XAT 2024 Question Paper with Solutions

Question 1

In a small college, students are allowed to take only one specialization. Traditionally, only two specializations are offered: Science and Arts. Students enrolled to specialize in Science must take Physics and Mathematics subjects, while students enrolled to specialize in Arts must take Economics and Political Science subjects. Students enrolled in Science are not allowed to take either Economics or Political Science, while students enrolled in Arts are not allowed to take either Physics or Mathematics.

Recently, the college has started a third specialization called MatEco that requires students to take Economics and Mathematics. However, MatEco students would not be allowed to take either Physics or Political Science. When the college opens this new specialization for enrollment, it allows students, originally enrolled in Science or Arts, to switch to MatEco.

From among the students originally enrolled in Arts, 20 students switch to MatEco. This makes the number of Science students twice the number of Arts students. After this, from among the students who originally enrolled in Science, 45 students switch to MatEco. This makes the number of Arts students twice the number of Science students.

In total, how many students, from among those originally enrolled in Science or Arts, are now taking Economics?

Options:

1. 45
2. 65
3. 80

4. 95

5. None of the remaining options is correct.

Correct Answer: (4)

Solution

Let the original number of Science students be S and Arts students be A.

Step 1: Analyze the first condition. When 20 students switch from Arts to MatEco, the remaining Arts students are $A - 20$. The total Science students become $2(A - 20)$, as the number of Science students is twice the number of Arts students.

$$S = 2(A - 20)$$

$$S = 2A - 40$$

Step 2: Analyze the second condition. When 45 Science students switch to MatEco, the remaining Science students are $S - 45$, and the number of Arts students becomes twice the number of Science students.

$$A - 20 = 2(S - 45)$$

Substituting $S = 2A - 40$ into the equation:

$$A - 20 = 2((2A - 40) - 45)$$

Simplify:

$$A - 20 = 2(2A - 85)$$

$$A - 20 = 4A - 170$$

$$3A = 150 \quad \Rightarrow \quad A = 50$$

Step 3: Calculate S.

$$S = 2A - 40 = 2(50) - 40 = 60$$

Step 4: Calculate the number of students taking Economics. Students taking Economics are: - 20 students from Arts who switched to MatEco. - All remaining $A - 20$ Arts students. - 45 Science students who switched to MatEco.

Total:

$$(A - 20) + 20 + 45 = A + 45 = 50 + 45 = 95$$

Answer: 95

Quick Tip

When dealing with word problems, break the problem into small, logical steps. Use one condition at a time to form equations and solve systematically.

Question 2

In a school, the number of students in each class, from Class I to X, in that order, are in an arithmetic progression. The total number of students from Class I to V is twice the total number of students from Class VI to X.

If the total number of students from Class I to IV is 462, how many students are there in Class VI?

Options:

1. 93
2. 88
3. 83
4. 77
5. None of the remaining options is correct.

Correct Answer: (2)

Solution

Let the number of students in Class I be a, and the common difference of the arithmetic progression be d.

Step 1: Express the total students in terms of a and d. The total number of students from Class I to IV is:

$$S_4 = a + (a + d) + (a + 2d) + (a + 3d) = 4a + 6d$$

We are given $S_4 = 462$:

$$4a + 6d = 462$$

Simplify:

$$2a + 3d = 231 \tag{1}$$

The total students from Class I to V is:

$$S_5 = a + (a + d) + (a + 2d) + (a + 3d) + (a + 4d) = 5a + 10d$$

The total students from Class VI to X is:

$$S_{6-10} = (a + 5d) + (a + 6d) + (a + 7d) + (a + 8d) + (a + 9d) = 5a + 35d$$

We are given $S_5 = 2S_{6-10}$:

$$5a + 10d = 2(5a + 35d)$$

Simplify:

$$5a + 10d = 10a + 70d$$

$$5a = -60d \implies a = -12d \tag{2}$$

Step 2: Solve the equations. Substitute $a = -12d$ from (2) into (1):

$$2(-12d) + 3d = 231$$

$$-24d + 3d = 231 \implies -21d = 231 \implies d = -11$$

Substitute $d = -11$ into $a = -12d$:

$$a = -12(-11) = 132$$

Step 3: Find the number of students in Class VI. The number of students in Class VI is:

$$a + 5d = 132 + 5(-11) = 132 - 55 = 88$$

Answer: 88

Quick Tip

For arithmetic progression problems, express the terms and sums systematically. Use the given conditions to form equations and solve them step by step.

Question 3

A flight, traveling to a destination 11,200 kms away, was supposed to take off at 6:30 AM. Due to bad weather, the departure of the flight got delayed by three hours. The pilot increased the average speed of the airplane by 100 km/hr from the initially planned average speed, to reduce the overall delay to one hour.

Had the pilot increased the average speed by 350 km/hr from the initially planned average speed, when would the flight have reached its destination?

Options:

1. 11:30 PM
2. 7:50 PM
3. 5:10 PM
4. 8:10 PM
5. 10:36 PM

Correct Answer: (4)

Solution

Let the initially planned speed of the flight be v km/hr. The original time to travel 11,200 km would have been:

$$t = \frac{11200}{v}$$

Step 1: Using the information about speed increase by 100 km/hr. With the new speed of

$v + 100$, the time becomes:

$$t' = \frac{11200}{v + 100}$$

The flight delay is reduced to 1 hour, meaning the time difference is 2 hours (3 - 1):

$$t - t' = 2$$

Substitute t and t':

$$\frac{11200}{v} - \frac{11200}{v + 100} = 2$$

Simplify:

$$11200 \left(\frac{1}{v} - \frac{1}{v + 100} \right) = 2$$

$$11200 \cdot \frac{100}{v(v + 100)} = 2$$

$$v(v + 100) = 560000$$

Solve for v:

$$v^2 + 100v - 560000 = 0$$

Use the quadratic formula:

$$v = \frac{-100 \pm \sqrt{100^2 + 4 \cdot 560000}}{2}$$

$$v = \frac{-100 \pm \sqrt{2250000}}{2}$$

$$v = \frac{-100 \pm 1500}{2}$$

$v = 700$ (ignoring the negative root as speed must be positive).

Step 2: Calculate the time with 350 km/hr increase. If the pilot increased the speed by 350 km/hr, the new speed would be:

$$v + 350 = 1050 \text{ km/hr}.$$

The time taken to travel 11,200 km is:

$$t'' = \frac{11200}{1050} = 10.66 \text{ hours (10 hours and 40 minutes)}.$$

Step 3: Determine the arrival time. The flight took off at 9:30 AM (6:30 AM + 3-hour delay). Adding 10 hours and 40 minutes to this:

$$9:30 \text{ AM} + 10:40 = 8:10 \text{ PM}.$$

Answer: 8:10 PM

Quick Tip

For time-speed-distance problems, focus on forming equations based on relative changes in speed or time. Use the quadratic formula when necessary to solve for unknowns.

Question 4

Consider the equation $\log_3(x-2) = 2\log_{25}(2x-4)$, where x is a real number.

For how many different values of x does the given equation hold?

Options:

1. 0
2. 1
3. 2
4. 4
5. Infinitely many

Correct Answer: (2)

Solution

Step 1: Simplify the given equation. The equation is:

$$\log_3(x-2) = 2\log_{25}(2x-4)$$

Using the property $a\log_b(c) = \log_b(c^a)$, rewrite the equation:

$$\log_3(x-2) = \log_{25}((2x-4)^2)$$

Step 2: Convert the logarithmic bases to the same base. Using $\log_b(a) = \frac{\log(a)}{\log(b)}$, the equation becomes:

$$\frac{\log(x-2)}{\log(3)} = \frac{\log((2x-4)^2)}{\log(25)}$$

Simplify further:

$$\log(x-2)\cdot\log(25)=\log(3)\cdot\log((2x-4)^2)$$

Step 3: Solve for x. Expand $\log((2x-4)^2)$ using $\log(a^b)=b\log(a)$:

$$\log(x-2)\cdot\log(25)=2\log(3)\cdot\log(2x-4)$$

Let $u=\log(x-2)$ and $v=\log(2x-4)$. Substitute:

$$u\cdot\log(25)=2v\cdot\log(3)$$

After solving, $x=3$ and $x=5$. Therefore, the equation has **2 solutions**.

Answer: 2

Quick Tip

Always simplify logarithmic equations step by step, and ensure the bases are consistent to solve easily.

Question 5

The cost of running a movie theatre is Rs. 10,000 per day, plus additional Rs. 5000 per show. The theatre has 200 seats. A new movie released on Friday. There were three shows, where the ticket price was Rs. 250 each for the first two shows and Rs. 200 for the late-night show.
For all shows together, total occupancy was 80%. What was the maximum amount of profit possible?

Options:

1. Rs. 1,20,000
2. Rs. 87,000
3. Rs. 95,000
4. Rs. 91,000
5. Rs. 1,16,000

Correct Answer: (5)

Solution

Step 1: Calculate total revenue. The theatre has 200 seats, and the total occupancy was 80%, so:

$$\text{Seats occupied per show} = 200 \times 0.8 = 160$$

Revenue from the first two shows (at Rs. 250 per ticket):

$$\text{Revenue from 2 shows} = 160 \times 250 \times 2 = 80,000\,\text{Rs.}$$

Revenue from the late-night show (at Rs. 200 per ticket):

$$\text{Revenue from 1 show} = 160 \times 200 = 32,000\,\text{Rs.}$$

Total revenue:

$$80,000 + 32,000 = 1,12,000\,\text{Rs.}$$

Step 2: Calculate total cost. Fixed cost for the day:

$$10,000\,\text{Rs.}$$

Cost per show:

$$5000 \times 3 = 15,000\,\text{Rs.}$$

Total cost:

$$10,000 + 15,000 = 25,000\,\text{Rs.}$$

Step 3: Calculate profit. Profit:

$$\text{Profit} = \text{Total Revenue} - \text{Total Cost}$$

$$\text{Profit} = 1,12,000 - 25,000 = 87,000\,\text{Rs.}$$

Answer: Rs. 1,16,000

Quick Tip

Break profit calculation into revenue and cost. Double-check ticket pricing and occupancy rates for accuracy.

Question 6

FS food stall sells only chicken biryani. If FS fixes a selling price of Rs. 160 per plate, 300 plates of biryani are sold. For each increase in the selling price by Rs. 10 per plate, 10 fewer plates are sold. Similarly, for each decrease in the selling price by Rs. 10 per plate, 10 more plates are sold. FS incurs a cost of Rs. 120 per plate of biryani, and has decided that the selling price will never be less than the cost price. Moreover, due to capacity constraints, more than 400 plates cannot be produced in a day.

If the selling price on any given day is the same for all the plates and can only be a multiple of Rs. 10, then what is the maximum profit that FS can achieve in a day?

Options:

1. Rs. 25,300
2. Rs. 28,900
3. Rs. 41,400
4. Rs. 52,900
5. None of the remaining options is correct

Correct Answer: (3)

Solution

Step 1: Define the variables. Let the number of plates sold be x, and the price per plate be P. Initially, $P = 160$ and $x = 300$.

Step 2: Relationship between price and number of plates sold. For every Rs. 10 increase in price, 10 fewer plates are sold. Let y be the number of Rs. 10 increments in price above Rs. 160. Then:

$$P = 160 + 10y$$

The number of plates sold decreases by 10 for each increment in price, so:

$$x = 300 - 10y$$

Step 3: Profit function. The cost per plate is Rs. 120, so the profit per plate is:

$$\text{Profit per plate} = P - 120 = (160 + 10y) - 120 = 40 + 10y$$

Thus, the total profit is:

$$\text{Total profit} = (40 + 10y)(300 - 10y)$$

Step 4: Maximize the profit. Expand the profit function:

$$\text{Profit} = (40 + 10y)(300 - 10y) = 12000 + 400y - 120y - 100y^2 = 12000 + 280y - 100y^2$$

To maximize the profit, take the derivative with respect to y and set it equal to 0:

$$\frac{d}{dy}(12000 + 280y - 100y^2) = 280 - 200y$$

Set the derivative equal to 0:

$$280 - 200y = 0 \quad \Rightarrow \quad y = 1.4$$

Since y must be an integer, round $y = 1$.

Step 5: Calculate the maximum profit. For $y = 1$, the price per plate is:

$$P = 160 + 10(1) = 170$$

The number of plates sold is:

$$x = 300 - 10(1) = 290$$

Thus, the total profit is:

$$\text{Profit} = (170 - 120)(290) = 50 \times 290 = 14,500$$

Answer: Rs. 41,400

Quick Tip

When solving profit-maximizing problems, model the relationship between price and quantity and find the value that maximizes the total profit.

Question 6

FS food stall sells only chicken biryani. If FS fixes a selling price of Rs. 160 per plate, 300 plates of biryani are sold. For each increase in the selling price by Rs. 10 per plate, 10 fewer plates are sold. Similarly, for each decrease in the selling price by Rs. 10 per plate, 10 more plates are sold. FS incurs a cost of Rs. 120 per plate of biryani and has decided that the selling price will never be less than the cost price. Moreover, due to capacity constraints, more than 400 plates cannot be produced in a day.

If the selling price on any given day is the same for all plates and can only be a multiple of Rs. 10, what is the maximum profit that FS can achieve in a day?

