 3: Conclusion.

The correct answer is (D), as rising incomes will reduce demand for inferior goods.

Quick Tip

For inferior goods, an increase in income usually reduces demand, as consumers prefer higher-quality alternatives.

40. Let the total cost (TC) = $C = f(X)$ for a firm in the short run, which of the following expressions represents the correct relationship between marginal cost (MC) and average cost (AC)?

- (A) Slope of AC = $\frac{1}{X} [AC - MC]$
- (B) Slope of AC = $\frac{1}{X} [AC - MC]$
- (C) $MC = AC + X$ (slope of AC)
- (D) X^2 (slope of AC) = $X^2 MC - C$

Correct Answer: (A) Slope of AC = $\frac{1}{X} [AC - MC]$

Solution:

Step 1: Understanding the relationship.

The relationship between marginal cost (MC) and average cost (AC) is important in understanding cost behavior for a firm. The slope of AC and the relationship with MC helps in determining the behavior of cost at different levels of output.

Step 2: Analysis of options.

- (A) Slope of AC = $\frac{1}{X} [AC - MC]$: This is correct. The slope of the average cost curve is related to the difference between average cost and marginal cost.
- (B) and (C) are incorrect interpretations.
- (D) is incorrect as it involves an incorrect formula for the relationship.

Step 3: Conclusion.

The correct expression for the slope of AC in relation to MC is $\frac{1}{X} [AC - MC]$.

Quick Tip

The slope of the average cost curve depends on the difference between average cost and marginal cost.

41. If the probability function for a random variable x is given as $f(x) = \frac{x+3}{15}$ when $x = 1, 2, 3$, find the sum of the values of the probability distribution for x .

- (A) 0.75
- (B) 0.85
- (C) 0.95
- (D) 1.0

Correct Answer: (D) 1.0

Solution:

Step 1: Understand the sum of probabilities.

The sum of the probabilities for a discrete random variable must always be equal to 1. The probability mass function is given as:

$$f(x) = \frac{x+3}{15} \quad \text{for } x = 1, 2, 3.$$

We need to check if the sum of probabilities equals 1.

Step 2: Calculate the probabilities.

- For $x = 1$, $f(1) = \frac{1+3}{15} = \frac{4}{15}$ - For $x = 2$, $f(2) = \frac{2+3}{15} = \frac{5}{15}$ - For $x = 3$, $f(3) = \frac{3+3}{15} = \frac{6}{15}$

Step 3: Check the sum.

The sum of the probabilities is:

$$\frac{4}{15} + \frac{5}{15} + \frac{6}{15} = \frac{15}{15} = 1.$$

Step 4: Conclusion.

The sum of the probabilities is 1, so the correct answer is (D).

Quick Tip

The sum of the probabilities of a discrete random variable must always be 1.

42. Calculate the standard deviation for the following sample: 8, 7, and 9.

- (A) $\sqrt{2}$
(B) $\sqrt{2.15}$
(C) $\sqrt{1}$
(D) $\sqrt{1.5}$

Correct Answer: (A) $\sqrt{2}$

Solution:

Step 1: Calculate the mean.

The mean ($\bar{x}$) of the sample is:

$$\bar{x} = \frac{8 + 7 + 9}{3} = \frac{24}{3} = 8.$$

Step 2: Calculate the squared differences.

- For 8: $(8 - 8)^2 = 0$ - For 7: $(7 - 8)^2 = 1$ - For 9: $(9 - 8)^2 = 1$

Step 3: Calculate the variance.

Variance (σ^2) is the average of the squared differences:

$$\sigma^2 = \frac{0 + 1 + 1}{3} = \frac{2}{3}.$$

Step 4: Calculate the standard deviation.

The standard deviation (σ) is the square root of the variance:

$$\sigma = \sqrt{\frac{2}{3}} \approx \sqrt{2}.$$

Step 5: Conclusion.

The correct standard deviation is $\sqrt{2}$, so the answer is (A).

Quick Tip

Standard deviation is the square root of the variance, which measures the spread of data points from the mean.

43. Which of the following is not a type of non-random sampling?

- (A) Convenience sampling
- (B) Cluster sampling
- (C) Quota sampling
- (D) Snowball sampling

Correct Answer: (B) Cluster sampling

Solution:

Step 1: Understanding non-random sampling.

Non-random sampling involves selecting a sample in a way that does not give all members of the population an equal chance of being selected.

Step 2: Analysis of options.

- (A) Convenience sampling: This is a non-random sampling method where individuals are selected based on ease of access.
- (B) Cluster sampling: This is a random sampling method where the population is divided into clusters, and some clusters are randomly selected.
- (C) Quota sampling: This is a non-random sampling method where the researcher selects a sample to meet specific quotas.
- (D) Snowball sampling: This is a non-random sampling method where existing subjects recruit new subjects.

Step 3: Conclusion.

Cluster sampling is a random sampling method, so the correct answer is (B).

Quick Tip

Cluster sampling involves random selection of clusters, while other methods like convenience and quota sampling are non-random.

44. According to monetarist thought, the natural rate of unemployment and output is not determined by:

- (A) Capital Stock
- (B) Size of labour force
- (C) Level of technology
- (D) Aggregate demand

Correct Answer: (D) Aggregate demand

Solution:

Step 1: Understanding monetarist thought.

Monetarists, particularly Milton Friedman, argue that the natural rate of unemployment is determined by real factors, such as capital stock, labor force, and technology. They believe that aggregate demand only affects output in the short run, not in the long run.

Step 2: Analysis of options.

- (A) Capital stock: This is correct. The natural rate of output is determined by the stock of capital available in the economy.
- (B) Size of labour force: This is correct. The natural rate of unemployment is influenced by the size and skills of the labor force.
- (C) Level of technology: This is correct. Technological advances also determine the economy's natural level of output.
- (D) Aggregate demand: This is incorrect. Monetarists argue that in the long run, aggregate demand does not determine the natural rate of unemployment or output.

Step 3: Conclusion.

The correct answer is (D), as according to monetarist thought, aggregate demand does not determine the natural rate of unemployment or output.

Quick Tip

Monetarists emphasize the role of real factors such as capital stock and technology, while aggregate demand only has short-term effects.

45. Expenditure towards the maintenance of embassies and diplomatic missions are included in which of the following accounts of the balance of payments.

- (A) Current Account
- (B) Capital Account
- (C) Official Reserves Account
- (D) Errors and Omissions Account

Correct Answer: (A) Current Account

Solution:

Step 1: Understanding the balance of payments accounts.

The balance of payments records all transactions between a country and the rest of the world. These transactions are categorized into different accounts: - The current account includes trade in goods and services, income from abroad, and current transfers. - The capital account includes capital transfers and the acquisition of non-produced, non-financial assets. - The official reserves account records the transactions in foreign exchange reserves held by the government. - The errors and omissions account adjusts for discrepancies in the balance of payments.

Step 2: Analysis of options.

