

National Testing Agency

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Mathematical Economics

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Mathematical Economics-1

Section Id :	603489379
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory

Number of Questions :	96
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Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Sub-Section Number :	1
Sub-Section Id :	603489703
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 60348918643 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The basic difference between Cardinal numbers and Ordinal numbers is that:

1. Cardinal numbers are real while ordinal numbers are imaginary
2. Cardinal numbers are rational while ordinal numbers are irrational
3. Cardinal numbers are additive while ordinal numbers are not additive
4. There is no difference

Options :

60348970309. 1

60348970310. 2

60348970311. 3

60348970312. 4

Question Number : 2 Question Id : 60348918644 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Rational numbers

1. can be represented as ratios of two numbers.
2. are categorized as Integers and fractions
3. include the number "zero"
4. all of these

Options :

60348970313. 1

60348970314. 2

60348970315. 3

60348970316. 4

Question Number : 3 Question Id : 60348918645 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Golden ratio

1. rotates around 1.618
2. is correlated to stock prices
3. when multiplied with stock prices can stop losses
4. All of the options are correct

Options :

60348970317. 1

60348970318. 2

60348970319. 3

60348970320. 4

Question Number : 4 Question Id : 60348918646 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Kajol is a member of a group consisting of four members. How many different types of relationships will this group have?

1. 8
2. 16
3. 10
4. 5

Options :

60348970321. 1

60348970322. 2

60348970323. 3

60348970324. 4

Question Number : 5 Question Id : 60348918647 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If U is a universal set of total expenditures of a consumer, comprising of Food, Clothing, Furniture and Travel and A is a set of Outdoor Food expenditures and Indoor Food expenditures, the complement of set A is

1. Clothing, Furniture and Travel
2. Outdoor food
3. Indoor food
4. None of these

Options :

60348970325. 1

60348970326. 2

60348970327. 3

60348970328. 4

Question Number : 6 Question Id : 60348918648 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A bus leaves from ISBT Dehradun with 25 passengers on board. At Roorkee, 5 passengers get off and 10 passengers get on. At Muzafarnagar, 10 get off and 5 get on. How many passengers are in the bus after crossing Muzafarnagar?

1. 20
2. 5
3. 25
4. 10

Options :

60348970329. 1

60348970330. 2

60348970331. 3

60348970332. 4

Question Number : 7 Question Id : 60348918649 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A firm produces 100 units of a good. The cost incurred to produce one unit is Rs. 1000. Each unit of the good is sold at Rs. 1500. If the firm is able to sell all the 100 units, the profit earned is

1. 500
2. 5000
3. 10000
4. 50000

Options :

60348970333. 1

60348970334. 2

60348970335. 3

60348970336. 4

Question Number : 8 Question Id : 60348918650 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

It is believed that pollution increases as the number of automobiles increase. The rate of change of pollution with respect to a unit change in automobile:

1. increases at an increasing rate
2. increases at a decreasing rate
3. remains constant
4. inadequate information

Options :

60348970337. 1

60348970338. 2

60348970339. 3

60348970340. 4

Question Number : 9 Question Id : 60348918651 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A function

1. is defined as a relation that expresses the dependence of one variable on one or more other variables.
2. is a set of "ordered pairs"
3. is related to a unique value of the dependent variable
4. All of the above

Options :

60348970341. 1

60348970342. 2

60348970343. 3

60348970344. 4

Question Number : 10 Question Id : 60348918652 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In Keynes' equation of Absolute Income Hypothesis, $C = \alpha_0 + by$, where C = consumption expenditure, α_0 is consumption expenditure when income (y) is zero, b = marginal propensity to consume (MPC), which of the following statements is false?

1. MPC is independent of level of income
2. MPC is dependent on level of income
3. APC falls as income rises
4. $APC > MPC$

Options :

60348970345. 1

60348970346. 2

60348970347. 3

60348970348. 4

Question Number : 11 Question Id : 60348918653 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In a relationship between Education and Economic Development, which is the dependent variable?