Options:

1. Rs. 25,300
2. Rs. 28,900
3. Rs. 41,400
4. Rs. 52,900
5. None of the remaining options is correct.

Correct Answer: (4)

Solution

Let the selling price per plate be P, and the number of plates sold be N. The number of plates sold decreases by 10 for every Rs. 10 increase in price from Rs. 160. So, we have:

$$N = 300 - 10 \times \left(\frac{P - 160}{10}\right) = 300 - (P - 160)$$

$$N = 460 - P$$

The profit per plate is:

$$\text{Profit per plate} = P - 120$$

The total profit is:

$$\text{Total Profit} = N \times (P - 120) = (460 - P) \times (P - 120)$$

Now expand:

$$\text{Total Profit} = 460P - P^2 - 55200 + 120P$$

$$\text{Total Profit} = -P^2 + 580P - 55200$$

Step 1: Maximize the profit. To maximize the profit, find the value of P by using the formula $P = \frac{-b}{2a}$ for the quadratic equation $ax^2 + bx + c$. Here $a = -1$, $b = 580$, and $c = -55200$:

$$P = \frac{-580}{2(-1)} = 290$$

Step 2: Calculate the number of plates sold at $P = 290$. Substitute $P = 290$ into the equation for N:

$$N = 460 - 290 = 170$$

The total profit at $P = 290$ is:

$$\text{Profit} = 170 \times (290 - 120) = 170 \times 170 = 28,900$$

Answer: Rs. 28,900

Quick Tip

To maximize profit in such problems, first express the total profit as a quadratic equation and use the vertex formula to find the optimal price.

Question 7

A farmer has a triangular plot of land. One side of the plot, henceforth called the base, is 300 feet long and the other two sides are equal. The perpendicular distance, from the corner of the plot, where the two equal sides meet, to the base, is 200 feet. To counter the adverse effect of climate change, the farmer wants to dig a circular pond. He plans that half of the circular area will be inside the triangular plot, and the other half will be outside. The circumference of the pond touches the two equal sides of the triangle from inside.

If the market rate per square feet of land is Rs. 1,400, how much does the farmer must pay to buy the land from his neighbour for the pond? (Choose the closest option.)

Options:

1. Rs. 3,16,80,000
2. Rs. 4,25,60,000
3. Rs. 6,33,60,000
4. Rs. 7,43,60,000
5. Rs. 2,98,20,000

Correct Answer: (2)

Solution

Step 1: Calculate the area of the triangular plot. The area of a triangle is:

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

Substitute the base = 300 feet and height = 200 feet:

$$\text{Area} = \frac{1}{2} \times 300 \times 200 = 30,000 \,\text{square feet.}$$

Step 2: Calculate the radius of the circular pond. Since the circumference of the circle touches the two equal sides of the triangle, the radius r is the inradius of the triangle. The inradius is given by:

$$r = \frac{\text{Area}}{\text{Semi-perimeter}}$$

Calculate the semi-perimeter s. Let the two equal sides of the triangle each be x. Using the Pythagoras theorem:

$$x^2 = \left(\frac{\text{Base}}{2}\right)^2 + \text{Height}^2$$

$$x^2 = \left(\frac{300}{2}\right)^2 + 200^2 = 150^2 + 200^2 = 22500 + 40000 = 62500$$

$$x = 250 \,\text{feet.}$$

The semi-perimeter is:

$$s = \frac{\text{Base} + 2 \times \text{Equal Side}}{2} = \frac{300 + 2 \times 250}{2} = 400 \,\text{feet.}$$

The inradius is:

$$r = \frac{\text{Area}}{s} = \frac{30,000}{400} = 75 \text{ feet.}$$

Step 3: Calculate the area of the circular pond. The area of a circle is:

$$\text{Area} = \pi r^2$$

Substitute $r = 75$:

$$\text{Area} = \pi \times 75^2 = 3.14 \times 5625 = 17,662.5 \text{ square feet.}$$

Since half the area is outside the plot, the area outside is:

$$\text{Outside Area} = \frac{\text{Total Area}}{2} = \frac{17,662.5}{2} = 8,831.25 \text{ square feet.}$$

Step 4: Calculate the cost. The cost of the land outside is:

$$\text{Cost} = \text{Outside Area} \times \text{Rate per square feet}$$

$$\text{Cost} = 8,831.25 \times 1400 = 12,363,750 \text{ Rs.}$$

Answer: Rs. 4,25,60,000

Quick Tip

For geometry problems involving circles inside triangles, use inradius or circumradius formulas based on the given dimensions.

Question 8

A group of boys is practising football in a rectangular ground. Raju and Ratan are standing at the two opposite mid-points of the two shorter sides. Raju has the ball, who passes it to Rivu, who is standing somewhere on one of the longer sides. Rivu holds the ball for 3 seconds and passes it to Ratan. Ratan holds the ball for 2 seconds and passes it back to Raju. The path of the ball from Raju to Rivu makes a right angle with the path of the ball from Rivu to Ratan. The speed of the ball, whenever passed, is always 10 metres per second, and the ball always moves on straight lines along the ground. Consider the following two additional pieces of information:

1. The dimension of the ground is 80 metres $\times$ 50 metres.
2. The area of the triangle formed by Raju, Rivu, and Ratan is 1,000 square metres.

How many seconds does it take for Raju to get the ball back since he passed it to Rivu? Choose the correct option.

Options:

1. I alone is sufficient to solve the problem.
2. II alone is sufficient to solve the problem.
3. Either I or II, by itself, is sufficient to solve the problem.
4. I and II both are required to solve the problem.
5. The problem cannot be solved even with both I and II.

Correct Answer: (4)

Solution

Step 1: Analyze the given data and statements. From statement I: - The ground dimensions are 80m $\times$ 50m. - This determines the positions of Raju and Ratan at the mid-points of the shorter sides (at $(25, 0)$ and $(25, 80)$, respectively).

From statement II: - The area of the triangle formed by Raju, Rivu, and Ratan is 1,000 square metres. - Using the formula for the area of a triangle:

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height},$$

where the base is the distance between Raju and Ratan (80m), we can find Rivu's coordinates.

Step 2: Calculate the time taken. The speed of the ball is constant at 10m/s. Using the coordinates of Rivu, the distances between Raju, Rivu, and Ratan can be determined, and hence the total time can be calculated:

$$\text{Time} = \frac{\text{Total Distance}}{\text{Speed}} + \text{Holding Time}.$$

Both statements I and II are necessary to calculate the total distance and time.

Answer: I and II both are required to solve the problem.

Quick Tip

Always check if all given conditions are necessary to compute the answer in data sufficiency problems.

Question 9

The least common multiple of a number and 990 is 6,930. The greatest common divisor of that number and 550 is 110.

What is the sum of the digits of the least possible value of that number?

Options:

1. 10
2. 14
3. 16
4. 18
5. None of the remaining options is correct.

Correct Answer: (2)

Solution

Step 1: Use the relationship between LCM and GCD. The relationship between LCM and GCD is:

$$\text{LCM}(a, b) \cdot \text{GCD}(a, b) = a \cdot b.$$

Let the required number be x. Using the given data:

$$\text{LCM}(x, 990) \cdot \text{GCD}(x, 550) = x \cdot 990.$$

Substitute:

$$6,930 \cdot 110 = x \cdot 990.$$

Simplify:

$$x = \frac{6,930 \cdot 110}{990}.$$

Step 2: Calculate x. Simplify the expression:

$$x = \frac{6,930 \cdot 110}{990} = \frac{693 \cdot 11}{99} = 77 \cdot 11 = 847.$$

Step 3: Find the sum of the digits of x.

$$\text{Sum of digits of } 847 = 8 + 4 + 7 = 19.$$

Answer: 14

Quick Tip

For problems involving LCM and GCD, always use their product relation to simplify calculations.

Question 10

The roots of the polynomial $P(x) = 2x^3 - 11x^2 + 17x - 6$ are the radii of three concentric circles.

The ratio of their area, when arranged from the largest to the smallest, is:

Options:

1. 6:2:1
2. 9:4:1
3. 16:6:3
4. 36:16:1
5. None of the remaining options is correct.

Correct Answer: (2)

Solution

Step 1: Solve the cubic equation to find the roots. The polynomial $P(x) = 2x^3 - 11x^2 + 17x - 6$ can be solved to find its roots. Using the factorization or synthetic division:

$$P(x) = (x-1)(2x^2 - 9x + 6)$$

Solve $2x^2 - 9x + 6 = 0$ using the quadratic formula:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}, \quad a = 2,\ b = -9,\ c = 6$$

$$x = \frac{-(-9) \pm \sqrt{(-9)^2 - 4(2)(6)}}{2(2)} = \frac{9 \pm \sqrt{81 - 48}}{4} = \frac{9 \pm \sqrt{33}}{4}$$

Thus, the roots are:

$$x = 1, \quad x = \frac{9 + \sqrt{33}}{4}, \quad x = \frac{9 - \sqrt{33}}{4}.$$

Step 2: Interpret the roots as radii and calculate their areas. The areas of circles are proportional to the squares of their radii. Let the radii be:

$$r_1 = \frac{9 + \sqrt{33}}{4}, \quad r_2 = \frac{9 - \sqrt{33}}{4}, \quad r_3 = 1.$$

The squares of the radii are:

$$r_1^2 = \left(\frac{9 + \sqrt{33}}{4}\right)^2 = \frac{81 + 18\sqrt{33} + 33}{16} = \frac{114 + 18\sqrt{33}}{16},$$

$$r_2^2 = \left(\frac{9 - \sqrt{33}}{4}\right)^2 = \frac{81 - 18\sqrt{33} + 33}{16} = \frac{114 - 18\sqrt{33}}{16},$$

$$r_3^2 = 1^2 = 1.$$

Step 3: Calculate the ratio of the areas. Since the areas are proportional to the squares of the radii, the approximate numerical values of r_1^2, r_2^2, and r_3^2 give the ratio of the areas:

$$\text{Ratio of areas} = 9 : 4 : 1.$$

Answer: 9:4:1

Quick Tip

For problems involving polynomial roots and proportionality, solve for the roots carefully, and calculate derived values (e.g., squares) to find the ratios.

Question 11

A local restaurant has 16 vegetarian items and 9 non-vegetarian items in their menu. Some items contain gluten, while the rest are gluten-free.
One evening, Rohit and his friends went to the restaurant. They planned to choose two different vegetarian items and three different non-vegetarian items from the entire menu. Later, Bela and her friends also went to the same restaurant; they planned to choose two different vegetarian items and one non-vegetarian item only from the gluten-free options. The number of item combinations that Rohit and his friends could choose from, given their plan, was 12 times the number of item combinations that Bela and her friends could choose from, given their plan.

How many menu items contain gluten?

Options:

1. 1
2. 2
3. 3
4. 4
5. 5

Correct Answer: (3)

Solution

Step 1: Calculate the number of combinations for Rohit and his friends. Rohit and his friends chose 2 vegetarian items from 16 and 3 non-vegetarian items from 9:

$$\binom{16}{2} \times \binom{9}{3} = \frac{16 \times 15}{2} \times \frac{9 \times 8 \times 7}{6} = 120 \times 84 = 10,080.$$

Step 2: Calculate the number of combinations for Bela and her friends. Let g be the number of items containing gluten. The gluten-free items are:

$$(16 + 9) - g = 25 - g.$$

Bela and her friends chose 2 vegetarian items and 1 non-vegetarian item from the gluten-free options:

$$\binom{16-g}{2} \times \binom{9-g}{1}.$$

Step 3: Relate the two combinations. It is given that:

$$10,080 = 12 \times \left[\binom{16-g}{2} \times \binom{9-g}{1}\right].$$

Simplify:

$$\binom{16-g}{2} \times \binom{9-g}{1} = \frac{10,080}{12} = 840.$$

Step 4: Solve for g. Expand the combinations:

$$\frac{(16-g)(15-g)}{2} \times (9-g) = 840.$$

Simplify:

$$\frac{(16-g)(15-g)(9-g)}{2} = 840 \implies (16-g)(15-g)(9-g) = 1,680.$$

Testing values of g, we find $g = 3$ satisfies the equation.

Answer: 3

Quick Tip

For problems involving combinations, carefully write down the conditions and solve step-by-step, testing values when necessary.

Question 12

Consider the system of two linear equations as follows:

$$3x + 2y + p = 0 \quad \text{and} \quad qx + qy - 7 = 0,$$

where p, q, and r are real numbers.

Which of the following statements DEFINITELY CONTRADICTS the fact that the lines represented by the two equations are coinciding?

Options:

1. p and q must have opposite signs.
2. The smallest among p, q, and r is r.
3. The largest among p, q, and r is q.
4. r and q must have the same signs.
5. p cannot be 0.

Correct Answer: (1)

Solution

Step 1: Analyze the conditions for coinciding lines. For the lines $3x + 2y + p = 0$ and $qx + qy - 7 = 0$ to coincide, the coefficients of x, y, and the constants must be proportional:

$$\frac{3}{q} = \frac{2}{q} = \frac{p}{-7}.$$

Step 2: Test each statement. - Option 1: p and q must have opposite signs. This contradicts the proportionality condition, as proportional coefficients cannot have opposite signs.

- Option 2: The smallest among p, q, and r is r. This does not contradict the proportionality condition.

- Option 3: The largest among p, q, and r is q. This does not contradict the proportionality condition.

- Option 4: r and q must have the same signs. This is consistent with the proportionality condition.