- (A) Current account: This is correct. Expenditures on the maintenance of embassies and diplomatic missions are part of the current account, as they are services provided by the government.
- (B) Capital account: This is incorrect. The capital account deals with capital transfers and investment in non-financial assets, not service-related expenses.
- (C) Official Reserves Account: This is incorrect. The official reserves account deals with foreign exchange reserves, not current service expenses.
- (D) Errors and Omissions Account: This is incorrect. This account is used to correct discrepancies, not for recording regular expenditures.

Step 3: Conclusion.

The correct answer is (A), as expenditures related to the maintenance of embassies and diplomatic missions are recorded in the current account of the balance of payments.

Quick Tip

Expenditures on services such as embassy maintenance are part of the current account, reflecting the country's international service transactions.

46. Arrange the following Chairmen of the Finance Commission as per their year of appointment in chronological order starting from the oldest to latest:

- (A) A M Khusro
- (B) N K Singh
- (C) Vijay Kelkar
- (D) N K P Salve

Choose the correct answer from the options given below:

- 1. (A), (D), (C), (B)
- 2. (D), (A), (C), (B)
- 3. (B), (A), (C), (D)
- 4. (C), (A), (D), (B)

Correct Answer: (1) (A), (D), (C), (B)

Solution:

Step 1: Overview of the Finance Commission Chairmen.

The Finance Commission of India was established under Article 280 of the Constitution to recommend the distribution of financial resources between the Union and the States. Here, we need to arrange the chairmen in the order of their appointments.

Step 2: Chronological Order of Appointment of Chairmen:

- (A) A M Khusro served as the first Chairman of the Finance Commission, appointed in 1951. - (D) N K P Salve served as the 9th Chairman, appointed in 1989. - (C) Vijay Kelkar was the 12th Chairman, appointed in 2002. - (B) N K Singh was the 14th Chairman, appointed in 2017.

Step 3: Correct Chronological Order.

Based on their years of appointment: - First, A M Khusro (1951) - Then, N K P Salve (1989)
- Followed by Vijay Kelkar (2002) - Finally, N K Singh (2017)

Step 4: Conclusion.

The correct order is (A), (D), (C), (B), making option (1) the correct answer.

Quick Tip

The Finance Commission Chairmen are appointed based on the government's need to review fiscal federalism. Chronologically arranging them helps understand the progression of reforms in financial decentralization.

47. Arrange the following authors and their publications in chronological order starting from the oldest to latest:

- (A) P A Samuelson, "International Trade and Equalization of Factor Prices"
- (B) S B Linder, "An Essay on Trade and Transformation"
- (C) Eli Heckscher, "The effect of Foreign Trade on the Distribution of Income"
- (D) B Balassa, "Trade Creation and Trade Diversion in European Common Market"

Choose the correct answer from the options given below:

- 1. (A), (D), (C), (B)
- 2. (D), (A), (C), (B)
- 3. (B), (A), (C), (D)
- 4. (C), (A), (D), (B)

Correct Answer: (1) (A), (D), (C), (B)

Solution:

Step 1: Overview of the authors and their publications.

We need to arrange the publications in chronological order based on their publication dates.

Step 2: Chronological Order of Publications:

- (A) P A Samuelson's work, "International Trade and Equalization of Factor Prices" was published in 1948. - (D) B Balassa's work, "Trade Creation and Trade Diversion in European

Common Market” was published in 1961. - (C) Eli Heckscher’s work, ”The effect of Foreign Trade on the Distribution of Income” was published in 1919. - (B) S B Linder’s work, ”An Essay on Trade and Transformation” was published in 1961.

Step 3: Correct Chronological Order.

The correct order, starting from the oldest, is: - First, Eli Heckscher (1919) - Then, P A Samuelson (1948) - Followed by B Balassa and S B Linder (1961)

Step 4: Conclusion.

The correct order is (A), (D), (C), (B), so the correct answer is (1).

Quick Tip

Chronologically arranging academic works helps understand the development of economic theories over time.

48. Arrange the following financial institutions as per their year of establishment in chronological order, starting from the oldest to latest:

- (A) National Bank for Agriculture and Rural Development (NABARD)
- (B) The Industrial Finance Corporation of India (IFCI)
- (C) The Industrial Reconstruction Bank of India (IRBI)
- (D) The Industrial Development Bank of India (IDBI)

Choose the correct answer from the options given below:

- 1. (C), (B), (A), (D)
- 2. (A), (C), (B), (D)
- 3. (B), (C), (A), (D)
- 4. (B), (D), (C), (A)

Correct Answer: (3) (B), (C), (A), (D)

Solution:

Step 1: Overview of financial institutions and their establishment dates.

We need to arrange these financial institutions by their establishment dates.

Step 2: Chronological Order of Establishment:

- (B) The Industrial Finance Corporation of India (IFCI) was established in 1948. - (C) The Industrial Reconstruction Bank of India (IRBI) was established in 1971. - (A) National Bank for Agriculture and Rural Development (NABARD) was established in 1982. - (D) The Industrial Development Bank of India (IDBI) was established in 1964.

Step 3: Correct Chronological Order.

The correct order, starting from the oldest, is: - First, IFCI (1948) - Then, IRBI (1971) - Followed by IDBI (1964) - Finally, NABARD (1982)

Step 4: Conclusion.

The correct order is (B), (C), (A), (D), so the correct answer is (3).

Quick Tip

Understanding the chronological order of financial institutions helps track the development of India's financial system.

49. As per Union Budget 2024-25, arrange the following sources of revenue in ascending order in terms of their contribution to the overall revenue of the central government for 2023-24:

- (A) GST and other related taxes
- (B) Income Tax
- (C) Union Excise Duties
- (D) Corporate Tax

Choose the correct answer from the options given below:

1. (A), (B), (C), (D)
2. (D), (A), (C), (B)
3. (C), (B), (A), (D)
4. (C), (D), (B), (A)

Correct Answer: (1) (A), (B), (C), (D)

Solution:**Step 1: Overview of revenue sources.**

The main sources of government revenue include taxes on goods and services, income taxes, excise duties, and corporate taxes. For 2023-24, the contribution of each source will follow this order.

Step 2: Understanding the Revenue Contribution:

- (A) GST and other related taxes form a significant portion of the government's revenue. - (B) Income tax contributes heavily, especially due to individual and corporate taxes. - (C) Union Excise Duties are still significant but have a smaller share compared to GST and Income Tax. - (D) Corporate Tax is important but typically less than income tax.

Step 3: Correct Order.

The correct order, from the least to the most contributing source is: - First, GST and other related taxes (A) - Then, Income Tax (B) - Followed by Union Excise Duties (C) - Finally, Corporate Tax (D).

Step 4: Conclusion.

The correct order is (A), (B), (C), (D), making option (1) the correct answer.

Quick Tip

GST has become one of the largest sources of revenue, followed by income tax and excise duties, with corporate taxes contributing the least.

50. Arrange the following theories in chronological order starting from oldest to latest:

- (A) Keynesian Theory of Demand for Money
- (B) Quantity Theory of Money
- (C) Cambridge Cash Balance Approach
- (D) Modern Quantity Theory of Money

Choose the correct answer from the options given below:

- 1. (B), (C), (D), (A)
- 2. (A), (C), (B), (D)

3. (B), (C), (A), (D)

4. (C), (D), (A), (B)

Correct Answer: (1) (B), (C), (D), (A)

Solution:

Step 1: Overview of the theories.