1. Economic Development
2. Education
3. Both economic development and education may be dependent variable
4. Data is not sufficient to draw a conclusion

Options :

60348970349. 1

60348970350. 2

60348970351. 3

60348970352. 4

Question Number : 12 Question Id : 60348918654 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If there is no change in the dependent variable (Y) for every unit change in the independent variable (X), then the relationship between X and Y is graphically represented by _____ and the value of the ratio is ____

1. A downward sloping straight line, one
2. An upward sloping straight line, one
3. A horizontal line parallel to X-axis, zero
4. A vertical line parallel to Y- axis, infinity

Options :

60348970353. 1

60348970354. 2

60348970355. 3

60348970356. 4

Question Number : 13 Question Id : 60348918655 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A model is

1. An imagination of the human mind
2. An artificial structure of real things
3. A mathematical representation of statements
4. All of these

Options :

60348970357. 1

60348970358. 2

60348970359. 3

60348970360. 4

Question Number : 14 Question Id : 60348918656 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Models are useful because

1. They make complex things simple to understand
2. They save time, money and energy
3. They are accessible to all
4. All of these

Options :

60348970361. 1

60348970362. 2

60348970363. 3

60348970364. 4

Question Number : 15 Question Id : 60348918657 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Economic models are used

1. To calculate profit
2. To predict the future
3. To calculate risk involved
4. All of these

Options :

60348970365. 1

60348970366. 2

60348970367. 3

60348970368. 4

Question Number : 16 Question Id : 60348918658 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

An economic model may comprise of

1. Economic variables
2. Factor affecting the economic variables
3. Economic variables and factors affecting economic variables
4. None of these

Options :

60348970369. 1

60348970370. 2

60348970371. 3

60348970372. 4

Question Number : 17 Question Id : 60348918659 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Economic models may be

1. Diagrammatical
2. Graphical
3. Mathematical
4. All of these

Options :

60348970373. 1

60348970374. 2

60348970375. 3

60348970376. 4

Question Number : 18 Question Id : 60348918660 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Assume a model of income determination of the following type:

$$C = a + bY^d$$

$$Y^d = Y - T$$

$$T = T_0 + t_1Y$$

$$I = \bar{I}$$

$$G = \bar{G}$$

$$Y = C + I + G$$

Where C = consumption expenditure, Y = income, Y^d = disposable income, T = tax, T_0 is tax when $Y = 0$, t_1 = marginal tax rate, I = investment expenditure, G = government expenditure, and \bar{I} and \bar{G} indicate these are autonomous variables, then tax multiples with respect to T_0 is:

1. $\frac{1}{1-b+bt_1}$

2. $\frac{-b}{1-b+bt_1}$

3. $\frac{1-b}{1-b-bt_1}$

4. $\frac{1}{1-b-bt_1}$

Options :

60348970377. 1

60348970378. 2

60348970379. 3

60348970380. 4

**Question Number : 19 Question Id : 60348918661 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

A negative y intercept in a mathematical model means that the graph starts from

1. Negative X-axis
2. Negative Y-axis
3. Positive X-axis
4. Not sufficient information to conclude

Options :

60348970381. 1

60348970382. 2

60348970383. 3

60348970384. 4

**Question Number : 20 Question Id : 60348918662 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

National Income is the sum of Consumption Expenditure, Investment Expenditure and Government Expenditure is a/an

1. Definitional Equation
2. Behavioural Equation
3. Equilibrium Equation
4. All of these

Options :

60348970385. 1

60348970386. 2

60348970387. 3

60348970388. 4

Question Number : 21 Question Id : 60348918663 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Economic models may be constructed by using

1. the concept of Scatter diagrams
2. statistical data
3. symbols and numbers
4. All of these

Options :

60348970389. 1

60348970390. 2

60348970391. 3

60348970392. 4

Question Number : 22 Question Id : 60348918664 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The budget (B) of a consumer is used to purchase units of two goods X and Y. If the price of Good X is P_x and price of Good Y is P_y , and X and Y represent the units of the goods consumed, and the consumer decides to save some amount from the budget, then the budget equation may be written as

1. $B = P_x X + P_y Y$
2. $B = P_x X - P_y Y$
3. $B \leq P_x X - P_y Y$
4. $B \geq P_x X + P_y Y$

Options :

60348970393. 1

60348970394. 2

60348970395. 3

60348970396. 4

Question Number : 23 Question Id : 60348918665 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Direct Tax is a function of the Income of consumers. If T denotes direct tax and Y denote Income, the tax model may be written as

1. $T = c + dY$
2. $T = c - dY$
3. $T = dY$
4. $T = c + dY$ or $T = dY$

Options :

60348970397. 1

60348970398. 2

60348970399. 3

60348970400. 4

Question Number : 24 Question Id : 60348918666 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If a small size Pizza yields 5 Utils and a regular Masala Corn yields 10 Utils, the consumption of both Pizza and Masala Corn will give

1. 50 Utils
2. 15 Utils
3. 10 Utils
4. 5 Utils

Options :