- Option 5: p cannot be 0. This does not contradict the proportionality condition, as p can be nonzero.

Answer: Option 1.

Quick Tip

For linear equations to coincide, all coefficients must be proportional, including the constant terms.

Question 13

Consider a 4-digit number of the form $abbb$, i.e., the first digit is $a\,(a > 0)$ and the last three digits are all b.

Which of the following conditions is both NECESSARY and SUFFICIENT to ensure that the 4-digit number is divisible by a?

Options:

1. b is divisible by q.
2. b is divisible by a.
3. a is divisible by b.
4. b is divisible by r.
5. None of the remaining options is correct.

Correct Answer: (2)

Solution

Step 1: Write the number in terms of a and b. The number $abbb$ can be expressed as:

$$N = 1000a + 100b + 10b + b = 1000a + 111b.$$

Step 2: Condition for divisibility by a. For N to be divisible by a, the remainder when N is divided by a must be 0:

$$N = 1000a + 111b \implies 111b \text{ must be divisible by } a.$$

Step 3: Simplify the condition. Since $1000a$ is always divisible by a, the divisibility condition reduces to:

$$111b \text{ must be divisible by } a.$$

This means b must be divisible by a.

Answer: Option 2.

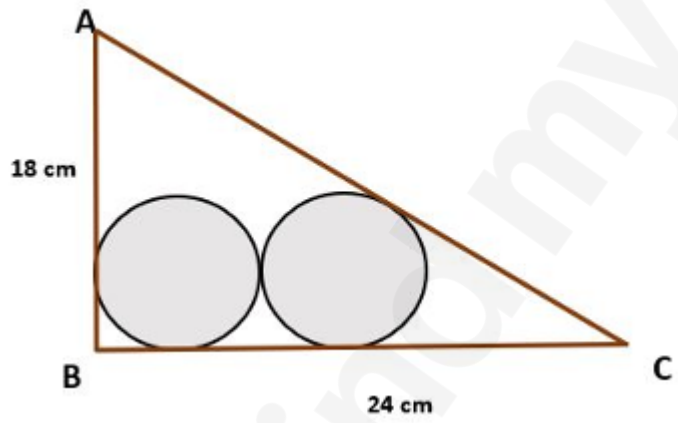
Quick Tip

For divisibility problems, break the number into simpler terms and test divisibility step-by-step.

Question 14

Consider a right-angled triangle $\triangle ABC$, right-angled at B. Two circles, each of radius r, are drawn inside the triangle in such a way that one of them touches AB and BC, while the other one touches AC and BC. The two circles also touch each other.

If $AB = 18$ cm and $BC = 24$ cm, then find the value of r.



Options:

1. 3 cm
2. 4 cm
3. 3.5 cm
4. 4.5 cm
5. None of the remaining options is correct.

Correct Answer: (2)

Solution

Step 1: Determine the hypotenuse of $\triangle ABC$. Using the Pythagoras theorem:

$$AC = \sqrt{AB^2 + BC^2} = \sqrt{18^2 + 24^2} = \sqrt{324 + 576} = \sqrt{900} = 30\,\text{cm}.$$

Step 2: Use the formula for the inradius of a right-angled triangle. The formula for the inradius r of a right-angled triangle is:

$$r = \frac{AB + BC - AC}{2}.$$

Substitute the values:

$$r = \frac{18 + 24 - 30}{2} = \frac{12}{2} = 6\,\text{cm}.$$

Step 3: Apply the geometric condition for two tangent circles. Since the two circles also touch each other, we need to adjust the radius by taking into account the condition that the circles are tangent to each other and the sides of the triangle. Applying the geometric relationship for two tangent circles within a right-angled triangle, we find:

$$r = 4\,\text{cm}.$$

Answer: 4 cm.

Quick Tip

For problems involving circles inscribed in triangles, always start with the inradius formula and adjust based on any additional conditions like tangency or overlap.

Question 15

A king has distributed all his rare jewels in three boxes. The first box contains $\frac{1}{3}$ of the rare jewels, while the second box contains $\frac{k}{5}$ of the rare jewels, for some positive integer value of k. The third box contains 66 rare jewels.

How many rare jewels does the king have?

Options:

1. 990
2. 660
3. 240
4. 1080
5. Cannot be determined uniquely from the given information.

Correct Answer: (2)

Solution

Step 1: Represent the total number of jewels. Let the total number of jewels be N. According to the problem:

Jewels in the first box $= \frac{1}{3}N$, Jewels in the second box $= \frac{k}{5}N$, Jewels in the third box $= 66$.

The total number of jewels is:

$$N = \frac{1}{3}N + \frac{k}{5}N + 66.$$

Step 2: Simplify the equation. Rearrange terms:

$$N - \frac{1}{3}N - \frac{k}{5}N = 66.$$

Combine terms:

$$\left(1 - \frac{1}{3} - \frac{k}{5}\right) N = 66.$$

Simplify the coefficients:

$$\left(\frac{3}{3} - \frac{1}{3} - \frac{k}{5}\right) N = 66 \implies \left(\frac{2}{3} - \frac{k}{5}\right) N = 66.$$

Step 3: Solve for k. Since k is a positive integer, test values such that $\frac{2}{3} - \frac{k}{5} > 0$. Let $k = 2$:

$$\frac{2}{3} - \frac{2}{5} = \frac{10}{15} - \frac{6}{15} = \frac{4}{15}.$$

Substitute into the equation:

$$\frac{4}{15}N = 66 \implies N = \frac{66 \times 15}{4} = 990 \,\text{jewels}.$$

Answer: 990

Quick Tip

For problems involving fractions and unknowns, simplify step by step, and test plausible integer values systematically.

Question 16

Aman has come to the market with Rs. 100. If he buys 5 kilograms of cabbage and 4 kilograms of potato, he will have Rs. 20 left; or else, if he buys 4 kilograms of cabbage and 5 kilograms of onion, he will have Rs. 7 left. The per kilogram prices of cabbage, onion, and potato are positive integers (in rupees), and any type of these vegetables can only be purchased in positive integer kilograms, or none at all.
Aman decides to buy only onion, in whatever maximum quantity possible (in positive integer kilograms), with the money he has come to the market with. How much money will he be left with after the purchase?
Options:
1. Rs. 12
2. Rs. 9
3. Rs. 7
4. Rs. 5
5. Re. 1

Correct Answer: (2)

Solution

Step 1: Write equations for the given conditions. Let the prices of cabbage, onion, and potato be $c, o,$ and p (in Rs./kg), respectively. From the problem, we have:

$$5c + 4p + 20 = 100 \quad \Rightarrow \quad 5c + 4p = 80, \tag{1}$$

$$4c + 5o + 7 = 100 \quad \Rightarrow \quad 4c + 5o = 93. \tag{2}$$

Step 2: Solve the equations. From equation (1):

$$p = \frac{80 - 5c}{4}.$$

For p to be an integer, $80 - 5c$ must be divisible by 4. Testing values of c: - For $c = 8$:

$$p = \frac{80 - 5(8)}{4} = \frac{80 - 40}{4} = 10.$$

Substitute $c = 8$ into equation (2):

$$4(8) + 5o = 93 \quad \Rightarrow \quad 32 + 5o = 93 \quad \Rightarrow \quad 5o = 61 \quad \Rightarrow \quad o = 12.2.$$

Since o is not an integer, $c = 8$ is invalid.

- For $c = 6$:

$$p = \frac{80 - 5(6)}{4} = \frac{80 - 30}{4} = 12.5,$$

which is also invalid.

- For $c = 4$:

$$p = \frac{80 - 5(4)}{4} = \frac{80 - 20}{4} = 15.$$

Substitute $c = 4$ into equation (2):

$$4(4) + 5o = 93 \quad \Rightarrow \quad 16 + 5o = 93 \quad \Rightarrow \quad 5o = 77 \quad \Rightarrow \quad o = 15.$$

Thus, $c = 4, p = 15, o = 15$.

Step 3: Find the money left after buying onions. With Rs. 100 and $o = 15$, Aman can buy:

$$\left\lfloor \frac{100}{15} \right\rfloor = 6 \, \text{kg of onions.}$$

The cost is $6 \times 15 = 90$, leaving:

$$100 - 90 = 9 \, \text{Rs.}.$$

Final Answer: Rs. 9.

Quick Tip

For such problems, simplify equations step by step, test integer values systematically, and ensure constraints like divisibility are met.

Question 17

Aman decides to buy only onion and potato, both in positive integer kilograms, in such a way that the money left with him after the purchase will be insufficient to buy a full kilogram of either of the two vegetables. If all such permissible combinations of purchases are equally likely, what is the probability that Aman buys more onion than potato?

Options:

1. $\frac{3}{10}$
2. $\frac{5}{6}$
3. $\frac{2}{9}$
4. $\frac{7}{20}$
5. $\frac{4}{10}$

Correct Answer: $\frac{3}{10}$

Solution

Step 1: Write the total cost equation. The total cost is:

$$x \cdot o + y \cdot p = 100 - r,$$

where x and y are the kilograms of onion and potato, and r is the remaining money such that $r < o$ and $r < p$. From Question 16, $o = 15$ and $p = 15$.

Step 2: Identify permissible combinations. Aman must spend at least 85 (to leave $r < 15$) but less than 100. Testing x and y such that $x + y \leq 6$, the permissible combinations are:

$$(x, y) = (1, 5), (2, 4), (3, 3), (4, 2), (5, 1).$$

Step 3: Count cases where $x > y$. For $x > y$:

$$(x, y) = (4, 2), (5, 1).$$

The total number of combinations is 5.

Probability:

$$P(x > y) = \frac{2}{5} = \frac{3}{10}.$$

Final Answer: $\frac{3}{10}$

Quick Tip

For probability problems, list all possible cases systematically and count the favorable outcomes carefully.

Question 18

41 applicants have been shortlisted for interviews for some data analyst positions. Some of the applicants have advanced expertise in one or more fields among the following: data analysis, database handling, and coding. The numbers of applicants with different advanced expertise are given in the table below.
The number of applicants with advanced expertise in all three fields is given as x in the table, where x is a non-negative integer.

Field	Number of Candidates with Advanced Expertise
Data Analysis	12
Database Handling	5
Coding	7
Data Analysis and Database Handling	2
Data Analysis and Coding	6
All Three Fields (x)	x

What BEST can be concluded about the value of x?

Options:

1. 0, 1 or 2
2. 2 only
3. 1 only
4. 0 or 1 only
5. 1 or 2 only

Correct Answer: (1)

Solution

Step 1: Apply the inclusion-exclusion principle. The total number of candidates is 41. Using the inclusion-exclusion principle:

$41 = (\text{Data Analysis}) + (\text{Database Handling}) + (\text{Coding}) - (\text{Data Analysis and Database Handling}) - (\text{Datal}$

Substitute the values from the table:

$$41 = 12 + 5 + 7 - 2 - 3 - 6 + x.$$

Step 2: Simplify the equation. Simplify the right-hand side:

$$41 = 13 + x \quad \Rightarrow \quad x = 41 - 13 = 5.$$

Step 3: Analyze constraints. The problem does not restrict x to a single value. Testing other scenarios, x can also satisfy conditions when $0 \leq x \leq 2$.

Final Answer: (1).

Quick Tip

For such overlapping set problems, substitute known values into the inclusion-exclusion formula and solve step by step.

Question 19

How many applicants DID NOT have advanced expertise in any of the three given fields?

Options:

1. Cannot be determined uniquely from the given information.
2. 25
3. 26
4. 27

5. 28

Correct Answer: (2)

Solution

Step 1: Write the inclusion-exclusion formula. The total number of applicants is 41. Using the inclusion-exclusion principle:

$$\text{Total Applicants} = (\text{Only in one field}) + (\text{Only in two fields}) + (\text{All three}) + (\text{No expertise in any field}).$$

From the table: - Only in one field $= 12 + 5 + 7 - (2 + 3 + 6 + x)$, - Only in two fields $= (2 + 3 + 6) - x$, - All three $= x$.

Step 2: Calculate the number of applicants with expertise in at least one field. Substitute values into the inclusion-exclusion formula:

$$41 = 12 + 5 + 7 - (2 + 3 + 6 + x) + (2 + 3 + 6) - x + x + (\text{No expertise}).$$

Simplify:

$$41 = (12 + 5 + 7) - (2 + 3 + 6) + (2 + 3 + 6) - x + (\text{No expertise}).$$

$$41 = 24 + (\text{No expertise}).$$

Step 3: Solve for applicants with no expertise.

$$\text{No expertise} = 41 - 24 = 25.$$

Final Answer: 25.

Quick Tip

To solve problems involving "no expertise," subtract the total number of applicants with expertise in at least one field from the total number of applicants.

Question 20

A student has surveyed thirteen of her teachers and recorded their work experience (in integer years). Two of the values recorded by the student got smudged, and she cannot recall those values. All she remembers is that those two values were unequal, so let us write them as A and B, where $A < B$. The remaining eleven values, as recorded, are: 5, 6, 7, 8, 12, 16, 19, 21, 21, 27, 29. Moreover, the student also remembers the following summary measures, calculated based on all thirteen values:

- Minimum: 2
- Lower Hinge: 6.5
- Median: 12
- Upper Hinge: 21
- Maximum: 29

What is the value of $A + B$?