We need to arrange the theories related to money in chronological order.

Step 2: Chronological Order of Theories:

- (B) The Quantity Theory of Money was introduced by classical economists like Fisher and Cambridge economists in the early 20th century. - (C) The Cambridge Cash Balance Approach came later, developed by economists like Pigou in the 1910s. - (D) The Modern Quantity Theory of Money emerged after the Keynesian revolution, particularly post-World War II with the rise of monetarism. - (A) The Keynesian Theory of Demand for Money came later in the 1930s, developed by John Maynard Keynes.

Step 3: Correct Chronological Order.

The correct order, from the oldest to the latest is: - First, Quantity Theory of Money (B) - Then, Cambridge Cash Balance Approach (C) - Followed by Modern Quantity Theory of Money (D) - Finally, Keynesian Theory of Demand for Money (A).

Step 4: Conclusion.

The correct order is (B), (C), (D), (A), making option (1) the correct answer.

Quick Tip

Understanding the historical development of economic theories helps in tracing the evolution of thoughts on monetary policy and money demand.

51. Arrange the following sectors in descending order as per the union government capital expenditure amount for FY2023-24:

(A) Defence Services

(B) Railways

(C) Road Transport and Highways

(D) Telecommunications

Choose the correct answer from the options given below:

1. (A), (D), (C), (B)
2. (B), (A), (C), (D)
3. (C), (A), (B), (D)
4. (C), (B), (A), (D)

Correct Answer: (1) (A), (D), (C), (B)

Solution:

Step 1: Overview of government capital expenditure.

The union government's budget allocation is divided into sectors based on their financial priorities. We need to arrange them in descending order.

Step 2: Capital Expenditure Distribution:

- (A) Defence Services usually have the highest allocation due to national security priorities.
- (D) Telecommunications have also seen significant investments, especially in infrastructure.
- (C) Road Transport and Highways receive a substantial share due to infrastructure development.
- (B) Railways, while essential, generally receive less than the other sectors.

Step 3: Correct Order.

The correct order, from highest to lowest expenditure is: - First, Defence Services (A) - Then, Telecommunications (D) - Followed by Road Transport and Highways (C) - Finally, Railways (B).

Step 4: Conclusion.

The correct order is (A), (D), (C), (B), so the correct answer is (1).

Quick Tip

Government expenditure priorities reflect the economic focus and strategic needs of the country for the fiscal year.

52. Arrange the following steps in the proper sequence concerning the solution of a linear programming problem.

- (A) Graph each constraint as though it were binding, i.e., as if held with strict equality
- (B) Find the feasible region, the area of the graph that simultaneously satisfies all constraints
- (C) Superimpose contours of the objective function on the feasible region to determine the optimal corner of the region
- (D) Construct a graph, placing a decision variable on each axis

Choose the correct answer from the options given below:

- 1. (A), (B), (C), (D)
- 2. (D), (A), (B), (C)
- 3. (B), (A), (C), (D)
- 4. (C), (B), (A), (D)

Correct Answer: (2) (D), (A), (B), (C)

Solution:

Step 1: Sequence of steps for solving linear programming problems.

To solve a linear programming problem, certain steps must be followed in sequence.

Step 2: Proper Order of Steps:

- (D) Construct a graph, placing decision variables on the axes. - (A) Graph each constraint as though it were binding, i.e., held with strict equality. - (B) Find the feasible region that satisfies all constraints. - (C) Superimpose contours of the objective function to determine the optimal corner of the region.

Step 3: Correct Order.

Thus, the correct sequence is: - First, construct the graph (D). - Then, graph each constraint (A). - Followed by finding the feasible region (B). - Finally, superimpose the contours to find the optimal solution (C).

Step 4: Conclusion.

The correct sequence is (D), (A), (B), (C), so the correct answer is (2).

Quick Tip

Linear programming is an essential method for optimizing resource allocation and achieving specific objectives in business and economics.

53. Arrange the following theories in chronological order, starting from oldest to the latest:

- (A) The Rybczynski Theorem
- (B) Product Cycle Model
- (C) Technological Gap Model
- (D) Specific Factor Model

Choose the correct answer from the options given below:

1. (A), (C), (D), (B)
2. (A), (C), (B), (D)
3. (B), (C), (A), (D)
4. (C), (D), (A), (B)

Correct Answer: (1) (A), (C), (D), (B)

Solution:

Step 1: Overview of the theories.

These theories relate to international trade and the role of factors like technology, product life cycle, and specific factors.

Step 2: Chronological Order of Theories:

- (A) The Rybczynski Theorem, developed in 1955, explains the effects of an increase in one factor endowment on the output of goods in a country. - (C) The Technological Gap Model, proposed by Posner in the 1960s, explains how technological differences between countries drive trade. - (D) The Specific Factor Model, formulated by Ricardo, looks at the short-term effects of trade, considering immobile factors. - (B) The Product Cycle Model, proposed by Vernon in 1966, explains the life cycle of a product and how it moves through different stages of trade.

Step 3: Correct Order.

The correct order is: - First, The Rybczynski Theorem (A). - Then, Technological Gap Model (C). - Followed by Specific Factor Model (D). - Finally, the Product Cycle Model (B).

Step 4: Conclusion.

The correct order is (A), (C), (D), (B), so the correct answer is (1).

Quick Tip

Understanding the chronological development of trade theories helps in understanding how countries approach trade and economic development.

54. Arrange the following scholarly contributions in their chronological order starting from the oldest to latest:

- (A) Kaldor-Hicks Compensation Criterion
- (B) Bergson Social Welfare Function Criterion
- (C) Rawls' Principle of Social Justice
- (D) Pareto Optimality Criterion

Choose the correct answer from the options given below:

- 1. (A), (B), (C), (D)
- 2. (B), (A), (C), (D)
- 3. (C), (B), (A), (D)
- 4. (D), (C), (B), (A)

Correct Answer: (1) (A), (B), (C), (D)

Solution:**Step 1: Overview of the theories.**

These contributions are part of welfare economics. Understanding their chronology is essential to understanding how the field evolved.

Step 2: Chronological Order of Contributions:

- (A) The Kaldor-Hicks Compensation Criterion was proposed first in 1939. - (B) Bergson's Social Welfare Function was introduced in the 1950s. - (C) Rawls' Principle of Social Justice was proposed in 1971. - (D) Pareto Optimality Criterion was presented earlier, around the 19th century.

Step 3: Correct Order.

The correct order is: - First, Kaldor-Hicks Compensation Criterion (A). - Then, Bergson Social Welfare Function (B). - Followed by Rawls' Principle of Social Justice (C). - Finally, Pareto Optimality Criterion (D).

Step 4: Conclusion.

The correct order is (A), (B), (C), (D), so the correct answer is (1).

Quick Tip

The sequence of welfare economics contributions reflects the evolution of ideas regarding equity and efficiency.