60348970401. 1

60348970402. 2

60348970403. 3

60348970404. 4

Question Number : 25 Question Id : 60348918667 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The Indifference Curve theory depends on

1. The idea that utility is independent
2. Ordinal preferences
3. Cardinal measurements
4. The assumption that consumers cannot make comparisons of commodity bundles

Options :

60348970405. 1

60348970406. 2

60348970407. 3

60348970408. 4

Question Number : 26 Question Id : 60348918668 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Utility may be defined as

1. The demand for a commodity
2. The application of a commodity
3. The level of satisfaction given by a commodity
4. Technical progress

Options :

60348970409. 1

60348970410. 2

60348970411. 3

60348970412. 4

Question Number : 27 Question Id : 60348918669 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

When Total Utility is maximum,

1. Consumer is in equilibrium
2. Marginal Utility is zero
3. Marginal Utility is negative
4. None of these is correct

Options :

60348970413. 1

60348970414. 2

60348970415. 3

60348970416. 4

Question Number : 28 Question Id : 60348918670 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The Total Utility Curve

1. Slopes upward with a constant slope
2. First increases, reaches a maximum then decreases
3. Slopes downward
4. Cannot be determined

Options :

60348970417. 1

60348970418. 2

60348970419. 3

60348970420. 4

Question Number : 29 Question Id : 60348918671 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Marginal Utility Curve will be below the x-axis when

1. MU is positive
2. MU is constant
3. TU is negative
4. TU is maximum

Options :

60348970421. 1

60348970422. 2

60348970423. 3

60348970424. 4

**Question Number : 30 Question Id : 60348918672 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

Which one is the true statement(s)?

- A. The transpose of the transposed matrix is equal to the matrix itself
- B. Transpose of the sum of the two matrices is equal to the sum of the transpose

In light of the above statements, choose the **correct** answer from the options given below

1. A, B
2. Only A is true
3. Only B is true
4. None of the statements is true

Options :

60348970425. 1

60348970426. 2

60348970427. 3

60348970428. 4

**Question Number : 31 Question Id : 60348918673 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

If R is the Revenue, P is the Price and Q is the Quantity sold, then the Revenue function can be written as

1. $R = P \cdot q$
2. $R = P + Q$
3. $R = P/Q$
4. None of these

Options :

60348970429. 1

60348970430. 2

60348970431. 3

60348970432. 4

Question Number : 32 Question Id : 60348918674 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If $f(x) = x^2 - 5x + 6$ then $f(-2)$ will be

1. 6
2. 20
3. 10
4. 12

Options :

60348970433. 1

60348970434. 2

60348970435. 3

60348970436. 4

Question Number : 33 Question Id : 60348918675 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

$f(x) = \frac{(x^2-9)}{(x-3)}$ is _____ at $X=3$

1. Continuous
2. Discontinuous
3. Undefined
4. Asymptotic

Options :

60348970437. 1

60348970438. 2

60348970439. 3

60348970440. 4

Question Number : 34 Question Id : 60348918676 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If $U = xy$, where U is utility of consumer for the combination of two products x and y then, according to the Indifference theory, U will be

1. Constant
2. Increasing
3. Decreasing
4. Cannot be predicted

Options :

60348970441. 1

60348970442. 2

60348970443. 3

60348970444. 4

Question Number : 35 Question Id : 60348918677 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Excess demand is

1. $(\text{Demand} - \text{Supply})^2$
2. $(\text{Demand})^2 - (\text{supply})^2$
3. Demand – Supply
4. Demand + Supply

Options :

60348970445. 1

60348970446. 2

60348970447. 3

60348970448. 4

Question Number : 36 Question Id : 60348918678 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If the revenue function is $R = 14x - x^2$ then AR (average revenue) will be

1. $14 - x$
2. $14 - 2x$
3. 14
4. 2

Options :

60348970449. 1

60348970450. 2

60348970451. 3

60348970452. 4

Question Number : 37 Question Id : 60348918679 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If consumption function is $C = 80 + 0.6Y$; then MPS will be

1. 0.6
2. 0.4
3. 0.8
4. 80

Options :

60348970453. 1

60348970454. 2

60348970455. 3

60348970456. 4

Question Number : 38 Question Id : 60348918680 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The value of $|A|$ if $A = \begin{bmatrix} 0 & ab^2 & ac^2 \\ a^2b & 0 & bc^2 \\ a^2c & b^2c & 0 \end{bmatrix}$

1. $2a^3b^3c^3$
2. $2a^2b^2c^2$
3. 1
4. 0

Options :