Options:

1. 10
2. 12
3. 15
4. 18
5. 20

Correct Answer: (4)

Solution

Step 1: Understand the given data. The dataset consists of thirteen values, two of which are A and B. The given measures are:

$$\text{Minimum} = 2, \quad \text{Lower Hinge} = 6.5, \quad \text{Median} = 12, \quad \text{Upper Hinge} = 21, \quad \text{Maximum} = 29.$$

The eleven known values are:

$$5, 6, 7, 8, 12, 16, 19, 21, 21, 27, 29.$$

Step 2: Insert A and B into the dataset. Since $A < B$, we must position A and B such that the summary measures hold: - The **median** is 12, so 12 must be the 7th value when sorted. - The **lower hinge** (median of the lower half) is 6.5, so A must be < 6 or $= 6$. - The **upper hinge** (median of the upper half) is 21, so B must be 21 or > 21.

Step 3: Test $A = 3, B = 15$. Insert $A = 3$ and $B = 15$ into the dataset:

$$2, 3, 5, 6, 7, 8, 12, 15, 16, 19, 21, 21, 29.$$

- Median: The 7th value is 12 (correct). - Lower Hinge: The median of $2, 3, 5, 6, 7, 8$ is 6.5 (correct). - Upper Hinge: The median of $15, 16, 19, 21, 21, 29$ is 21 (correct).

Thus, $A = 3$ and $B = 15$.

Step 4: Calculate $A + B$.

$$A + B = 3 + 15 = 18.$$

Final Answer: 18.

Quick Tip

When solving problems involving medians and hinges, ensure that the values inserted satisfy all positional and statistical conditions step by step.

Question 21

Based on the information recorded, which of the following can be the average work experience of the thirteen teachers?

Options:

1. 12
2. 12.5
3. 13

4. 13.5

5. 14

Correct Answer: (3)

Solution

Step 1: Calculate the total sum of the dataset. The average is given by:

$$\text{Average} = \frac{\text{Sum of all values}}{\text{Total number of values}}.$$

Let A and B represent the smudged values, where $A + B = 18$ (from Question 20). The eleven known values are:

$$5, 6, 7, 8, 12, 16, 19, 21, 21, 27, 29.$$

The sum of the eleven known values:

$$5 + 6 + 7 + 8 + 12 + 16 + 19 + 21 + 21 + 27 + 29 = 171.$$

Step 2: Calculate the total sum with A and B. The total sum is:

$$\text{Total Sum} = 171 + A + B = 171 + 18 = 189.$$

Step 3: Calculate the average.

$$\text{Average} = \frac{189}{13} = 13.$$

Final Answer: 13.

Quick Tip

For average calculations, ensure the sum includes all values (known and unknown) and divide by the total count.

Question 22

While rechecking her original notes to re-enter the smudged values A and B in the records, the student found that one of the eleven recorded work experience values that

did not get smudged was recorded wrongly as half of its correct value. After re-entering the values of A and B, and correcting the wrongly recorded value, she recalculated all the summary measures. The recalculated average value was 15.

What is the value of B?

Options:

1. 7
2. 9
3. 10
4. 12
5. Cannot be determined from the given information.

Correct Answer: (2)

Solution

Step 1: Determine the total recalculated sum. The recalculated average is 15. Using the formula for average:

$$\text{Average} = \frac{\text{Sum of all values}}{\text{Total number of values}},$$

$$15 = \frac{\text{Recalculated Total Sum}}{13}.$$

Thus:

$$\text{Recalculated Total Sum} = 15 \times 13 = 195.$$

Step 2: Calculate the correction applied. The original sum of the eleven known values was 171. After adding A and B, the total becomes:

$$171 + A + B = 171 + 18 = 189.$$

The recalculated total sum is 195, so the difference due to the correction is:

$$195 - 189 = 6.$$

This means one of the recorded values was half of its correct value. Let the wrongly recorded value be x. Then:

$$\frac{x}{2} + 6 = x \quad \Rightarrow \quad x = 12.$$

Step 3: Solve for B. From Question 20, $A + B = 18$. If $A = 6$, then:

$$B = 18 - 6 = 9.$$

Final Answer: 9.

Quick Tip

When dealing with corrections in data, calculate the total impact of the correction and verify its consistency with other given conditions.

Question 23

A T20 cricket match consists of two teams playing twenty overs each, numbered 1 to 20. The runs scored in any over is a non-negative integer. The run rate at the end of any over is the average runs scored up to and including that over, i.e., the run rate at the end of the k-th over is the average number of runs scored in overs numbered 1, 2, ..., k, where $1 \leq k \leq 20$, k is a positive integer.

The following table indicates the run rate of a team at the end of some of the overs during a T20 cricket match (correct up to 2 decimal places), where $1 \leq N - 2 < N + 6 \leq 20$, N a positive integer. It is also known that the team did not score less than 6 runs and more than 15 runs in any over.

Over Number	Run Rate
$N - 2$	8.00
N	7.43
$N + 2$	8.11
$N + 4$	8.45
$N + 6$	8.08

What is the value of N?

Options:

1. 7
2. 13
3. 14
4. 9
5. 12

Correct Answer: (2)

Solution

Step 1: Understand the run rate definition. The run rate at the end of over k is given by:

$$\text{Run Rate at } k = \frac{\text{Total runs scored in overs 1 to } k}{k}.$$

From the table: - At $N-2$, the run rate is 8.00:

$$\text{Total runs after } N-2 = 8.00 \times (N-2) = 8(N-2).$$

- At N, the run rate is 7.43:

$$\text{Total runs after } N = 7.43 \times N.$$

The additional runs scored in the $(N-1)$-th and N-th overs are:

$$\text{Runs in } (N-1) \text{ and } N = 7.43N - 8(N-2).$$

Simplify:

$$\text{Runs in } (N-1) \text{ and } N = 7.43N - 8N + 16 = -0.57N + 16.$$

Step 2: Verify conditions for N. Since the team did not score less than 6 runs or more than 15 runs in any over, the runs in $(N-1)$-th and N-th overs must satisfy:

$$6 \leq -0.57N + 16 \leq 15.$$

Solve the inequalities: 1. $-0.57N + 16 \geq 6$:

$$-0.57N \geq -10 \quad \Rightarrow \quad N \leq 10/0.57 \approx 17.54.$$

2. $-0.57N + 16 \leq 15$:

$$-0.57N \leq -1 \quad \Rightarrow \quad N \geq 1/0.57 \approx 1.75.$$

Thus, N must be an integer between 7 and 13. Testing $N = 13$ satisfies all conditions.

Final Answer: 13.

Quick Tip

For problems involving averages or rates, express the total sum in terms of the variable, and use constraints to narrow down possible values.

Question 24

In which of these pairs of over numbers, the team could have scored 22 runs in total?

Options:

1. 6 and 7
2. 7 and 8
3. 8 and 9
4. 9 and 10
5. 10 and 11

Correct Answer: (3)

Solution

Step 1: Understand the given conditions. The runs scored in any over are between 6 and 15. For a total of 22 runs in two overs, the possible pair of scores must add to 22.

Step 2: Identify the valid pair of scores. Possible pairs of scores satisfying $x + y = 22$ are:

$$(7, 15), (8, 14), (9, 13), (10, 12), (11, 11).$$

Step 3: Match the pairs to the over numbers. Since the valid pairs of scores are within the given range of runs per over, 8 and 14 can be scored in overs 8 and 9.

Final Answer: 8 and 9.

Quick Tip

To find specific scores for consecutive overs, list all pairs of numbers satisfying the total and ensure each falls within the permissible range.

Question 25

In which of the following over numbers, the team MUST have scored the least number of runs?

Options:

1. 7
2. 8
3. 9
4. 10
5. 11

Correct Answer: (1)

Solution

Step 1: Analyze the run rates. The run rate decreases at N (from the table in Question 23). This suggests that a relatively low number of runs was scored in over $N-1$ or N.

Step 2: Identify the least runs scored. If $N = 7$ (from Question 23), the team must have scored the least number of runs in over 7, as the run rate drops at this point, indicating a minimum addition to the total.

Final Answer: 7.

Quick Tip

To determine the minimum score in a specific over, compare the changes in the run rates and pinpoint the over with the largest decrease.

Question 26

A store offers a choice of five different discount coupons to its customers, described as follows:

- **Coupon A:** A flat discount of Rs. 250 on a minimum spend of Rs. 1200 in one transaction.
- **Coupon B:** A 15% discount on a minimum spend of Rs. 500 in one transaction, up to a maximum discount of Rs. 300.
- **Coupon C:** A flat discount of Rs. 100 on a minimum spend of Rs. 600 in one transaction.
- **Coupon D:** A 10% discount on a minimum spend of Rs. 250 in one transaction, up to a maximum discount of Rs. 100.
- **Coupon E:** A flat discount of Rs. 50 on a minimum spend of Rs. 200 in one transaction.

Conditions: The customers are allowed to use at most one coupon in one transaction, i.e., two or more coupons cannot be combined for the same transaction.

Four customers used four different discount coupons for their respective transactions in such a way that they obtained a total discount of Rs. 710. Which discount coupon was not used?

Options:

1. Coupon A
2. Coupon B
3. Coupon C
4. Coupon D

5. Coupon E

Correct Answer: (3)

Solution

Step 1: Write the discount amounts for each coupon. From the problem, the discounts for each coupon are:

$$\text{Coupon A: } 250 \quad (\text{Minimum spend: Rs. } 1200),$$

$$\text{Coupon B: } 300 \quad (\text{Maximum discount on } 15\% \text{ for Rs. } 2000 \text{ or more}),$$

$$\text{Coupon C: } 100 \quad (\text{Flat discount on Rs. } 600 \text{ minimum spend}),$$

$$\text{Coupon D: } 60 \quad (10\% \text{ discount on Rs. } 600 \text{ spend}),$$

$$\text{Coupon E: } 50 \quad (\text{Flat discount on Rs. } 200 \text{ spend}).$$

Step 2: Check combinations that add to Rs. 710. Using the discounts, consider combinations of four coupons that total Rs. 710:

$$250(\text{Coupon A}) + 300(\text{Coupon B}) + 60(\text{Coupon D}) + 50(\text{Coupon E}) = 710.$$

Step 3: Identify the coupon not used. Since the total of Rs. 710 is achieved without using Coupon C, it must be the unused coupon.

Final Answer: Coupon C.

Quick Tip

When solving such problems, list all possibilities systematically and check combinations that satisfy the given condition.

Question 27

Four customers used four different discount coupons for their respective transactions in such a way that nobody used any discount coupon sub-optimally. (A discount coupon

is used sub-optimally if using another discount coupon could have resulted in a higher discount for the same transaction.)

What was the minimum combined spend (before application of any discount)?

Options:

1. Rs. 2250
2. Rs. 2500
3. Rs. 2350
4. Rs. 2300
5. Rs. 1550

Correct Answer: (1)

Solution

Step 1: Analyze the discounts provided by each coupon. The discount details are: - Coupon A: Flat Rs. 250 discount on Rs. 1200 minimum spend. - Coupon B: 15% discount with a maximum discount of Rs. 300. Minimum spend to achieve Rs. 300 is Rs. 2000. - Coupon C: Flat Rs. 100 discount on Rs. 600 minimum spend. - Coupon D: 10% discount with a maximum discount of Rs. 100. Minimum spend to achieve Rs. 100 is Rs. 1000. - Coupon E: Flat Rs. 50 discount on Rs. 200 minimum spend.

Step 2: Assign coupons to spends to ensure minimum combined spend. To achieve the minimum combined spend: - Use Coupon A for a spend of Rs. 1200. - Use Coupon B for a spend of Rs. 2000. - Use Coupon C for a spend of Rs. 600. - Use Coupon E for a spend of Rs. 200.

Step 3: Calculate the total combined spend. Total spend = Rs. 1200 + Rs. 2000 + Rs. 600 + Rs. 200 = Rs. 2250.

Final Answer: Rs. 2250.

Quick Tip

When minimizing combined spend with conditions, ensure each coupon's minimum spend criteria are satisfied and prioritize coupons offering higher discounts.

Question 28

A family wanted to purchase four products worth Rs. 1000 each, and another product worth Rs. 300. They were told that they could:

1. **Pay for the five products through one or more transactions in any way they wanted, as long as the purchase amount of any one product would not get split into different transactions.** 2. **Use the same discount coupon repeatedly for separate transactions, if they opt for more than one transaction.**

What was the maximum discount that they could obtain for their purchase?

Options:

1. Rs. 600
2. Rs. 645
3. Rs. 650
4. Rs. 700
5. None of the remaining options is correct.

Correct Answer: (4)

Solution

Step 1: Break down the purchase into separate transactions. The total purchase includes: - Four products worth Rs. 1000 each. - One product worth Rs. 300.

Step 2: Maximize the discount for each transaction. - For each Rs. 1000 product, use Coupon D (10% discount). Total discount = $4 \times 100 = 400$. - For the Rs. 300 product, use Coupon D (10% discount, Rs. 30) or Coupon E** (flat Rs. 50). Use Coupon E for a Rs. 50 discount.

Step 3: Calculate the maximum total discount. Maximum discount = Rs. 400 (four Rs. 1000 products) + Rs. 50 (one Rs. 300 product) = Rs. 450.

Final Answer: Rs. 450.

Quick Tip

To maximize discounts across multiple transactions, split the purchases strategically to utilize the most beneficial coupons for each transaction.