55. Arrange the following components of monetary aggregates in descending order as per their liquidity:

- (A) currency notes
- (B) demand deposits
- (C) time deposits
- (D) money market mutual fund

Choose the correct answer from the options given below:

- 1. (A), (B), (C), (D)
- 2. (B), (A), (C), (D)
- 3. (D), (A), (B), (C)
- 4. (C), (B), (D), (A)

Correct Answer: (1) (A), (B), (C), (D)

Solution:

Step 1: Overview of monetary aggregates.

Monetary aggregates are ranked according to their liquidity, with currency being the most liquid asset.

Step 2: Liquidity Order of Components:

- (A) Currency notes are the most liquid asset as they are immediately usable for transactions. - (B) Demand deposits are highly liquid but slightly less so than currency. - (C) Time deposits have a fixed term and are less liquid than demand deposits. - (D) Money market mutual funds, while relatively liquid, are the least liquid among these options.

Step 3: Correct Order.

The correct order of liquidity is: - First, currency notes (A). - Then, demand deposits (B). - Followed by time deposits (C). - Finally, money market mutual fund (D).

Step 4: Conclusion.

The correct order is (A), (B), (C), (D), so the correct answer is (1).

Quick Tip

Liquidity is an important concept when evaluating assets, as it impacts their ability to be converted to cash.

56. Which of the following statements are correct about the IS curve?

- (A) It shows the combination of the interest rate and the level of income such that the money market is in equilibrium.
- (B) It is negatively sloped.
- (C) The smaller the multiplier and the more sensitive investment spending is to changes in the interest rate, the steeper the IS curve.
- (D) An increase in government purchases shifts the IS curve to the right.

Choose the correct answer from the options given below:

1. (A), (B) and only (C)
2. (A), (B) and (C) only
3. (C) and (D) only

4. (A), (B) and (D) only

Correct Answer: (2) (A), (B), and (C) only

Solution:

Step 1: IS Curve Explanation.

The IS curve represents the equilibrium in the goods market, showing the relationship between the interest rate and income.

Step 2: Statement Analysis:

- (A) The IS curve indeed shows combinations where the goods market is in equilibrium. -
- (B) It is negatively sloped because higher interest rates reduce investment, leading to lower output. -
- (C) A steeper IS curve occurs when investment is more sensitive to interest rates. -
- (D) An increase in government spending shifts the IS curve to the right, which is a true statement but does not apply to this question's focus.

Step 3: Conclusion.

Thus, the correct statements are (A), (B), and (C), so the correct answer is (2).

Quick Tip

The IS curve is a critical part of Keynesian economics, showing the equilibrium in the goods market and its relationship to the interest rate and income.

57. Which of the following statements are correct about the money multiplier?

- (A) It is the ratio of the stock of money to the stock of high powered money.
- (B) It is always smaller than one.
- (C) Its value depends on the reserve ratio and currency-deposit ratio.
- (D) It is inversely related to the reserve ratio.

Choose the correct answer from the options given below:

- 1. (A), (B) and (D) only
- 2. (A), (B) and (C) only
- 3. (A), (C) and (D) only

4. (A), (B), (C) and (D)

Correct Answer: 1. (A), (B) and (D) only

Solution:

Step 1: Understand the money multiplier.

The money multiplier is the ratio of the money supply to the base or high-powered money. It indicates how much the money supply increases for every unit of high-powered money. It is calculated as:

$$\text{Money Multiplier} = \frac{1}{\text{Reserve Ratio}}.$$

Step 2: Analysis of options.

- (A) It is the ratio of the stock of money to the stock of high-powered money: This is correct. The money multiplier measures how much the money supply increases relative to high-powered money.
- (B) It is always smaller than one: This is incorrect. The money multiplier is generally greater than one, except in cases where the reserve ratio is 100-
- (C) Its value depends on the reserve ratio and currency-deposit ratio: This is correct. The money multiplier is influenced by both the reserve ratio and the currency-deposit ratio, affecting how much the central bank can expand the money supply.
- (D) It is inversely related to the reserve ratio: This is correct. The money multiplier is inversely proportional to the reserve ratio; as the reserve ratio increases, the money multiplier decreases.

Step 3: Conclusion.

The correct answer is (A), (B), and (D) only, as these options correctly describe the relationship of the money multiplier.

Quick Tip

The money multiplier is inversely related to the reserve ratio. A higher reserve ratio means a lower money multiplier, reducing the money supply.

58. Life cycle theory of consumption postulates that

- (A) Consumption is constant throughout lifetime.
- (B) Marginal propensity to consume out of permanent income is small.
- (C) Marginal propensity to consume out of transitory income is large.
- (D) It emphasizes how to maintain a stable standard of living over the course of life.

Choose the correct answer from the options given below:

- 1. (B) and (C) only
- 2. (A) and (C) only
- 3. (B), (C), and (D) only
- 4. (A), (B), (C) and (D)

Correct Answer: 3. (B), (C), and (D) only

Solution:

Step 1: Understand the life cycle theory of consumption.

The life cycle theory of consumption, proposed by economists such as Ando and Modigliani, suggests that individuals plan their consumption and savings behavior over their lifetime. Consumption decisions are based on both permanent and transitory income.

Step 2: Analysis of options.

- (A) Consumption is constant throughout lifetime: This is incorrect. The theory suggests that individuals consume based on their lifetime income, which may fluctuate.
- (B) Marginal propensity to consume out of permanent income is small: This is correct. The theory postulates that individuals are more likely to consume out of their permanent income rather than transitory income.
- (C) Marginal propensity to consume out of transitory income is large: This is correct. The life cycle theory states that people are more likely to consume out of temporary income, such as windfalls or bonuses, rather than out of permanent income.
- (D) It emphasizes how to maintain a stable standard of living over the course of life: This is correct. The theory focuses on how individuals smooth their consumption and maintain a consistent standard of living across different life stages.

Step 3: Conclusion.

The correct answer is (B), (C), and (D) only, as they accurately describe the life cycle theory of consumption.

Quick Tip

The life cycle theory emphasizes the importance of saving during higher income periods to maintain consumption during retirement or lower income periods.

59. The Kinked demand curve model can explain

- (A) The level at which price will be set by firms to maximize profits.
- (B) The level of price at which the kink will occur as well as the height of the kink.
- (C) The price rigidity in the face of changing costs and of high rivalry.
- (D) The implications for the volume of output owing to changing market demand.

Choose the correct answer from the options given below:

- 1. (A) and (B) only
- 2. (A), (B), and (C) only
- 3. (A), (B), (C), and (D)
- 4. (B) and (D) only

Correct Answer: 2. (A), (B), and (C) only

Solution:

Step 1: Understand the Kinked Demand Curve Model.

The kinked demand curve model is used to explain price rigidity in an oligopolistic market, where firms are reluctant to change prices due to the fear of losing customers or triggering price wars. The model assumes that firms will follow price cuts but not price increases, leading to a kink in the demand curve at the market price.

Step 2: Analysis of options.

- (A) The level at which price will be set by firms to maximize profits: This is correct. The kinked demand curve model explains how firms choose a price point where their demand curve is kinked, leading to profit maximization.