60348970457. 1

60348970458. 2

60348970459. 3

60348970460. 4

Question Number : 39 Question Id : 60348918681 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Condition for solving a system of simultaneous equations is

1. Number of equations = number of exogenous variables
2. Number of equations < number of exogenous variables
3. Number of equations = number of endogenous variables
4. Number of equations < number of exogenous variables

Options :

60348970461. 1

60348970462. 2

60348970463. 3

60348970464. 4

Question Number : 40 Question Id : 60348918682 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Input-output analysis is concerned with determining _____ required to sustain or achieve target levels across the entire range of _____

1. An industry's production level, final demand
2. A firm's production level, market demand
3. An industry's production level, consumer demand
4. A firm's production level, final demand

Options :

60348970465. 1

60348970466. 2

60348970467. 3

60348970468. 4

Question Number : 41 Question Id : 60348918683 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If the original function is $y = 4 + 5x$, then the inverse is

1. $x = 1.2y - 0.8$
2. $x = 0.2y - 1.8$
3. $x = 0.2y - 0.8$
4. $x = 1.2y - 1.8$

Options :

60348970469. 1

60348970470. 2

60348970471. 3

60348970472. 4

Question Number : 42 Question Id : 60348918684 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In a basic Keynesian macroeconomic model, it is assumed that $Y = C + I$ where $I = 250$ and $C = 0.75Y$, then equilibrium level of Y is

1. 1500
2. 250
3. 2000
4. 1000

Options :

60348970473. 1

60348970474. 2

60348970475. 3

60348970476. 4

Question Number : 43 Question Id : 60348918685 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If the average revenue is equal to marginal revenue for all level of output, then the average revenue will

1. Increase
2. Decrease
3. First increase then decrease
4. Remain constant

Options :

60348970477. 1

60348970478. 2

60348970479. 3

60348970480. 4

Question Number : 44 Question Id : 60348918686 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which is false statement about set theory?

1. $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$
2. $(A \cap B) \cap C = A \cap (B \cap C)$
3. $(A \cup B) \cup C = A \cup (B \cup C)$
4. $A \cap (B \cup C) = (A \cap B) \cap (A \cap C)$

Options :

60348970481. 1

60348970482. 2

60348970483. 3

60348970484. 4

Question Number : 45 Question Id : 60348918687 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following is finite set?

1. $A = \{\text{men in the world}\}$
2. $B = \{1,2,3,4,5\}$
3. $C = \{\text{set of vowels}\}$
4. All of these

Options :

60348970485. 1

60348970486. 2

60348970487. 3

60348970488. 4

Question Number : 46 Question Id : 60348918688 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If $U = \{1,2,3,4,5,6,7,8,9\}$ be the universal set with $A = \{1,2,3,4\}$ and $B = \{2,4,6,8\}$ then $(A \cup B)'$ will be

1. $\{2,4\}$
2. $\{5,6,7,8,9\}$
3. $\{5,7,9\}$
4. $\{1,3,5,6,7,9\}$

Options :

60348970489. 1

60348970490. 2

60348970491. 3

60348970492. 4

Question Number : 47 Question Id : 60348918689 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In the equation, $C = \alpha + \beta(Y - T)$, where C is consumption expenditure, Y is income and T is direct tax, β will be greater than 1 if

1. $\frac{\Delta C}{\Delta(Y-T)} = 1$
2. $\frac{\Delta C}{\Delta(Y-T)} > 1$
3. $\frac{\Delta C}{\Delta(Y-T)} < 1$
4. $\alpha = \text{zero}$

Options :

60348970493. 1

60348970494. 2

60348970495. 3

60348970496. 4

Question Number : 48 Question Id : 60348918690 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

For a function with two variables, $y = f(x_1, x_2)$, $\frac{\partial^2 y}{\partial x_1 \partial x_2}$ is

1. the partial derivative of $\frac{\partial y}{\partial x_2}$ with respect to x_2
2. the partial derivative of $\frac{\partial y}{\partial x_2}$ with respect to x_1
3. the total derivative
4. None of these

Options :

60348970497. 1

60348970498. 2

60348970499. 3

60348970500. 4

Question Number : 49 Question Id : 60348918691 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In the elasticity of demand formula, $e_p = \frac{dQ}{dP} \times \frac{P}{Q}$, the derivative $\frac{dQ}{dP}$ is

1. The responsiveness of quantity demanded to a change in the price
2. The slope of the demand function
3. A component of the elasticity of demand
4. All of these

Options :

60348970501. 1

60348970502. 2

60348970503. 3

60348970504. 4

Question Number : 50 Question Id : 60348918692 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Equilibrium without an objective function is called