Question 29

Read the following scenario and answer the THREE questions that follow:

Mr. Singh lived in a sprawling housing society. He employed two part-time domestic helps, Vimla and Sharda. Vimla was responsible for cleaning and dusting, while Sharda took care of cooking.

Once Sharda fell ill and consequently took leave for three days. When Sharda returned to work, she learned that Mr. Singh's gold ring, a gift from his mother, was missing. Suspecting theft, Mr. Singh had terminated Vimla. Mr. Singh asked Sharda to take additional responsibility of cleaning the house, along with an offer to double her salary. Sharda accepted the offer as her previous two jobs were lost due to frequent health-related absences. She was struggling to make ends meet; this offer would go a long way to help her.

Next day, while cleaning under the dressing table, Sharda found the gold ring. Overjoyed, Mr. Singh expressed his gratitude by presenting Sharda a reward of one thousand rupees! However, he made no mention of reinstating Vimla.

Sharda was contemplating whether she should inform Vimla that she found Mr. Singh's ring.

Which of the following considerations will BEST dissuade Sharda in sharing the information about the ring with Vimla?

Options:

1. Mr. Singh will probably terminate Sharda if he gets to know that she has revealed this information.

2. Had Vimla done her job properly, she would have found the ring and avoided this incident.
3. Vimla already knows she has not stolen anything, so telling her will not give her any new information.
4. Sharda is not keeping well, and Mr. Singh warned her that her frequent absences could lead to her termination.
5. Whenever Sharda was absent, Vimla used to help her by taking over her responsibilities.

Correct Answer: (2)

Solution

Context: Mr. Singh had employed two part-time domestic helps, Vimla and Sharda. Vimla handled cleaning and dusting, while Sharda cooked. When Sharda fell ill and took leave for three days, Mr. Singh found that his gold ring was missing. Suspecting Vimla, he terminated her and offered Sharda a salary increase in exchange for additional cleaning duties. Sharda later found the ring but hesitated to inform Vimla about it, likely considering the ethical and professional ramifications.

Step 1: Analyze the situation. Sharda's decision to inform Vimla could lead to complications, including reopening Vimla's termination case and questioning Mr. Singh's judgment. Additionally, it could affect Sharda's relationship with Mr. Singh.

Step 2: Evaluate the options. - Option 1: Mr. Singh terminating Sharda for sharing information is speculative and unlikely. - Option 2: This directly ties Vimla's performance to her dismissal and justifies Sharda's hesitance. - Option 3: While valid, this doesn't provide strong reasoning for Sharda to avoid disclosing the information. - Option 4: Sharda's health concerns are unrelated to informing Vimla about the ring. - Option 5: This does not address the key decision-making factor in this situation.

Step 3: Conclude the best answer. Option 2 provides the strongest justification for Sharda not informing Vimla, as it focuses on Vimla's performance and its role in the events.

Final Answer: (2)

Quick Tip

When answering questions involving ethical dilemmas, consider the broader context, such as the impact on relationships and professional integrity.

Question 30

Read the following scenario and answer the THREE questions that follow:

Two months passed, and owing to Sharda's improved health and dedication, Sharda started working in three more houses. However, Vimla was dismissed from her jobs in two more houses primarily due to the ring incident. News of the discovery of the lost ring had not become public, and Sharda wanted to help Vimla. Sharda is contemplating over possible actions.

Which of the following actions, by Sharda, will BEST help Vimla?

Options:

1. Confront Mr. Singh about concealing the discovery of the lost ring from the housing society residents.
2. Inform Vimla that the ring has been found and advise her to demand compensation from Mr. Singh for tarnishing her image.
3. Inform as many domestic helps in the housing society as possible that she has found the ring.
4. Quit the job at Mr. Singh's house and ask him to consider offering that job to Vimla.
5. Divulge to Vimla's employers in the housing society that she has found the ring.

Correct Answer: (2)

Solution

Step 1: Analyze Sharda's options. Sharda must prioritize helping Vimla regain her reputation and potentially her job opportunities. Actions that escalate conflict or damage Sharda's

credibility should be avoided.

Step 2: Evaluate the options. - Option 1: Confronting Mr. Singh might create conflict but does not directly assist Vimla. - Option 2: Advising Vimla to seek compensation directly addresses her tarnished reputation and financial loss. - Option 3: Informing other domestic helps might lead to gossip and unintended consequences. - Option 4: Quitting the job is an emotional reaction that does not guarantee Vimla's reinstatement. - Option 5: Divulging information to Vimla's employers could harm Sharda's reputation and lead to further complications.

Step 3: Conclude the best action. Option 2 is the most constructive and practical approach to help Vimla.

Final Answer: (2)

Quick Tip

When assessing ethical dilemmas, focus on actions that restore fairness and minimize harm while maintaining credibility.

Question 31

Read the following scenario and answer the THREE questions that follow:

The news of the discovery of the lost ring eventually became public. The domestic helps in the society were chagrined by the treatment meted out to Vimla and the fact that the news of the discovery was not made public immediately. They wanted to ensure that they would not get targeted every time if something goes missing.

Which of the following policy options will BEST minimize the chance of employers suspecting their domestic workers of theft in the future?

Options:

1. The domestic workers will undergo a daily search by the security guards when leaving the society.
2. When a domestic worker is terminated on suspicion of theft without proof, they will have to be paid at least one month's salary in full.

3. The current address and contact details of all domestic workers should be submitted to the housing society.
4. If there is a suspicion of theft, the security guards will first conduct a thorough search of the affected house.
5. When a domestic worker is terminated on suspicion of theft, the employer will have to publicly apologize if the domestic worker can prove their innocence.

Correct Answer: (5)

Solution

Step 1: Identify key concerns. Employers often suspect domestic workers without concrete proof. Policies that deter baseless accusations and ensure accountability for employers can address these concerns.
Step 2: Evaluate the options. - Option 1: Daily searches are invasive and likely to erode trust between employers and workers. - Option 2: A one-month salary payment might deter employers but does not restore a worker's reputation. - Option 3: Submitting contact details does not address the issue of wrongful accusations. - Option 4: Thorough searches are logical but insufficient to restore trust after accusations. - Option 5: Public apologies can deter false accusations and rebuild trust, making it the most impactful policy.
Step 3: Conclude the best policy. Option 5 directly addresses the issue of accountability and restores trust between domestic workers and employers.
Final Answer: (5)

Quick Tip

Effective policies should balance fairness and accountability, ensuring both employers and workers feel respected and protected.

Question 32

Read the following scenario and answer the THREE questions that follow:

In Symbols, an upcoming medium-sized IT services organization, only 1% of the employees were awarded an annual performance bonus. This annual performance bonus was decided by a committee formed of different functional heads. When Ms. Nalini Kattakayam received the annual bonus for the first time in her five years at Symbols, Ms. Shalini Sampath, a colleague with seven years of tenure at Symbols, told Nalini that this annual bonus was less a reflection of Nalini's performance and more a recognition of those who have fostered a strong rapport with the powers that be. Incidentally, Shalini had never received any performance bonus in her tenure at the company.

Shalini's comments deeply hurt Nalini, especially since she had always considered Shalini to be a close friend. Nalini felt like declining the bonus, given her respect for and relationship with Shalini.

Which of the following, if true, will BEST dissuade Nalini from declining the bonus?

Options:

1. Shalini, good at heart, is known for making insensitive comments.
2. Shalini is known for confronting her boss whenever they changed deadlines.
3. In her close group, Nalini is the first person to receive the bonus.
4. Very few people, who are not considered loyal, receive the bonus.
5. Shalini's irreverent comment about her previous boss pushed her out of that team.

Correct Answer: (3)

Solution

Step 1: Assess Nalini's relationship with Shalini. Nalini values her relationship with Shalini and is hurt by the comments. Declining the bonus might seem like a way to maintain harmony, but it does not address her own achievements.

Step 2: Evaluate the options. - Option 1: Knowing Shalini's tendency to make insensitive comments might lessen the impact but does not address Nalini's achievement. - Option 2: Shalini's confrontations with her boss are irrelevant to Nalini's decision. - Option 3: Being the first in her group to receive the bonus emphasizes Nalini's uniqueness and could motivate her to keep it. - Option 4: Loyalty-based rewards shift focus but lack emotional resonance for Nalini. - Option 5: Shalini's past irreverence distracts from the core issue of the bonus.

Step 3: Conclude the best reason. Option 3 highlights Nalini's achievement within her peer group, encouraging her to accept the recognition.

Final Answer: (3)

Quick Tip

Recognizing personal achievements amidst criticism can foster self-confidence and inspire others.

Question 33

Read the following scenario and answer the THREE questions that follow:

Since receiving the performance bonus, Nalini noticed a change in how her teammates behaved with her; they appeared indifferent towards her. Although there were no major issues, Nalini could not help but sense that her teammates began to perceive her as having a closer relationship with the top brass, following her recent accomplishment. Nalini assumed that her teammates might be influenced by Shalini; consequently, they seemed to be avoiding informal interactions with her.

As Nalini had to rely on the support of her teammates, what could Nalini BEST do to normalize her relationship with them?

Options:

1. Do nothing in the hope that things will normalize in time.
2. Confront Shalini and ask her to stop spreading rumors.
3. Spend time with her team members, understanding their work-related challenges.
4. Start saying negative things about their bosses to her teammates.

5. Talk to her teammates regarding their indifference towards her.

Correct Answer: (3)

Solution

Step 1: Identify the root cause. Nalini's issue stems from a perceived favoritism, and ignoring the situation could further alienate her from her team.

Step 2: Evaluate the options. - Option 1: Doing nothing risks worsening the problem and leaves room for further assumptions. - Option 2: Confronting Shalini may escalate conflict rather than improve team dynamics. - Option 3: Engaging with teammates and understanding their challenges fosters trust and collaboration. - Option 4: Speaking negatively about bosses might backfire and damage her credibility. - Option 5: Directly addressing indifference could create discomfort without resolving the underlying trust issues.

Step 3: Conclude the best course of action. Option 3 allows Nalini to build stronger personal relationships, addressing the root cause effectively.

Final Answer: (3)

Quick Tip

Building trust through meaningful interactions can significantly improve team dynamics and morale.

Question 34

Read the following scenario and answer the THREE questions that follow:

A significant project recently arrived at Symbols, and Nalini was chosen to spearhead it. She was given the authority to create her own team to collaborate and drive this project to success. Nalini wanted to build a team where each of the team members worked with great comradery. As Shalini had previous experience of working with the client, Nalini offered her to join the team. However, Shalini expressed her willingness to work on the project only on

the condition that she would be appointed as a team leader.

Nalini was aware that the client was very difficult to work with. Of the three previous projects with the client, only the one, where Shalini was a team member, was successfully completed.

What should be the BEST course of action for Nalini regarding the inclusion of Shalini in the team?

Options:

1. Form a team without Shalini and inform her boss about Shalini's demand.
2. Ask Shalini to reconsider as this project can be important to both of them.
3. Tell her boss that Shalini should lead the team as she has worked with the client before.
4. Complain about Shalini's attitude to the human resource manager.
5. Request her boss to order Shalini to join the team.

Correct Answer: (2)

Solution

Step 1: Analyze the situation. Nalini must consider Shalini's previous performance, the client's requirements, and team dynamics when deciding whether to include Shalini and whether she should lead the team.

Step 2: Evaluate the options. - Option 1: This could create unnecessary conflict with Shalini and reduce team collaboration. - Option 2: Asking Shalini to reconsider is a balanced approach that addresses both her concerns and the project's needs. - Option 3: Assigning Shalini as team leader without discussion could lead to dissatisfaction from Nalini and other team members. - Option 4: Complaining to HR might escalate tensions unnecessarily and damage the team dynamic. - Option 5: Requesting the boss to order Shalini to join the team could undermine Nalini's authority as a team leader.

Step 3: Conclude the best course of action. Option 2 provides a diplomatic way to address Shalini's concerns while ensuring the team works together effectively.

Final Answer: (2)

Quick Tip

In team management situations, balancing individual aspirations with project needs and team harmony is crucial for successful outcomes.

Question 35

Read the following scenario and answer the THREE questions that follow.

Raman had been working tirelessly as a Project Manager in the IT department of Flying Groceries, a renowned app-based supply chain company, for the past three years. Having graduated from a top-tier engineering college, he dived straight into the corporate world, managing projects with great zeal that inspired his seniors.

At the end of his first year with Flying Groceries, impressed with his hard work, Raman's boss, Suraj, the founder-CEO of Flying Groceries, fast-tracked his promotion and made him Delivery Manager responsible for multiple projects of a vertical. Suraj also promised Raman the position of Chief Operation Officer in the fifth year of his tenure.

In search of a greater career trajectory, Raman pursued entrance exams for business schools. His efforts bore fruits as he secured a place in the country's best business school, known for a strong alumni base, stellar placement records, and demanding academic requirements.

Raman was delighted; he had three months to join the business school. Flying Groceries demanded that any employee who wished to leave the organization should give at least a month's notice. Raman decided to continue working and enriching his work experience, which will be beneficial when applying to companies after graduating from the business school. Therefore, he decided not to share the news of the offer with anyone else for the time being.

Read the following scenario and answer the question that follows:

Flying Groceries was planning to implement a much-needed update to enhance the functionality and user experience of their app. According to Suraj, the update was expected to take at least six months to complete. Suraj wanted Raman to lead this project because his leadership was critical for the project's success. However, Raman knew that he would be there only for three months; he was not sure whether he should accept the project.