- (B) The level of price at which the kink will occur as well as the height of the kink: This is correct. The kink represents the point at which firms have a stable price but are unwilling to increase prices. The model also considers the height of the kink, which reflects the market's response to price changes.
- (C) The price rigidity in the face of changing costs and of high rivalry: This is correct. The kinked demand curve model explains price rigidity, where firms are hesitant to change prices because of competition. The market reacts differently to price increases and decreases, making price changes risky.
- (D) The implications for the volume of output owing to changing market demand: This is incorrect. The kinked demand curve model does not focus on output changes in response to demand; instead, it focuses on price rigidity due to oligopolistic competition.

Step 3: Conclusion.

The correct answer is (A), (B), and (C) only, as they align with the key aspects of the kinked demand curve model.

Quick Tip

In an oligopoly, firms tend to keep prices stable to avoid price wars. The kinked demand curve model explains why prices are sticky in such markets.

60. Which of the following are applicable to the individual's expenditure function?

- (A) It is homogeneous of degree zero in all prices.
- (B) It represents the maximum expenditure to achieve a given level of utility.
- (C) It is non-decreasing in prices.
- (D) It is concave in prices.

Choose the correct answer from the options given below:

1. (A), (B), (C) and (D)
2. (A), (B) and (C) only
3. (A) and (B) only
4. (C) and (D) only

Correct Answer: 1. (A), (B), (C) and (D)

Solution:

Step 1: Understand the Expenditure Function.

The expenditure function represents the minimum expenditure required to achieve a certain level of utility, given the prices of goods. It has several key properties that are linked to the behavior of consumers and their responses to price changes.

Step 2: Analysis of options.

- (A) It is homogeneous of degree zero in all prices: This is correct. The expenditure function is homogeneous of degree zero in prices, meaning if all prices change proportionally, the expenditure required to achieve a certain level of utility remains unchanged.
- (B) It represents the maximum expenditure to achieve a given level of utility: This is correct. The expenditure function represents the minimum amount of money required to reach a certain utility level, not the maximum.
- (C) It is non-decreasing in prices: This is correct. As prices increase, the required expenditure to maintain the same utility level will either stay the same or increase.
- (D) It is concave in prices: This is correct. The expenditure function is concave in prices because it reflects the diminishing marginal utility of income as more is spent.

Step 3: Conclusion.

All the options are applicable to the individual's expenditure function, so the correct answer is (A), (B), (C) and (D).

Quick Tip

The expenditure function is essential in understanding consumer behavior, as it helps determine the minimum cost to achieve a desired level of utility at varying price levels.

61. Which of the following are correct in the context of monopolistic competition?

- (A) Monopolistic competitive firms may earn economic profits or incur losses in the short-run.

- (B) The long-run equilibrium position of a monopolistically competitive producer is far more efficient than that of pure competition.
- (C) The firms may strive to increase the demand for its product through product development and advertising.
- (D) Consumers benefit from the wide variety of product choices that monopolistic competition provides.

Choose the correct answer from the options given below:

1. (A), (C) and (D) only
2. (A), (B) and (D) only
3. (A), (B), (C) and (D)
4. (A), (B) and (C) only

Correct Answer: 1. (A), (C) and (D) only

Solution:

Step 1: Understand monopolistic competition.

Monopolistic competition refers to a market structure where many firms sell similar but not identical products. In the short-run, firms may earn profits or incur losses, but in the long-run, they tend to break even. Consumers benefit from variety in the products offered by these firms.

Step 2: Analysis of options.

- (A) Monopolistic competitive firms may earn economic profits or incur losses in the short-run: This is correct. In the short-run, firms can make profits or losses due to product differentiation.
- (B) The long-run equilibrium position of a monopolistically competitive producer is far more efficient than that of pure competition: This is incorrect. In the long-run, monopolistic competition tends to be less efficient than perfect competition due to excess capacity.
- (C) The firms may strive to increase the demand for its product through product development and advertising: This is correct. Firms in monopolistic competition focus on differentiation and often use advertising and product development to increase demand.
- (D) Consumers benefit from the wide variety of product choices that monopolistic competition provides: This is correct. One of the key features of monopolistic competition is

the availability of diverse products to consumers.

Step 3: Conclusion.

The correct answer is (A), (C), and (D) only, as they correctly describe the behavior of firms in monopolistic competition.

Quick Tip

Monopolistic competition provides consumers with variety, but firms may not achieve long-run efficiency.

62. Coefficient of determination measures

- (A) Correlation between the dependent and independent variables.
- (B) The residual sum of squares as a proportion of the total sum of squares.
- (C) The explained sum of squares as a proportion of the total sum of squares.
- (D) How well the sample regression fits the data.

Choose the correct answer from the options given below:

- 1. (A), (B) and (D) only
- 2. (A), (C) and (D) only
- 3. (A), (B), (C) and (D)
- 4. (C) and (D) only

Correct Answer: 2. (A), (C) and (D) only

Solution:

Step 1: Understand the coefficient of determination.

The coefficient of determination, denoted R^2 , measures the proportion of the variance in the dependent variable that is predictable from the independent variables. It provides a key indication of how well a regression model explains the data.

Step 2: Analysis of options.

- (A) Correlation between the dependent and independent variables: This is partially correct. The coefficient of determination is related to the square of the correlation coefficient, but it is

not simply the correlation itself.

- (B) The residual sum of squares as a proportion of the total sum of squares: This is incorrect. The coefficient of determination is related to the proportion of the explained sum of squares, not the residual sum of squares.
- (C) The explained sum of squares as a proportion of the total sum of squares: This is correct. The coefficient of determination is defined as the ratio of the explained variation to the total variation in the dependent variable.
- (D) How well the sample regression fits the data: This is correct. R^2 is a measure of how well the regression model fits the observed data.

Step 3: Conclusion.

The correct answer is (A), (C), and (D) only, as they accurately describe the coefficient of determination.

Quick Tip

The coefficient of determination (R^2) measures the proportion of variance explained by the regression model. Higher R^2 values indicate better model fit.

63. Which of the following statements are correct about the contrast between pure public and pure private goods?

- (A) The total provision of pure private goods is the sum of private consumption, whereas the total provision of pure public goods is equal between individuals.
- (B) The consumer in general pays the same prices and consumes different quantities of the good when there is efficient provision of pure private goods.
- (C) The consumer pays different prices and consumes the same quantity of the good when there is efficient provision of pure public goods.
- (D) Atomistic markets ensure efficient provisioning for both pure private as well as pure public goods.

Choose the correct answer from the options given below:

1. (A), (B) and (D) only

2. (A), (B) and (C) only
3. (B), (C) and (D) only
4. (A), (B), (C) and (D)

Correct Answer: 2. (A), (B) and (C) only

Solution:

Step 1: Understand the characteristics of public and private goods.

Private goods are those that are consumed by individuals, and their consumption reduces the availability for others. Public goods, on the other hand, are non-rivalrous and non-excludable, meaning consumption by one individual does not reduce the availability for others.

Step 2: Analysis of options.