1. Non-goal equilibrium
2. Unstable equilibrium
3. Disequilibrium
4. Stable Equilibrium

Options :

60348970505. 1

60348970506. 2

60348970507. 3

60348970508. 4

Question Number : 51 Question Id : 60348918693 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If a function is decreasing at an increasing rate, then

1. $\frac{dy}{dx} = 0, \frac{d^2y}{dx^2} < 0$

2. $\frac{dy}{dx} < 0, \frac{d^2y}{dx^2} > 0$

3. $\frac{dy}{dx} = 0, \frac{d^2y}{dx^2} > 0$

4. $\frac{dy}{dx} < 0, \frac{d^2y}{dx^2} < 0$

Options :

60348970509. 1

60348970510. 2

60348970511. 3

60348970512. 4

**Question Number : 52 Question Id : 60348918694 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

If the Marginal Curve (MC) cuts the Marginal Revenue (MR) from below, then which of the following is true?

1. Slope of the MC curve is greater than the slope of the MR curve

2. $\frac{d^2(TR)}{dQ^2} < \frac{d^2(TC)}{dQ^2}$

3. $\frac{d^2(TC)}{dQ^2} > \frac{d^2(TR)}{dQ^2}$

4. All of these

Options :

60348970513. 1

60348970514. 2

60348970515. 3

60348970516. 4

**Question Number : 53 Question Id : 60348918695 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

Which of the following regarding linear programming is correct?

1. Linear programming is a type of mathematical programming
2. Linear programming is goal oriented
3. Linear programming is a type optimization technique
4. All of these

Options :

60348970517. 1

60348970518. 2

60348970519. 3

60348970520. 4

Question Number : 54 Question Id : 60348918696 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Linear programming can be used to solve which of the following problems?

1. Reduce transportation cost
2. Material efficiency
3. Plan a healthy diet
4. All of these

Options :

60348970521. 1

60348970522. 2

60348970523. 3

60348970524. 4

Question Number : 55 Question Id : 60348918697 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Who among the following won the Nobel Prize for their work on the theory of optimum allocation of resources?

1. Charles Koopmans
2. Kantorovich
3. Charles Koopmans and Kantorovich jointly
4. Friedman

Options :

60348970525. 1

60348970526. 2

60348970527. 3

60348970528. 4

Question Number : 56 Question Id : 60348918698 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If $y = x^{1/4}$ then $dy/dx = ?$

1. $4x$
2. $4x^{1/3}$
3. $\frac{1}{4} (x)^{-3/4}$
4. $2x$

Options :

60348970529. 1

60348970530. 2

60348970531. 3

60348970532. 4

Question Number : 57 Question Id : 60348918699 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If $y = (x-1)(2x-1)$ then dy/dx

1. $2x-1$
2. $x-1$
3. $4x-3$
4. 1

Options :

60348970533. 1

60348970534. 2

60348970535. 3

60348970536. 4

Question Number : 58 Question Id : 60348918700 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

For demand function $Q = 200 - 4P$, the inverse demand function will be

1. $P = 50Q - 0.25$
2. $P = 50 - 1.25Q$
3. $P = 50Q - 1.25$
4. $P = 50 - 0.25Q$

Options :

60348970537. 1

60348970538. 2

60348970539. 3

60348970540. 4

Question Number : 59 Question Id : 60348918701 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If the goods are necessary then income elasticity e_i will be

1. $e_i > 0$
2. $e_i > 1$
3. $0 < e_i < 1$
4. $e_i < 0$

Options :

60348970541. 1

60348970542. 2

60348970543. 3

60348970544. 4

Question Number : 60 Question Id : 60348918702 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If MR = marginal revenue, AR = Average revenue and e_p is Price elasticity of demand then which one is representing the relationship among these three?

1. $MR = AR / e_p$
2. $MR = AR (1 - 1/e_p)$
3. $MR = e_p / AR$
4. $MR = e_p * AR$

Options :

60348970545. 1

60348970546. 2

60348970547. 3

60348970548. 4

Question Number : 61 Question Id : 60348918703 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If the total variable cost function is $TVC = 2x^3 - 500x^2 - 1000x$; then the slope of average variable cost

1. $500 - 4x$
2. $4x - 500$
3. 500
4. $4x$

Options :

60348970549. 1

60348970550. 2

60348970551. 3

60348970552. 4

Question Number : 62 Question Id : 60348918704 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Marginal propensity to consume (MPC) is represented by (if C= Consumption; Y= income)