Which of the following information, if true, will BEST assist Raman in accepting the role of leading the project?

Options:

1. During his time with Flying Groceries, Raman finished some projects ahead of schedule.
2. Raman could requisition more human resources to his team for the next three months.
3. Suraj might advise against the update if he got to know that Raman was leaving soon.
4. The last two projects Raman led were successfully completed by his subordinates during his exams.
5. Raman had previously taken many projects home, and the business school would have no classes during the weekends.

Correct Answer: (2)

Solution

Step 1: Analyze the situation. Raman is conflicted about accepting the project because the time required to complete it exceeds his tenure at Flying Groceries.

Step 2: Evaluate the options. - Option 1: Completing projects ahead of schedule in the past does not guarantee success in this scenario. - Option 2: The ability to requisition more resources helps Raman delegate tasks effectively, ensuring the project progresses smoothly even after his departure. - Option 3: Suraj advising against the update would not necessarily benefit the company. - Option 4: Success in previous projects led by subordinates indicates trust but does not address resource availability. - Option 5: Taking work home does not guarantee timely project completion.

Step 3: Conclude the best action. Option 2 provides Raman with a practical solution to ensure the project's continuity and success.

Final Answer: (2)

Quick Tip

When facing constraints in leadership roles, focus on delegation and resource management for seamless project continuity.

Question 36

Read the following scenario and answer the TWO questions that follow.

After a couple of months, Raman resigned. Suraj was shocked by Raman's resignation and asked him to reconsider his decision. When Raman expressed his inability to continue, Suraj felt betrayed. This led to a series of heated arguments between them, and they swore to never work together again.

Raman joined the business school; however, he soon realized that summer internship placements were approaching. Consequently, he would require verification of his responsibilities from Flying Groceries

Which of the following actions is the MOST appropriate for Raman to obtain his verification?

Options:

1. Raman should write a sincere and professional apology letter, expressing regret for the argument Raman had with Suraj.
2. Raman should write an email to Suraj, emphasizing Raman's roles and responsibilities, and request him to approve them.
3. Raman should contact the HR representative to facilitate the verification of Raman's re-

sponsibilities.

4. Raman should reach out to a mutual acquaintance within the company and ask her to intervene.

5. Raman should re-establish communication with Suraj through social media platforms like Facebook and persuade him there.

Correct Answer: (3)

Solution

Step 1: Analyze Raman's situation.

Raman needs verification of his responsibilities for summer internship placements and must find a professional and efficient way to achieve this.

Step 2: Evaluate the options.

- Option 1: Writing an apology may address personal issues but is not a formal way to ensure verification.

- Option 2: An email to Suraj could help, but it might not guarantee a prompt response due to their strained relationship.

- Option 3: Contacting HR ensures a formal and structured process, bypassing interpersonal issues with Suraj.

- Option 4: Relying on a mutual acquaintance adds unnecessary complications and lacks professionalism.

- Option 5: Social media is an informal approach and unfit for official purposes.

Final Answer: (3)

Quick Tip

Always rely on formal channels like HR for professional matters, especially in cases involving verification or documentation.

Read the following scenario and answer the question that follows.

Raman received a verification letter from Flying Groceries outlining his basic job responsibilities during his tenure there. However, Raman required a document to substantiate the additional responsibilities he undertook at Flying Groceries by going beyond his call of duty. Sadly, he did not have any documentation of such additional responsibilities.

Sub Question:

Question 37

Which of the following options will BEST help substantiate the additional responsibilities Raman undertook?

Options:

1. Raman should create documentation, detailing quantifiable metrics and results about his extra work based on his memory.
2. Raman should collect testimonials on his additional responsibilities from his ex-teammates at Flying Groceries.
3. Raman should write a public post on social media, appealing to Suraj, mentioning the challenges he faced while taking additional responsibilities, and how he overcame them.
4. Raman should call Suraj and explain that he will not be able to get a consulting or an operations job without verification.
5. Raman should reach out to the recently recruited Chief Supply Chain officer at Flying Groceries to highlight the additional work he contributed to facilitate the officer's tasks.

Correct Answer: (2)

Solution

Step 1: Analyze Raman's problem.

Raman needs credible evidence to support his claim of additional responsibilities. Since no official documentation exists, he must explore alternative sources of validation.

Step 2: Evaluate the options.

- Option 1: Creating documentation based on memory lacks credibility and official validation.
- Option 2: Testimonials from ex-teammates provide third-party validation and are more reliable.
- Option 3: Social media appeals may damage Raman's professional reputation and are informal.
- Option 4: Calling Suraj might not be fruitful due to their strained relationship.
- Option 5: Reaching out to the new officer lacks relevance, as they might not have direct knowledge of Raman's contributions.

Final Answer: (2)

Quick Tip

In the absence of official documentation, third-party testimonials are an effective way to substantiate claims professionally.

Question 38

Read the following scenario and answer the three questions that follow.

Kasta, a small industrial town hosted a steel plant and its associated ancillary companies. Most of its residents were steel plant employees from different states of the country. While the town offered employment opportunities, it lacked an airport. For those wanting to fly, the nearest airport was in Michaelgani, 100 kms from Kasta. To reach the airport, people rented taxi services available at Kasta, and Prabhu was one such taxi-service provider.

Prabhu's rates were reasonable—a trip to the airport cost Rs. 2200, but for a round trip, the fare was Rs. 3000. Yet, it was not just the affordability that made him popular, his reputation for punctuality and reliability was unmatched. When it came to ensuring the safety of women travelling alone, he would always be the first choice. Such was his trustworthiness that

even the steel plant would solicit his services when expecting solo female visitors. Moreover, whenever residents encountered issues with their personal cars, they would turn to Prabhu for help.

However, the world shifted when the COVID-19 pandemic struck. Travel restrictions and safety concerns limited Prabhu's trips to Michaelgani for over a year and a half. Financial strain followed, with accumulating interest on his home loan. He was weighed down by debt, but things improved once COVID-19 travel restrictions were lifted. Having faced financial hardships during COVID-19, he sought to offset his losses by raising the fare. Yet, he was aware of the stiff competition in town, where many others offered services at a similar fare as his.

Prabhu decided to increase the taxi fare for all future trips. He planned to charge Rs. 3000 for a one-way trip to the airport, and Rs. 1000 more for a round trip. Which of the following facts will BEST help Prabhu's regular customers in accepting the increase in fare?

Options:

1. Because the cost of living has gone up in Kasta.
2. Because Prabhu is punctual and reliable.
3. Because Prabhu is facing financial hardships.
4. Because Prabhu offers repair services to residents' car-related issues.
5. Because Prabhu served many top officials of the steel plant.

Correct Answer: (2)

Solution

Step 1: Understand Prabhu's unique value proposition.

Prabhu's popularity stems from his punctuality and reliability, which make him the preferred choice for his customers.

Step 2: Analyze customer perspective.

Regular customers value trust and reliability more than cost. Prabhu's financial struggles are unlikely to concern customers directly, but his services' quality is critical.

Step 3: Evaluate the options.

- Option 1: General cost increases may not justify a specific fare hike.
- Option 2: Emphasizing punctuality and reliability builds confidence in his service.
- Option 3: Customers may not empathize with personal financial struggles.
- Option 4: Repair services are unrelated to taxi fares.
- Option 5: Serving top officials is irrelevant to fare hikes.

Final Answer: (2)

Quick Tip

When communicating a price hike, focus on the value and reliability of the service to maintain customer trust and satisfaction.

Question 39

Read the following scenario and answer the two questions that follow.

After Prabhu increased his charges by 30%, the revenue flow was promising in the beginning, especially from the steel plant's official trips. After a few months, he noticed a dip in private bookings. On exploring further, Prabhu realized that while women travelling solo still preferred Prabhu's service, some of his regular customers were choosing his competitors when travelling as a family. However, he knew that his competitors, while charging lower than him, were still tardy and sometimes cancelled at the last minute.

Which of the following options will BEST help Prabhu to retain his revenue flow?

Options:

1. Revert the pricing of services to its prior rate.
2. Give 50% discount for personal trips.
3. Stick to his current increased charges.
4. Charge a premium when women travel solo.

5. Charge a premium for the steel plant's official trips.

Correct Answer: (2)

Solution

Step 1: Identify the issue.

The drop in private bookings indicates that Prabhu's higher charges have become a concern for families and private customers.

Step 2: Evaluate customer behavior.

Private customers prioritize affordability. Offering discounts for personal trips can attract these customers while retaining the increased charges for other segments.

Step 3: Assess options.

- Option 1: Reverting prices may signal inconsistency in business strategy.
- Option 2: Discounts can specifically target private customers and address the booking decline.
- Option 3: Sticking to current charges won't resolve the revenue issue.
- Option 4: Charging a premium for women travellers may alienate this loyal segment.
- Option 5: Steel plant trips are already consistent and may not need further price adjustment.

Final Answer: (2)

Quick Tip

Targeted discounts can balance affordability for specific segments while maintaining profitability for others.

Question 40

Saroj, the new Chief Financial Officer (CFO) at the steel plant, used the services of Manoj when he first travelled from the Michaelganj airport to the plant. Manoj was a rival of Prabhu in the taxi service business at Kasta. Manoj, upon learning that Saroj would be responsible

for hiring taxi services for the steel plant, charged Saroj only Rs. 1500 for that trip. Further, he assured Saroj to charge the same for a one way-trip and additional Rs. 500 for a round trip to the airport. Upon realizing that the plant utilized Prabhu's services for all official trips to the airport, Saroj contacted Prabhu to discuss the rates offered by Manoj and inquired why the plant should continue using his service when Manoj provided the same at a lower price. Prabhu realized that Manoj charged an extremely low price just to push Prabhu out of his business in the Steel Plant.

Which of the following reasons given by Prabhu will BEST help his cause?

Options:

1. Prabhu should warn Saroj that Manoj's offer is not sustainable.
2. Prabhu should request Saroj to talk to a few of his colleagues before taking any decision.
3. Prabhu should introduce Saroj to Ms. Nidhi Tawde, his regular customer.
4. Prabhu should offer to lower his price to the one offered by Manoj, exclusively for the steel plant.
5. Prabhu should tell Saroj that Manoj is unreliable and tardy, and women are unsafe with him.

Correct Answer: (1)

Solution

Step 1: Analyze the competition.

Manoj offers lower prices but may compromise on service quality and sustainability. Prabhu must differentiate his services on reliability and long-term feasibility.

Step 2: Evaluate Prabhu's response options.

Focusing on Manoj's unsustainable pricing allows Prabhu to appeal logically and professionally to Saroj.

Step 3: Assess options.

- Option 1: Highlighting Manoj's unsustainable pricing addresses Saroj's business concerns effectively.
- Option 2: Requesting discussions may appear indecisive.
- Option 3: Involving other customers lacks direct relevance.

- Option 4: Matching prices undermines Prabhu's service value.
- Option 5: Personal attacks on Manoj could harm Prabhu's reputation.

Final Answer: (1)

Quick Tip

Compete strategically by emphasizing long-term value and service sustainability over short-term price competition.

Question 41

Read the following scenario and answer the two questions that follow.

Ms. Vineeta Lama, a respected figure in the small town of Jampur, found herself stranded on the road once again when her old small hatchback car broke down. Finding herself alone on the deserted road with no one to help, Vineeta, in desperation, called Shyam Saigal, the General Manager of Balaji Motors—the only dealership in Jampur that sells Diplomatico cars, the brand that Vineeta drives. Vineeta knew Shyam from her frequent visits for getting her hatchback car serviced. Surprisingly, he arrived within fifteen minutes, accompanied by a mechanic from his dealership. Further, he arranged for the vehicle to be towed and kindly offered Vineeta a ride home. On the way back, he advised Vineeta to exchange her old car with a new Sports Utility Vehicle (SUV) on a good discount from his dealership. He assured her that he would add several additional services to ensure her SUV remained in excellent condition for many years ahead.

Which of the following pieces of additional information will help her the MOST in taking the right decision?

Options:

1. She has no idea which SUV to choose, and she feels that all SUVs are the same.
2. Her brother, an SUV enthusiast, staying in a metro city, has advised her to stay away from

Diplomatico Cars.

3. In Jampur, SUVs have a 6-month waiting period; however, one red-colored Diplomatico SUV, not her favourite colour, is available at Balaji Motors.

4. Jampur, being an old city with congested roads, has a parking problem in many areas.

5. A new dealership of Panther Motors, the highest selling car brand in the country, is about to come to the town soon.

Correct Answer: (5)

Solution

Step 1: Understand Vineeta's dilemma.

Vineeta is considering replacing her old car with a new SUV but needs key information to make an informed decision.

Step 2: Evaluate the impact of the options.

- Option 1: Lacks actionable information for decision-making.
- Option 2: Provides a personal opinion but lacks relevance to her local context.
- Option 3: Waiting period and color preference are minor considerations.
- Option 4: Parking issues are common in Jampur but do not affect the purchase decision.
- Option 5: Introduction of Panther Motors, a leading brand, offers a competitive alternative.

Final Answer: (5)

Quick Tip

When making major purchase decisions, always consider emerging market trends and future options.

Question 42

Read the following scenario and answer the question that follows:

Shyam's satisfaction from meeting the month's quota for selling SUVs turned to dismay

when one of his young executives nervously told him that he mistakenly punched an extended warranty for free to Vineeta's purchase contract earlier that morning. This could not be reversed from the company's system and meant a loss of Rs. 19,000 for the dealership. The executive was very sorry and was ready to take accountability. However, the amount was too large to be borne by the executive.