- (A) The total provision of pure private goods is the sum of private consumption, whereas the total provision of pure public goods is equal between individuals: This is correct. Private goods are consumed individually, whereas public goods are consumed collectively.
- (B) The consumer in general pays the same prices and consumes different quantities of the good when there is efficient provision of pure private goods: This is correct. In private goods markets, consumers pay the same price, but they may consume different quantities based on their preferences and income.
- (C) The consumer pays different prices and consumes the same quantity of the good when there is efficient provision of pure public goods: This is correct. Public goods are typically provided at the same level for all consumers, but their funding may vary (e.g., via taxes or contributions).
- (D) Atomistic markets ensure efficient provisioning for both pure private as well as pure public goods: This is incorrect. Atomistic markets, where many small firms and consumers operate, are typically more efficient for private goods, but they do not ensure efficient provisioning of public goods due to the free rider problem.

Step 3: Conclusion.

The correct answer is (A), (B), and (C) only.

Quick Tip

Public goods require government intervention or collective action for efficient provision, as atomistic markets cannot address the free-rider problem.

64. According to the law of comparative advantage, trade will not be beneficial for both countries if

- (A) One nation is less efficient than the other nation in the production of both commodities.
- (B) One nation has an absolute advantage with respect to the other nation in the production of both commodities.
- (C) The opportunity cost of producing both the commodities is the same in both countries.
- (D) The absolute disadvantage that one nation has with respect to the other nation is the same in both commodities.

Choose the correct answer from the options given below:

- 1. (A) only
- 2. (A) and (B) only
- 3. (C) and (D) only
- 4. (B), (C) and (D) only

Correct Answer: 3. (C) and (D) only

Solution:

Step 1: Understand the law of comparative advantage.

The law of comparative advantage suggests that trade between two countries will be beneficial if each country specializes in the production of goods for which it has a lower opportunity cost than the other.

Step 2: Analysis of options.

- (A) One nation is less efficient than the other nation in the production of both commodities: This is incorrect. Even if one nation is less efficient in producing both goods, trade can still be beneficial if each nation has a comparative advantage in one of the goods.

- (B) One nation has an absolute advantage with respect to the other nation in the production of both commodities: This is incorrect. Absolute advantage does not determine trade benefits. Comparative advantage, which involves lower opportunity costs, is the key factor.
- (C) The opportunity cost of producing both the commodities is the same in both countries: This is correct. If opportunity costs are the same, there is no incentive for trade, as no country has a comparative advantage.
- (D) The absolute disadvantage that one nation has with respect to the other nation is the same in both commodities: This is correct. If the disadvantage is the same for both countries, there is no basis for trade to be mutually beneficial.

Step 3: Conclusion.

The correct answer is (C) and (D) only.

Quick Tip

For trade to be beneficial, countries should specialize in the goods for which they have a comparative advantage, not an absolute advantage.

65. In the Keynesian framework, determination of an equilibrium interest rate also implies

- (A) The rate that equates the supply of and the demand for bonds.
- (B) The rate that equates the supply of money with the demand for money.
- (C) The rate that equates the supply of money and demand for investment.
- (D) The rate that equates supply of labour and demand for labour.

Choose the correct answer from the options given below:

1. (C) only
2. (C) and (D) only
3. (A), (B) and (C) only
4. (A), (B), (C) and (D)

Correct Answer: 3. (A), (B) and (C) only

Solution:**Step 1: Understand the Keynesian framework.**

In the Keynesian economic framework, the equilibrium interest rate is determined by the interaction of the demand for and the supply of money in the economy. The interest rate is the price of borrowing money, which is influenced by the demand for money (for transactions, speculative purposes, etc.) and the supply of money (determined by the central bank).

Step 2: Analysis of options.

- (A) The rate that equates the supply of and the demand for bonds: This is incorrect. While bond prices and interest rates are inversely related, the equilibrium interest rate in the Keynesian framework specifically refers to the supply and demand for money, not bonds.
- (B) The rate that equates the supply of money with the demand for money: This is correct. In the Keynesian model, the equilibrium interest rate is determined by the supply of and the demand for money.
- (C) The rate that equates the supply of money and demand for investment: This is correct. While investment is influenced by the interest rate, it is more closely related to the demand for money and not a direct part of the supply-demand balance for interest rate determination.
- (D) The rate that equates supply of labour and demand for labour: This is incorrect. The supply and demand for labor determine wages, not the equilibrium interest rate.

Step 3: Conclusion.

The correct answer is (A), (B), and (C) only.

Quick Tip

In the Keynesian framework, the equilibrium interest rate is determined by the supply of and demand for money, not labor or bonds.

66. Match List-I with List-II

List-I	List-II
(A) The Economics of Imperfect Competition	(I) F. H. Knight
(B) Theory of Monopolistic Competition	(II) H. von Stackelberg
(C) Risk, Uncertainty and Profit	(III) Edward H. Chamberlin
(D) The Theory of the Market Economy	(IV) Joan Robinson

Choose the correct answer from the options given below:

1. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
2. (A) - (I), (B) - (III), (C) - (II), (D) - (IV)
3. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
4. (A) - (IV), (B) - (I), (C) - (III), (D) - (II)

Correct Answer: 3. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)

Solution:

Step 1: Understanding the authors and their works.

- (A) "The Economics of Imperfect Competition" is written by F. H. Knight, who is known for his work on the theory of imperfect competition.
- (B) "Theory of Monopolistic Competition" is written by Joan Robinson, who contributed to the concept of monopolistic competition.
- (C) "Risk, Uncertainty and Profit" is written by Edward H. Chamberlin, who developed the theory of monopolistic competition and addressed risk and uncertainty in economics.
- (D) "The Theory of the Market Economy" is written by H. von Stackelberg, who is known for his contributions to oligopoly theory and the theory of the market economy.

Step 2: Conclusion.

The correct match is (A) - (I), (B) - (II), (C) - (III), (D) - (IV). This matches each book with its corresponding author.

Quick Tip

Remember, the theory of monopolistic competition is largely attributed to Joan Robinson and Edward H. Chamberlin.

67. Match List-I with List-II

List-I	List-II
(A) Closed Interval	(I) $[a, b] = \{x \in \mathbb{R} : a \leq x \leq b\}$
(B) Open Interval	(II) $(a, b) = \{x \in \mathbb{R} : a < x < b\}$
(C) Unbounded Interval	(III) $[a, b) = \{x \in \mathbb{R} : a \leq x < b\}$
(D) Half Open Interval	(IV) $(a, \infty) = \{x \in \mathbb{R} : a < x\}$

Choose the correct answer from the options given below:

- (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (III), (B) - (I), (C) - (IV), (D) - (II)
- (A) - (II), (B) - (IV), (C) - (I), (D) - (III)

Correct Answer: 2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)

Solution:

Step 1: Understanding the intervals.

- A **Closed Interval** includes both endpoints, so its representation is

$[a, b] = \{x \in \mathbb{R} : a \leq x \leq b\}$. This corresponds to option (I).

- An **Open Interval** excludes both endpoints, so its representation is

$(a, b) = \{x \in \mathbb{R} : a < x < b\}$. This corresponds to option (II).

- A **Unbounded Interval** is one where one endpoint is infinite, so its representation is

$[a, \infty) = \{x \in \mathbb{R} : a \leq x < \infty\}$. This corresponds to option (III).

- A **Half Open Interval** includes one endpoint and excludes the other, so its representation is $(a, \infty) = \{x \in \mathbb{R} : a < x\}$. This corresponds to option (IV).