1. $MPC = C/Y$
2. $MPC = dC/dY$
3. $MPC = Y/C$
4. $MPC = dY/dC$

Options :

60348970553. 1

60348970554. 2

60348970555. 3

60348970556. 4

Question Number : 63 Question Id : 60348918705 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The following will be the marginal rate of substitution of the utility function $u = 5x_1x_2$

1. $-x_1 + x_2$
2. x_1x_2
3. x_1/x_2
4. $-x_1/x_2$

Options :

60348970557. 1

60348970558. 2

60348970559. 3

60348970560. 4

Question Number : 64 Question Id : 60348918706 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The point elasticity of demand for the demand schedule $P = 60 - 0.2 Q$, where price is zero

1. 300
2. 100
3. 1
4. 0

Options :

60348970561. 1

60348970562. 2

60348970563. 3

60348970564. 4

Question Number : 65 Question Id : 60348918707 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Optimum solution is based on

1. Optimizing the Objective function
2. Optimizing the constraints
3. Optimizing the decision variables
4. None of these

Options :

60348970565. 1

60348970566. 2

60348970567. 3

60348970568. 4

Question Number : 66 Question Id : 60348918708 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Dual of the dual of LPP is _____ of the LPP

1. Dual form
2. Primal form
3. New objective function
4. None of the above

Options :

60348970569. 1

60348970570. 2

60348970571. 3

60348970572. 4

Question Number : 67 Question Id : 60348918709 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following are the components of a linear programming problem?

1. Performance variable
2. Choice variables
3. Non-negativity constraints
4. All of these

Options :

60348970573. 1

60348970574. 2

60348970575. 3

60348970576. 4

Question Number : 68 Question Id : 60348918710 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The graphical solution in Linear Programming cannot be applied if

1. The objective function and inequalities are non-linear
2. There are more than two choice variables
3. Quantities are not divisible
4. All of these

Options :

60348970577. 1

60348970578. 2

60348970579. 3

60348970580. 4

Question Number : 69 Question Id : 60348918711 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

For an Optimum solution to exist

1. The number of constraints must be equal to the number of choice variables
2. At least two constraints must intersect
3. A minimum of two constraints is required
4. All of these

Options :

60348970581. 1

60348970582. 2

60348970583. 3

60348970584. 4

Question Number : 70 Question Id : 60348918712 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Who proposed the theory of duality in linear programming?

1. John von Neumann
2. Leonid Khachiyan
3. T. C. Koopmans
4. George B. Dantzig

Options :

60348970585. 1

60348970586. 2

60348970587. 3

60348970588. 4

Question Number : 71 Question Id : 60348918713 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The arbitrary constant "c" in the integration $\int f'(x)dx = f(x) + c$ is important because

1. the same derivative may be obtained from the differentiation of different functions.
2. An original function may have different constants
3. Both a and b are correct
4. While integrating a function some data is lost

Options :

60348970589. 1

60348970590. 2

60348970591. 3

60348970592. 4

**Question Number : 72 Question Id : 60348918714 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

Which of the following regarding definite integral is correct?

1. Definite integral is used to find the area under a curve
2. Definite integral is the sum of infinite number of rectangles under a curve
3. Definite integral is the difference between the values of an antiderivative at the upper limit and the lower limit.
4. All of these

Options :

60348970593. 1

60348970594. 2

60348970595. 3

60348970596. 4

**Question Number : 73 Question Id : 60348918715 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

Slack variables used in Linear Programs are

1. Variables that are required in "less than" type of inequality
2. Variables that are required in "greater than" type of inequality
3. Variables that are used to maximize the original variable
4. Variables that are used to optimize the function

Options :

60348970597. 1

60348970598. 2

60348970599. 3

60348970600. 4

Question Number : 74 Question Id : 60348918716 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A firm recycles paper bags and sells at Rs. 55 each. A monthly production of that firm is 10000 unit and have cost of 50 Rs for each bag. What will be the monthly profit of that firm?

1. 10000

2. 50000

3. 550000

4. 500000

Options :

60348970601. 1

60348970602. 2

60348970603. 3

60348970604. 4

Question Number : 75 Question Id : 60348918717 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

When demand elasticity $e_d < 1$ then demand is known as

1. Inelastic
2. Elastic
3. Unit elastic
4. Dualistic

Options :

60348970605. 1

60348970606. 2

60348970607. 3

60348970608. 4

Question Number : 76 Question Id : 60348918718 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

For the given cost function $MC = 2 - 4q + 3q^2$ what will be the total variable cost at $q = 4$

1. 50
2. 60
3. 40
4. 20

Options :

60348970609. 1

60348970610. 2

60348970611. 3

60348970612. 4

Question Number : 77 Question Id : 60348918719 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

For the given demand function $p = 20 - D - D^2$, what will be the consumer surplus when demand is 3

1. 20
2. 45
3. $45/2$
4. $24/3$

Options :

60348970613. 1

60348970614. 2

60348970615. 3

60348970616. 4

Question Number : 78 Question Id : 60348918720 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What will be the producer surplus for the given supply curve $Q = \sqrt{-4 + 4P}$ at market price of Rs.10.?