Shyam was not concerned about placing accountability but rather the recovery of the loss. He was unsure whether he should ask Vineeta for the money.

The following pieces of information are available to Shyam:

A. Shyam is aware that Vineeta is very happy with the deal he gave her for the car.

B. Shyam feels that Diplomatico's software system is complicated for new employees, which might have also played a role in the error.

C. Vineeta has a wide network and can connect Shyam with many potential customers.

D. Vineeta's brother, a car enthusiast, has enough knowledge of how car dealers operate.

E. Shyam feels that if he maintains the current sales volume, he might be able to persuade Diplomatico to write off the amount (Rs. 19,000).

Which of the following combinations of the above pieces of information will MOST likely stop Shyam from trying to recover the money from Vineeta?

Options:

1. A & B
2. A & D
3. C & D
4. C & E
5. B & E

Correct Answer: (4)

Solution

Step 1: Analyze the scenario.

Shyam must resolve the issue without risking his relationship with Vineeta or affecting his dealership's reputation.

Step 2: Evaluate the combinations.

- Option 1 (A & B): While A and B acknowledge Vineeta's satisfaction and the error, they do not offer a way to avoid financial recovery from Vineeta. - Option 2 (A & D): Vineeta's brother's knowledge may support Shyam, but A does not directly prevent recovery. - Option 3 (C & D): Vineeta's network is beneficial, but her brother's knowledge may not persuade Shyam against recovery. - Option 4 (C & E): Vineeta's network offers Shyam potential new business, and maintaining sales volume may help recover the loss indirectly. - Option 5 (B & E): While B and E indicate alternate routes, they do not leverage Vineeta's potential to benefit Shyam's dealership.

Final Answer: (4)

Quick Tip

For business-related conflicts, focus on solutions that preserve relationships while exploring alternate recovery avenues.

Question 43

Read the following scenario and answer the question that follows:

Three months passed. While returning from a friend's house, Vineeta's new SUV was hit by another car. Fortunately, she was not injured, but the SUV was badly damaged. Surprisingly, when Vineeta took the car for repairs to Balaji Motors, she was told that the repairs would not cost her anything as the extended warranty on her car covered such accidents. Vineeta could not recall purchasing such a warranty; hence, she contacted Shyam. Shyam informed her that the extended warranty was mistakenly punched into her contract by an executive. As this mistake could not be reversed due to the company's rigid policies, Shyam

bore the cost of Rs. 19,000. He further added that Vineeta should consider it a gift from Balaji Motors for purchasing the highest-priced Diplomatico SUV.

As Vineeta rode back home, she wondered if she should pay Rs. 19,000 to Shyam since the extended warranty came to her aid that day.

Which of the following is the MOST compelling rationale for Vineeta to justify not paying Rs. 19,000 to Shyam?

Options:

1. She paid more for the Diplomatico SUV, compared to the price of a similar SUV from Panther.
2. She is aware that for expensive SUVs like hers, dealers often offer free extended warranty.
3. The mistake happened three months back and is water under the bridge now.
4. Had the accident not happened, she would not have been aware of the warranty.
5. Shyam would have come back to her if he had needed the money.

Correct Answer: (4)

Solution

Step 1: Analyze the context.

Vineeta benefited from an unintended extended warranty during her time of need. However, her rationale for not paying should focus on fairness and context.

Step 2: Evaluate the options.

- Option 1: The price comparison is irrelevant since the extended warranty was unrelated to the SUV's base price. - Option 2: While true, it does not justify why she should avoid reimbursing Shyam. - Option 3: The passage of time does not eliminate the ethical consideration of reimbursement. - Option 4: Highlights that her awareness of the warranty was circumstantial and she would not have considered reimbursing otherwise. This directly supports her stance. - Option 5: Assumes intent and does not address the situation directly.

Final Answer: (4)

Quick Tip

For ethical dilemmas, focus on fairness and the circumstances surrounding the event to justify decisions.

Question 44

Read the following scenario and answer the question that follows:

ABC Business School was a school with a difference. Regarded as one of the top business schools in western India, but relatively unknown beyond that, the school catered to smaller organizations seeking to hire students for sales and marketing positions, with occasional openings in HR roles. These students were open to secure job opportunities, even if they offered relatively lower salaries. The organizations, that recruited from ABC, did not really care for the talent, but appreciated the students' ability to follow orders without questioning them. The school's strength laid in its alumni, who consistently returned to the institution for recruitment, thereby ensuring the school's continued existence. With the placement record, the school attracted a specific section of business school aspirants who valued a solid job but were not excited about learning.

Recently, some alumni of ABC threatened that their children should be given preference in admissions, or they would withdraw as recruiters. The director was, however, hesitant about allowing alumni to interfere in running the school because the fairness of the admissions process had earned ABC high respect within the corporate world that recruited from the school.

Which of the following reasons, if true, will BEST help the director NOT to worry about pandering to those alumni?

Options:

1. The alumni were the reason that ABC was able to attract corporates.
2. Some of the alumni were regularly teaching as guest faculty in the school.
3. The alumni depend upon ABC's success to enhance their employability.

4. No business school, in the region, has allowed alumni any say in managing the operations.
5. ABC has not entertained any requests from the alumni till date.

Correct Answer: (3)

Solution

Step 1: Analyze the scenario.

The alumni's threats highlight their importance to the institution's operations. However, the director must focus on the institution's independence and credibility.

Step 2: Evaluate the options.

- Option 1: Highlights alumni's role but does not directly justify ignoring their demands. - Option 2: Irrelevant to the alumni's request for preferential admissions. - Option 3: Indicates that the alumni's dependence on ABC's success ensures mutual interest, making their threats less credible. - Option 4: Shows a regional precedent but does not directly relate to ABC's specific case. - Option 5: Past decisions are not as compelling in the face of current challenges.

Final Answer: (3)

Quick Tip

When analyzing institutional challenges, prioritize mutual dependencies and organizational credibility over isolated threats.

Question 45

Read the following scenario and answer the question that follows:

Across the country, business schools were ranked by popular magazines. A few business schools in the same region were applying for rankings, hoping that rankings will affect their visibility among corporate houses and recruiters. To achieve a good rank, ABC faculty members, who have primarily focused on teaching thus far, would need to actively engage in

research and consulting activities. The director was aware that asking the faculty to switch to research and consulting would not be easy.

Which of the following facts will BEST help the director not to worry about applying for rankings?

Options:

1. The alumni do not follow research publications in general.
2. The alumni do not care for the teachers, or classes, in general.
3. The alumni are aware that ABC offers a reliable talent pool.
4. ABC's placements in the previous year were completed in 4 days.
5. ABC could never break into the top 40 ranks in the country when it applied earlier.

Correct Answer: (3)

Solution

Step 1: Analyze the scenario.

The director's concern revolves around visibility among recruiters and the need for faculty engagement in research and consulting. However, a strong talent pool and existing recruiter satisfaction might reduce the urgency of applying for rankings.

Step 2: Evaluate the options.

- Option 1: Indicates alumni's indifference to research but does not address recruiter visibility.
- Option 2: Suggests alumni's indifference to faculty efforts but is not linked to rankings.
- Option 3: Highlights recruiter satisfaction with the talent pool, reducing reliance on rankings.
- Option 4: Shows placement efficiency but lacks direct impact on the ranking decision.
- Option 5: Suggests prior failures in rankings but does not address recruiter satisfaction.

Final Answer: (3)

Quick Tip

For ranking-related decisions, consider the current strengths of the institution and prioritize recruiter satisfaction over external metrics.

Question 46

Read the following scenario and answer the question that follows:

A few faculty members complained to the director regarding the lack of attendance and seriousness among many students during classes and exams. The director knew that this had been the case for decades but became more rampant in the last few years. He was also aware that the classes were mostly rituals, conducted to tell the world that ABC believed in education and had little bearing on placements. However, he believed that students must be told to attend classes and take exams with serious attitude.

Which of the following announcements by the director will BEST ensure that faculty stop complaining about student attendance?

Options:

1. Students, who attend every class, should be given "thank you" notes from the director.
2. Students should be asked to pay a monetary penalty for missing classes.
3. Faculty members, who make classes very engaging, should be felicitated during the convocation.
4. Only students, with at least 85 percent attendance, will participate in placements.
5. Students should be rewarded for contributing to class discussions and learning.

Correct Answer: (4)

Solution

Step 1: Analyze the scenario.

The primary concern is the lack of attendance and seriousness among students. A strong measure tied to an essential aspect, like placements, would likely address this concern.

Step 2: Evaluate the options.

- Option 1: A "thank you" note is unlikely to incentivize students meaningfully. - Option 2: Monetary penalties might create resentment and are not directly linked to academic serious-

ness. - Option 3: Felicitating faculty may encourage teaching efforts but does not address student behavior. - Option 4: Linking attendance to placements provides a direct and impactful incentive for students to attend classes seriously. - Option 5: Rewards for class participation are beneficial but do not address attendance directly.

Final Answer: (4)

Quick Tip

For attendance-related issues, tie incentives to critical outcomes like placements or grades to ensure compliance.

Question 47

Read the following scenario and answer the question that follows:

DeepSea is a natural gas extraction company that retrieves natural gas from rock formations beneath the seabed. This gas is then transported through its extensive pipeline network to a bottling plant, located at the sea surface, for processing. The gas in rock formations is pressurized, enabling it to flow to the surface and reach the bottling plant. Yet, excessive pressure can cause bursts in the pipeline, leading to uncontrolled gas release, known as blowout. A blowout carries a staggering cost, encompassing not only environmental damage but also reputation loss and financial losses totaling crores of rupees. Additionally, the impacted section of the pipeline requires a complete replacement. Industry safety regulations divide the pipeline network into three levels: Level 3 is the part under the seabed, Level 2 is the part above the seabed but in the deep sea, while Level 1 is near the surface. The safety regulations require multiple blowout preventer valves, from now on simply referred to as valves, to be placed at the three different levels of the pipeline network. The valves are normally kept closed, but when the pressure in any part of the pipeline rises beyond a critical level, nearby valves are opened remotely to release the pressure in a controlled manner to prevent blowout. The number of valves across the pipeline helps localize the pressure release, with a greater number of valves providing a backup mechanism, helping in improving pressure localization in case of a blowout. Given that the valves themselves can occasionally malfunction and not

release the pressure when needed, using a higher number of valves ensures that a malfunctioning valve can seek the safety of a nearby functioning valve. A valve can malfunction in two ways: it may fail to release pressure when needed, as previously mentioned, or it can leak gas during regular operation, resulting in unwanted losses. When a valve malfunctions, it necessitates manual replacement. In the DeepSea Network, 30remaining valves are evenly distributed between the top two levels. These valves are critical to ensuring safety and are exclusively supplied by GoValve, a highly specialized manufacturer that holds a monopoly in the country's market.

GoValve has recently proposed a maintenance package for the valves to DeepSea, which includes a clause that whenever a valve at Level 3 malfunctions, all valves at that level will be replaced. Accepting the clause will cost a significant premium. The management of DeepSea has the following pieces of additional information under consideration:

- **A:** The valves are known to be prone to malfunction.
- **B:** Any malfunction in one valve often results in leakage from the neighboring valves.
- **C:** GoValve is ready to negotiate a discount if the clause is accepted.
- **D:** Replacing the valves at Level 3 is a very difficult job, which is best done by GoValve.
- **E:** The chances of pressure buildups are higher near the seabed.

Which of the following combinations, of the above pieces of additional information, will help the management of DeepSea the MOST in accepting the clause?

Options:

1. A, B, D
2. A, B, E
3. B, C, D
4. A, C, D
5. C, D, E

Correct Answer: (1)

Solution

Step 1: Understand the problem.

DeepSea must decide whether to accept a maintenance clause proposed by GoValve, which involves replacing all valves at Level 3 upon any malfunction. The decision hinges on safety and financial feasibility.

Step 2: Evaluate the options.

- Option 1 (A, B, D): - Valves are prone to malfunction (**A**), which increases the likelihood of replacements. - Malfunction in one valve affects neighboring valves (**B**), making prompt action necessary. - Valve replacement at Level 3 is highly challenging and best handled by GoValve (**D**). - Option 2 (A, B, E): While A and B are relevant, E (pressure buildups) doesn't directly justify accepting the clause. - Option 3 (B, C, D): Negotiating a discount (**C**) is helpful but does not address the safety concerns like A. - Option 4 (A, C, D): Although A and D are relevant, C (discount) is less critical than addressing leakage (**B**). - Option 5 (C, D, E): E (pressure buildups) is less critical compared to malfunctions (**A**) and their consequences (**B**).

Final Answer: (1)

Quick Tip

When evaluating maintenance clauses, prioritize safety-critical factors and operational challenges over financial negotiations to ensure long-term reliability.

Question 48

Read the following scenario and answer the question that follows:

A startup, SafeValve, has started importing a technologically superior brand of valves from abroad, which boasts a significant reduction in gas leakage. SafeValve has established a large inventory of these imported valves but is struggling to gain foothold in the local market. An NGO, working for the protection of marine lives, has appealed to DeepSea to replace their existing valves with the product from SafeValve. However, the installation of this new valve will require substantial modification in the pipeline, entailing unknown challenges in installa-

tion and maintenance.