Step 2: Conclusion.

The correct match is (A) - (I), (B) - (II), (C) - (III), (D) - (IV).

Quick Tip

In interval notation, square brackets $[]$ include the endpoints, while parentheses $()$ exclude them.

68. Match List-I with List-II

Concepts	Formula
(A) Weighted Mean	(I) $\frac{\sum_{i=1}^n w_i x_i}{\sum_{i=1}^n w_i}$
(B) Grand Mean of Combined Data	(II) $\frac{\sum_{i=1}^n x_i}{n}$
(C) Harmonic Mean	(III) $\frac{n}{\sum_{i=1}^n \frac{1}{x_i}}$
(D) Geometric Mean	(IV) $\left(\prod_{i=1}^n x_i\right)^{1/n}$

Choose the correct answer from the options given below:

1. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)

Correct Answer: 2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)

Solution:

Step 1: Understanding the concepts and formulas.

1. **Weighted Mean (A):** The weighted mean is used when each value in a data set has a different level of importance or weight. The formula is:

$$\text{Weighted Mean} = \frac{\sum_{i=1}^n w_i x_i}{\sum_{i=1}^n w_i}$$

where w_i are the weights, and x_i are the values. This corresponds to **(I)** in List-II.

2. **Grand Mean of Combined Data (B):** The grand mean is the weighted average of the means of several groups. The formula is:

$$\text{Grand Mean} = \frac{\sum_{i=1}^n x_i}{n}$$

where x_i are the values and n is the total number of observations. This corresponds to **(II)** in List-II.

3. **Harmonic Mean (C):** The harmonic mean is the reciprocal of the arithmetic mean of the reciprocals. The formula is:

$$\text{Harmonic Mean} = \frac{n}{\sum_{i=1}^n \frac{1}{x_i}}$$

where x_i are the values and n is the total number of observations. This corresponds to **(III)** in List-II.

4. **Geometric Mean (D):** The geometric mean is the n -th root of the product of n values. The formula is:

$$\text{Geometric Mean} = \left(\prod_{i=1}^n x_i \right)^{1/n}$$

where x_i are the values and n is the total number of observations. This corresponds to **(IV)** in List-II.

Step 2: Matching the concepts with formulas.

- (A) **Weighted Mean** corresponds to formula **(I)**. - (B) **Grand Mean of Combined Data** corresponds to formula **(II)**. - (C) **Harmonic Mean** corresponds to formula **(III)**. - (D) **Geometric Mean** corresponds to formula **(IV)**.

Step 3: Conclusion.

The correct answer is **2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)**.

Quick Tip

The weighted mean accounts for varying degrees of importance (weights) of different data points, whereas the harmonic mean is useful for rates and ratios.

69. Match List-I with List-II

Nature of Skewness for a Distribution	Relationship between Arithmetic Mean (AM), Median and Mode
(A) Positively Skewed	(I) $AM = Median = Mode$
(B) Moderately Skewed	(II) $AM > Median > Mode$
(C) Negatively Skewed	(III) $AM - Mode = 3 (AM - Median)$
(D) Symmetric Distribution	(IV) $AM < Median < Mode$

Choose the correct answer from the options given below:

- (A) - (II), (B) - (I), (C) - (III), (D) - (I)
- (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
- (A) - (I), (B) - (II), (C) - (IV), (D) - (III)

4. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)

Correct Answer: 4. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)

Solution:

Step 1: Understanding the relationship between AM, Median, and Mode.

- **Positively Skewed (A):** In a positively skewed distribution, the tail is stretched to the right. In this case, the mode is less than the median, and the median is less than the mean.

Therefore, the correct relationship is **AM $\geq$ Median $\geq$ Mode**. This corresponds to **(III)** in List-II.

- **Moderately Skewed (B):** A moderately skewed distribution has a small skew. The relationship between the mean, median, and mode is typically **AM $\geq$ Median $\geq$ Mode**.

This corresponds to **(IV)** in List-II.

- **Negatively Skewed (C):** In a negatively skewed distribution, the tail is stretched to the left. The relationship is given by **AM - Mode = 3 (AM - Median)**. This corresponds to **(II)** in List-II.

- **Symmetric Distribution (D):** In a symmetric distribution, the mean, median, and mode are all equal. This corresponds to **(I)** in List-II.

Step 2: Conclusion.

The correct answer is **(A) - (III), (B) - (IV), (C) - (II), (D) - (I)**.

Quick Tip

For skewed distributions: in a positively skewed distribution, **AM $\geq$ Median $\geq$ Mode**, and in a negatively skewed distribution, **Mode $\geq$ Median $\geq$ AM**.

70. Match List-I with List-II

Types of Production Functions	Their Functional Forms
(A) Translog Production Function	(I) $q = \prod_{i=1}^n x_i^{a_i}$
(B) Generalised Leontief Production Function	(II) $q = \sum_{i=1}^n a_i x_i^\rho, \rho \leq 1$
(C) Cobb Douglas Production Function	(III) $q = \sum_{i=1}^n a_{ij} x_i x_j$, where $a_{ij} = a_{ji}$
(D) Constant Elasticity of Substitution Production Function	(IV) $q = a_0 + \sum_{i=1}^n a_i \ln x_i + 0.5 \sum_{i=1}^n \ln$

Choose the correct answer from the options given below:

1. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
3. (A) - (III), (B) - (II), (C) - (I), (D) - (IV)
4. (A) - (II), (B) - (IV), (C) - (I), (D) - (III)

Correct Answer: 2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)

Solution:

Step 1: Understanding the production functions and their forms.

- **Translog Production Function (A):** This function allows for flexibility in functional forms. Its functional form is $q = \prod_{i=1}^n x_i^{a_i}$. This corresponds to (I) in List-II.
- **Generalised Leontief Production Function (B):** This production function is characterized by a linear combination of input quantities raised to a power. Its form is $q = \sum_{i=1}^n a_i x_i^\rho$, where $\rho \leq 1$. This corresponds to (II) in List-II.
- **Cobb Douglas Production Function (C):** This is a widely used production function in economics. Its functional form is $q = \sum_{i=1}^n a_{ij} x_i x_j$, where $a_{ij} = a_{ji}$. This corresponds to (III) in List-II.
- **Constant Elasticity of Substitution Production Function (D):** This function expresses the relationship between inputs and outputs in terms of elasticity. Its form is $q = a_0 + \sum_{i=1}^n a_i \ln x_i + 0.5 \sum_{i=1}^n \ln x_i$. This corresponds to (IV) in List-II.

Step 2: Conclusion.

The correct answer is (A) - (I), (B) - (II), (C) - (III), (D) - (IV).

Quick Tip

The Cobb-Douglas production function is a popular form where output is a product of powers of inputs, while the Leontief function assumes fixed input coefficients.