1. 66
2. 36
3. 43
4. 34

Options :

60348970617. 1

60348970618. 2

60348970619. 3

60348970620. 4

Question Number : 79 Question Id : 60348918721 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

For total revenue $TR = 80q - 2q^2$, a function for MR (Marginal revenue) will be

1. $80 - 4q$
2. $4q$
3. 80
4. $80q - 2q$

Options :

60348970621. 1

60348970622. 2

60348970623. 3

60348970624. 4

Question Number : 80 Question Id : 60348918722 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If money is measured in Rupees, income is measured in

1. Rupees per unit of Time
2. Rupees
3. Rupees x Time
4. Rupees²

Options :

60348970625. 1

60348970626. 2

60348970627. 3

60348970628. 4

Sub-Section Number : 2

Sub-Section Id : 603489704

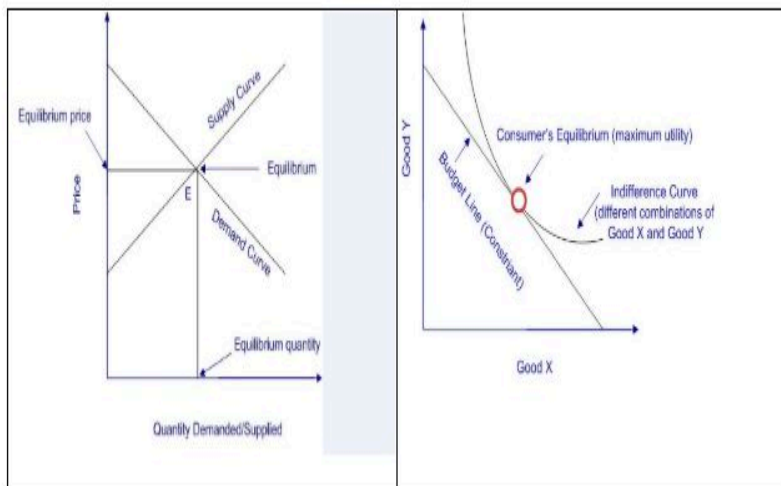
Question Shuffling Allowed : Yes

Question Id : 60348918723 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (81 to 85)

Question Label : Comprehension

Observe the two diagrams and answer questions that follow:



Sub questions

Question Number : 81 Question Id : 60348918724 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the statements are true?

1. First diagram from left is a case of goal equilibrium
2. Second figure from left is a case of non-goal equilibrium
3. Both the statements wrong
4. Both the figures are case of optimization

Options :

60348970629. 1

60348970630. 2

60348970631. 3

60348970632. 4

Question Number : 82 Question Id : 60348918725 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If the indifference curve passes through two points on the budget line. This means

1. The utility is less than the optimum utility
2. There is a tendency for the consumer to increase the utility and move to a higher indifference curve
3. There is not enough budget with the consumer
4. Both 1 and 2 are correct

Options :

60348970633. 1

60348970634. 2

60348970635. 3

60348970636. 4

Question Number : 83 Question Id : 60348918726 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What is the slope of the indifference curve and the budget line at the point of equilibrium?

1. Slope of indifference curve is equal to the slope of the budget line
2. Slope of indifference curve is greater than the slope of the budget line
3. Slope of the budget line is greater than the slope of the indifference curve
4. Cannot say as there is not enough information

Options :

60348970637. 1

60348970638. 2

60348970639. 3

60348970640. 4

Question Number : 84 Question Id : 60348918727 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If the slope of the Demand curve increases, slope of supply curve remaining the same, which of the following will be true?