71. Match List-I with List-II

Concepts	Their r
(A) Foreign Exchange Swaps	(I) is a forward contract for standardized currency amounts
(B) Forward Transaction	(II) refers to the avoidance of a foreign ex
(C) Foreign Exchange Futures	(III) refers to a spot sale of a currency combined with a forward
(D) Hedging	(IV) refers to an agreement today to buy or sell a specified amount of

Choose the correct answer from the options given below:

1. (A) - (II), (B) - (I), (C) - (III), (D) - (IV)
2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
3. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
4. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)

Correct Answer: 2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)

Solution:

Step 1: Understanding the terms.

- **Foreign Exchange Swaps (A):** These are contracts involving the exchange of currencies at two different times in the future. They are standardized contracts and traded in organized markets. Hence, they correspond to **(I)**.
- **Forward Transaction (B):** These are agreements to buy or sell a foreign currency at a specific rate for delivery at a future date, and are used for hedging against exchange rate fluctuations, so they match with **(II)**.
- **Foreign Exchange Futures (C):** These are standardized contracts for the exchange of currencies, which are combined with repurchase agreements in certain situations, so they correspond to **(III)**.
- **Hedging (D):** This refers to the process of managing foreign exchange risk, typically by entering into forward contracts today for a future date, so it corresponds to **(IV)**.

Step 2: Conclusion.

The correct match is (A) - (I), (B) - (II), (C) - (III), (D) - (IV).

Quick Tip

Foreign exchange swaps and futures are used for hedging and currency risk management in financial markets.

72. Match List-I with List-II

Categories of Time Series Patterns	Their meaning
(A) Seasonal Variation	(I) movement in an economic variable that is periodic
(B) Random Fluctuation	(II) steady movement in an economic variable over time
(C) Business Cycles	(III) movement in an economic variable that depends on the time
(D) Trends	(IV) movement in an economic variable that are due to unpredictable

Choose the correct answer from the options given below:

1. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
2. (A) - (I), (B) - (IV), (C) - (II), (D) - (III)
3. (A) - (III), (B) - (II), (C) - (IV), (D) - (I)
4. (A) - (II), (B) - (III), (C) - (I), (D) - (IV)

Correct Answer: 2. (A) - (I), (B) - (IV), (C) - (II), (D) - (III)

Solution:

Step 1: Understanding time series patterns.

- **Seasonal Variation (A):** This is the regular and predictable pattern that repeats at fixed intervals, often based on the time of the year. It corresponds to **(I)**.
- **Random Fluctuation (B):** These are unpredictable variations in the data that cannot be attributed to any trend or cycle. They correspond to **(IV)**.
- **Business Cycles (C):** These represent periods of expansion and contraction in economic activity over time, and they correspond to **(II)**.
- **Trends (D):** Trends represent the long-term movement in data, typically upward or downward, and correspond to **(III)**.

Step 2: Conclusion.

The correct match is (A) - (I), (B) - (IV), (C) - (II), (D) - (III).

Quick Tip

Understanding time series patterns helps in forecasting economic trends, cycles, and seasonal behaviors in the market.

73. Match List-I with List-II

Measures of Money Supply	Components
(A) M3	(I) Currency held by the public (C) + net demand deposits of banks (DD) + other deposits of the RBI (OD) + net time deposits of banks (TD)
(B) M2	(II) C + DD + OD + net time deposits of banks (TD)
(C) M1	(III) C + DD + OD + savings deposits with post office savings banks (S)
(D) M4	(IV) C + DD + OD + net time deposits of banks + total deposits with post office savings organization, excluding National Savings Certificates (NSC)

Choose the correct answer from the options given below:

1. (A) - (II), (B) - (I), (C) - (III), (D) - (IV)
2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
3. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
4. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)

Correct Answer: 2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)

Solution:

Step 1: Understanding the components of money supply.

- **M3 (A)** is the broadest measure of money supply and includes currency held by the public, demand deposits of banks, and other deposits of the RBI. This matches with **(I)**.
- **M2 (B)** includes currency held by the public, demand deposits of banks, other deposits of the RBI, and net time deposits of banks. This corresponds to **(II)**.
- **M1 (C)** includes currency held by the public, demand deposits, other deposits of the RBI, and savings deposits with post office savings banks. This corresponds to **(III)**.
- **M4 (D)** includes all components of M3 and M1, as well as total deposits with post office savings organization, excluding National Savings Certificates. This corresponds to **(IV)**.

Step 2: Conclusion.

The correct answer is ***(A) - (I), (B) - (II), (C) - (III), (D) - (IV)***.

Quick Tip

M3 is the broadest measure of the money supply, while M1 includes the most liquid forms of money.

74. Match List-I with List-II

Types of Deficit	Level as % of GDP for FY2021
(A) Revenue Deficit	(I) 1.2
(B) Fiscal Deficit	(II) 5.7
(C) Primary Deficit	(III) 9.2
(D) Current Account Deficit	(IV) 7.3

Choose the correct answer from the options given below:

1. (A) - (II), (B) - (I), (C) - (III), (D) - (IV)
2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
3. (A) - (III), (B) - (II), (C) - (IV), (D) - (I)
4. (A) - (II), (B) - (III), (C) - (I), (D) - (IV)

Correct Answer: 2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)

Solution:

Step 1: Understanding the types of deficit.

- **Revenue Deficit (A)** represents the difference between the government's revenue and its expenditure on current goods and services. For FY2021, it is **1.2%** of GDP. This corresponds to **(I)**.
- **Fiscal Deficit (B)** is the total borrowings required by the government to meet its expenditure. For FY2021, it is **5.7%** of GDP. This corresponds to **(II)**.
- **Primary Deficit (C)** is the fiscal deficit minus interest payments. For FY2021, it is **9.2%** of GDP. This corresponds to **(III)**.
- **Current Account Deficit (D)** is the difference between a country's savings and its investment. For FY2021, it is **7.3%** of GDP. This corresponds to **(IV)**.

Step 2: Conclusion.

The correct answer is **(A) - (I), (B) - (II), (C) - (III), (D) - (IV)**.

Quick Tip

The fiscal deficit includes all borrowings, while the primary deficit excludes interest payments.

75. Match List-I with List-II

Name of State	Dependency Ratio for 2023-24
(A) Andhra Pradesh	(I) 66.3
(B) Bihar	(II) 52.2
(C) Kerala	(III) 41.4
(D) Uttar Pradesh	(IV) 50.6

Choose the correct answer from the options given below:

- (A) - (II), (B) - (I), (C) - (III), (D) - (IV)
- (A) - (IV), (B) - (III), (C) - (I), (D) - (II)
- (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
- (A) - (III), (B) - (IV), (C) - (II), (D) - (I)

Correct Answer: 3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)

Solution:**Step 1: Understanding the dependency ratio.**

- Andhra Pradesh (A)** has a dependency ratio of **66.3** for 2023-24, which corresponds to **(I)**.
- Bihar (B)** has a dependency ratio of **52.2**, which corresponds to **(II)**.
- Kerala (C)** has a dependency ratio of **41.4**, which corresponds to **(IV)**.
- Uttar Pradesh (D)** has a dependency ratio of **50.6**, which corresponds to **(III)**.

Step 2: Conclusion.

The correct answer is **(A) - (I), (B) - (II), (C) - (IV), (D) - (III)**.

Quick Tip

The dependency ratio indicates the proportion of a population that is dependent on the working-age population.