1. Equilibrium will shift down
2. Equilibrium Price will fall
3. Both 1 and 2 are correct
4. Equilibrium will shift up

Options :

60348970641. 1

60348970642. 2

60348970643. 3

60348970644. 4

Question Number : 85 Question Id : 60348918728 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If the budget of the consumer increases, prices of both the goods remaining the same

1. The budget line will shift down and will be parallel to the original budget line
2. The budget line will shift up and will be parallel to the original budget line
3. The budget line will become steep
4. The budget line will become flat

Options :

60348970645. 1

60348970646. 2

60348970647. 3

60348970648. 4

Sub-Section Number : 3

Sub-Section Id : 603489705

Question Shuffling Allowed : Yes

Question Number : 86 Question Id : 60348918729 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The simple interest on an amount of 600 rupees for one year at the rate of 5% per annum will be Rs.____

1. 30
2. 40
3. 50
4. 60

Options :

60348970649. 1

60348970650. 2

60348970651. 3

60348970652. 4

**Question Number : 87 Question Id : 60348918730 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

Which of the following are characteristics of Economic Statics?

1. Equilibrium is timeless
2. Economic variables are studied at one point of time
3. Tastes and preference remain same
4. All of these

Options :

60348970653. 1

60348970654. 2

60348970655. 3

60348970656. 4

**Question Number : 88 Question Id : 60348918731 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

The letter 'e' in Mathematics

1. Was named after Leonhard Euler
2. Is used as base on natural logarithm
3. Is a constant equal to 2.71824.
4. All of these

Options :

60348970657. 1

60348970658. 2

60348970659. 3

60348970660. 4

Question Number : 89 Question Id : 60348918732 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Instantaneous growth rate

1. Is the measured at discrete time
2. Is a constant growth
3. is measured by the ratio of a marginal function to the total function
4. is measured by the ratio of the total function to the marginal function

Options :

60348970661. 1

60348970662. 2

60348970663. 3

60348970664. 4

Question Number : 90 Question Id : 60348918733 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The "Cobweb Theory" was first coined by _____ in the year _____

1. Saint Nicholas, 1934
2. Nicholas Kaldor, 1934
3. Nicholas Christakis, 1944
4. Harold Nicholas, 1938

Options :

60348970665. 1

60348970666. 2

60348970667. 3

60348970668. 4

Question Number : 91 Question Id : 60348918734 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

MS-Excel is an example of _____

1. An operating system
2. A processing device
3. Application software
4. An input device

Options :

60348970669. 1

60348970670. 2

60348970671. 3

60348970672. 4

Question Number : 92 Question Id : 60348918735 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Microsoft Office is an example of a

1. Commercial software
2. Free Open source software
3. Commercial free open source software
4. None of these

Options :

60348970673. 1

60348970674. 2

60348970675. 3

60348970676. 4

**Question Number : 93 Question Id : 60348918736 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

The first mechanical computer designed by Charles Babbage was called?

1. Super Computer
2. Abacus
3. Calculator
4. Analytical Engine

Options :

60348970677. 1

60348970678. 2

60348970679. 3

60348970680. 4

**Question Number : 94 Question Id : 60348918737 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

All of the logic and mathematical calculations done by the computer happen in/ on the

1. system board
2. central control unit
3. central processing unit
4. mother board

Options :

60348970681. 1

60348970682. 2

60348970683. 3

60348970684. 4

**Question Number : 95 Question Id : 60348918738 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

Computational economics is a discipline at the interface of

1. Computer Science
2. Economics
3. Management Science
4. All of these

Options :

60348970685. 1

60348970686. 2

60348970687. 3

60348970688. 4

**Question Number : 96 Question Id : 60348918739 Question Type : MCQ Option Shuffling : No
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

R functionality is divided into a number of _____

1. Packages
2. Functions
3. Domains
4. All of these

Options :

60348970689. 1

60348970690. 2

60348970691. 3

60348970692. 4

Question Number : 97 Question Id : 60348918740 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Advanced users can write ___ code to manipulate R objects directly

1. C
2. C ++
3. Java
4. None of these

Options :

60348970693. 1

60348970694. 2

60348970695. 3

60348970696. 4

Question Number : 98 Question Id : 60348918741 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Bitcoin is a

1. Currency
2. Property
3. Commodity
4. All the above

Options :

60348970697. 1

60348970698. 2

60348970699. 3

60348970700. 4

Question Number : 99 Question Id : 60348918742 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What is the advantage of using SPSS instead of manual calculations?

1. It is much faster and more efficient than mental arithmetic
2. Can do complex statistical data analysis within seconds
3. Yields high-quality results
4. All of these

Options :

60348970701. 1

60348970702. 2

60348970703. 3

60348970704. 4

Question Number : 100 Question Id : 60348918743 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

EViews is a

1. Statistical package for Windows
2. Used mainly for time-series
3. Used in econometric analysis
4. All of these

Options :

60348970705. 1

60348970706. 2

60348970707. 3

60348970708. 4