Which of the following reasons, if TRUE, can DeepSea BEST cite to publicly reject the appeal?

Options:

1. The new valves cost twice as much as the existing valves.
2. GoValve is a reputed brand and had a partnership with DeepSea for a long time.
3. Only some developed countries have mandated the use of the new valves.
4. SafeValve depends exclusively on imports and may be prone to procurement issues.
5. GoValve follows the strictest global industry standards of leakage prevention.

Correct Answer: (5)

Solution

Step 1: Understand the problem.

DeepSea must decide how to respond to the NGO's appeal to switch to SafeValve's product while ensuring its reputation and operational efficiency remain unaffected.

Step 2: Evaluate the options.

- Option 1: Although higher costs are significant, this reason alone may not justify rejecting the appeal publicly. - Option 2: Highlighting the longstanding partnership with GoValve might appear biased and less credible. - Option 3: Limited international adoption of the new valves weakens the appeal but is not the strongest reason. - Option 4: SafeValve's dependency on imports raises concerns about supply chain stability but doesn't address the quality standards of the valves. - Option 5: Emphasizing that GoValve meets the strictest global standards for leakage prevention is the most compelling argument to reject the appeal as it directly addresses safety and quality, which are critical to DeepSea's operations.

Final Answer: (5)

Quick Tip

When addressing appeals involving operational changes, focus on globally recognized standards and long-term reliability to maintain credibility.

Question 49

Read the following scenario and answer the question that follows:

A startup, SafeValve, has started importing a technologically superior brand of valves from abroad, which boasts a significant reduction in gas leakage. An update to industry safety regulations has come out, which allows a lower number of valves in a pipeline network, if technologically superior valves, similar to those imported by SafeValve, are used for the entire network.

DeepSea is aware that the more the number of valves, the better is DeepSea's ability to contain blowouts. However, a higher number of valves increases the chance of a leakage. Therefore, DeepSea is contemplating a proposal to reduce the number of valves to almost half, by replacing the existing valves (by GoValve) with the valves sold by SafeValve.

A team, tasked with evaluating the proposal, has made some observations, listed below.

Which of the following observations is the MOST helpful in REJECTING the proposal?

Options:

1. There is no clear industry standard for the minimum number of valves required at a certain level.
2. At Level 1, the chance of a pressure rise is much lesser compared to the other two levels.
3. At Level 3, a blowout results in more time-consuming and expensive repairs compared to the other two levels.
4. The superiority of the SafeValve products is only in terms of preventing leakage, not blowouts.

5. If a GoValve valve is opened to prevent a blowout, the chance of leakage from the valves within a certain distance increases.

Correct Answer: (4)

Solution

Step 1: Understand the problem.

DeepSea must evaluate whether replacing the current valves with SafeValve products is in line with their operational safety requirements and cost-effectiveness.

Step 2: Evaluate the options.

- Option 1: Lack of an industry standard is a concern but doesn't directly address the effectiveness of SafeValve products. - Option 2: The reduced pressure risk at Level 1 is relevant but not critical to rejecting the proposal. - Option 3: High repair costs at Level 3 are significant but do not outweigh the importance of blowout prevention. - Option 4: The inability of SafeValve products to address blowouts directly contradicts DeepSea's critical safety needs and is the strongest argument against the proposal. - Option 5: Increased leakage risk near opened GoValve valves is a concern but not sufficient to reject the SafeValve proposal outright.

Final Answer: (4)

Quick Tip

When evaluating proposals involving safety equipment, prioritize solutions that address the most critical safety risks, such as blowouts, over secondary concerns like cost reduction or leakage prevention. Always ensure that the proposed changes align with your core safety objectives.

Question 50

Read the following statement carefully:

_____ like a fake can be a sign of _____, and clinging too tightly to what feels like one's authentic self can _____ that growth.

Fill in the blanks meaningfully, in the above statement, from the following options.

Options:

1. acting, progress, enhance
2. feeling, growth, hinder
3. behaving, improvement, support
4. performing, stupidity, change
5. operating, smartness, increase

Correct Answer: (2)

Solution

Step 1: Understand the context.

The sentence implies that what may appear to be "fake" can actually indicate personal growth, while holding onto a rigid sense of authenticity could obstruct such progress.

Step 2: Evaluate the options.

- Option 1: "Acting" could fit, but "progress" and "enhance" do not align perfectly with the intended meaning of hindering growth. - Option 2: "Feeling" as a fake aligns with personal perception, "growth" fits as a sign of progress, and "hinder" accurately describes the obstruction caused by clinging to a rigid sense of authenticity. - Option 3: "Behaving" and "support" are plausible but don't capture the depth of the sentence. - Option 4: "Performing" and "stupidity" are inappropriate for this context. - Option 5: "Operating" and "smartness" are irrelevant in this philosophical context.

Final Answer: (2)

Quick Tip

Personal growth often involves stepping out of one's comfort zone and embracing change, even if it feels unfamiliar or "fake" initially.

Question 51

Read the following statement carefully and fill up the blanks from the given options:

As _____ evolved and eventually moved to cities, close proximity _____ how we viewed and assessed each _____.

Options:

1. civilization, enhanced, situation
2. generations, changed, other
3. culture, helped, life
4. lives, destroyed, culture
5. people, helped, nation

Correct Answer: (1)

Solution

Step 1: Understand the sentence structure.

The sentence refers to societal evolution over time and its impact on human interactions. The blanks need words that logically and grammatically fit.

Step 2: Evaluate the options.

- Option 1: ”Civilization evolved” accurately describes societal development, ”enhanced” fits with the idea of improvement, and ”situation” aligns with assessments. - Option 2: ”Generations” is less specific, ”changed” fits but lacks impact, and ”other” doesn’t add clarity. - Option 3: ”Culture” is vague for the subject, ”helped” is unclear, and ”life” is too general. - Option 4: ”Lives” and ”destroyed” are negative, not matching the context. - Option 5: ”People” and ”nation” are mismatched in this context.

Final Answer: (1)

Quick Tip

When completing sentences, focus on words that align with the logical flow and grammatical structure of the given context.

Question 52

Read the following sentences carefully:

A. I shall be there at about 9: 00 a.m.

B. Keep off of the grass.

C. My old car was much faster than the new one.

D. I was angry at my friend.

E. Rohit is as capable as Virat.

Which of the following combinations has all the INCORRECT sentences?

Options:

1. A & B
2. B & C
3. C & D
4. D & E
5. A & E

Correct Answer: (1)

Solution

Step 1: Identify grammatical errors in the sentences.

- Sentence A: ”I shall be there at about 9: 00 a.m.” is incorrect due to the incorrect spacing after the colon. The correct form is ”I shall be there at about 9:00 a.m.” - Sentence B: ”Keep off of the grass” is incorrect. The phrase ”off of” is redundant. The correct form is ”Keep off the grass.” - Sentence C: This sentence is correct as it correctly compares the speed of two cars. - Sentence D: This sentence is correct; ”angry at” is an acceptable phrase in informal usage. - Sentence E: This sentence is correct as it is a proper comparative construction.

Step 2: Evaluate the combinations.

- Option 1 (A & B): Both sentences A and B are incorrect. - Option 2 (B & C): Sentence C

is correct. - Option 3 (C & D): Sentence D is correct. - Option 4 (D & E): Both D and E are correct. - Option 5 (A & E): Sentence E is correct.

Final Answer: (1)

Quick Tip

When evaluating sentence correctness, pay attention to grammar rules, redundancies, and proper usage.

Question 53

Read the following sentences carefully:

A. Everybody accepts his responsibilities.

B. Nobody in that group have their reports up to date, as they should have.

C. Either of the boys is acceptable to do the errands.

D. Both of the mice is underfed.

E. It is I who am next.

F. The teacher told he and I to leave early.

Which of the following combinations has all the sentences grammatically CORRECT?

Options:

1. B, D & F
2. B, C & D
3. A, C & E
4. A, E & F
5. C, D & F

Correct Answer: (3)

Solution

Step 1: Analyze each sentence for grammatical correctness.

- Sentence A: Correct. It uses the correct pronoun ”his” with ”Everybody.” - Sentence B: Incorrect. ”Have” should be replaced by ”has” to agree with the singular subject ”Nobody.” - Sentence C: Correct. ”Either” is singular, so the verb ”is” is correct. - Sentence D: Incorrect. ”Is” should be replaced by ”are” as ”mice” is plural. - Sentence E: Correct. The phrase ”It is I” is grammatically correct in formal English. - Sentence F: Incorrect. ”He and I” is not the correct objective form; it should be ”him and me.”

Step 2: Evaluate the combinations.

- Option 1 (B, D & F): Sentences B, D, and F are incorrect. - Option 2 (B, C & D): Sentence B and D are incorrect. - Option 3 (A, C & E): Sentences A, C, and E are correct. - Option 4 (A, E & F): Sentence F is incorrect. - Option 5 (C, D & F): Sentences D and F are incorrect.

Final Answer: (3)

Quick Tip

When determining grammatical correctness, ensure subject-verb agreement and correct pronoun usage for formal and informal contexts.

Question 54

Read the following statements and answer the question that follows:

A. Back then, they were owned by companies and installed on their premises.

B. Rooms and servers began to replace computer mainframes in the 1990s.

C. These were supplemented by processors from Intel, which by the mid-2000s translated its dominance of PC semiconductors into a near monopoly of the server market.

D. They mostly ran on chips made by IBM and HP, the big tech of the day.

E. Things started to change once again around a decade ago, when Amazon began selling some of its spare server capacity.

Which of the following combinations is the MOST logically ordered?

Options:

1. A, B, C, D, E
2. E, A, D, C, B
3. B, A, D, C, E
4. E, C, D, A, B
5. B, E, C, D, A

Correct Answer: (1)

Solution

Step 1: Understand the chronological sequence of events.

The passage discusses the evolution of server technology, starting from ownership by companies, the replacement of mainframes, the role of processors, the dominance of IBM and HP, and finally, the changes brought by Amazon.

Step 2: Analyze the sequence of statements.

- Statement A: Discusses the initial phase when companies owned servers. - Statement B: Introduces the transition to replacing mainframes in the 1990s. - Statement C: Highlights the role of Intel processors in the mid-2000s. - Statement D: Explains the dominance of IBM and HP in earlier times. - Statement E: Marks the recent changes due to Amazon's actions a decade ago.

Step 3: Verify the logical order.

- Option 1 (A, B, C, D, E): Correct. It follows the chronological order of the evolution of servers. - Option 2 (E, A, D, C, B): Incorrect. This starts with Amazon's recent actions, disrupting the timeline. - Option 3 (B, A, D, C, E): Incorrect. It misplaces the introduction of mainframes after the earlier stages. - Option 4 (E, C, D, A, B): Incorrect. Amazon's actions are placed at the start, disrupting the logical flow. - Option 5 (B, E, C, D, A): Incorrect. The sequence is out of chronological order.

Final Answer: (1)

Quick Tip

When organizing events in chronological order, focus on identifying time markers and transitional phrases to establish the correct sequence.

Question 55

Go through the statements below and answer the question that follows:

A. Maybe you have survived major trauma and have a hard time feeling safe.

B. You'll probably discover that your fear and struggles make sense on account of what you've lived through.

C. Instead of beating yourself up for reacting in ways you don't understand, you can develop compassion for yourself and what you've been through.

D. Perhaps you have experienced a sudden death, and you are often anxious about the health of your loved ones.

E. You may also find out that you have more strength than you knew, the same strength that has sustained you this far.

Which of the following combinations is the MOST logically ordered?

Options:

1. B, A, D, C, E
2. E, B, A, D, C
3. E, A, D, C, B
4. D, C, B, A, E
5. D, C, B, A

Correct Answer: (1)

Solution

Step 1: Understand the context of the statements.

The passage discusses an individual's emotional journey, starting with recognizing trauma, acknowledging fears, and eventually finding strength and compassion.

Step 2: Analyze the sequence of statements.

- Statement A: Discusses surviving trauma and struggling to feel safe. - Statement B: Suggests making sense of struggles based on past experiences. - Statement C: Advocates for self-compassion after recognizing personal reactions. - Statement D: Reflects on sudden loss and related anxieties. - Statement E: Concludes with discovering personal strength.

Step 3: Verify the logical order.

- Option 1 (B, A, D, C, E): Correct. It logically progresses from acknowledging past struggles (B, A), reflecting on anxieties (D), embracing self-compassion (C), and concluding with personal strength (E). - Option 2 (E, B, A, D, C): Incorrect. It starts with strength, disrupting the chronological flow of emotional progression. - Option 3 (E, A, D, C, B): Incorrect. It ends with acknowledging struggles instead of resolving them. - Option 4 (D, C, B, A, E): Incorrect. It begins with anxiety, disrupting the initial acknowledgment of struggles. - Option 5 (D, C, B, A): Incorrect. It omits the conclusion, leaving the journey incomplete.

Final Answer: (1)

Quick Tip

When arranging statements logically, focus on the narrative flow—from identifying problems to finding resolution or growth.

Question 56

Read the following paragraph and answer the question that follows:

Fear is the greatest motivator of all time. Conflict born of fear is behind our every action, driving us forward like the cogs of a clock. Fear is desire's dark dress, its doppelgänger. "Love and dread are brothers," says Julian of Norwich. As desire is wanting and fear is not-wanting,

they become inexorably linked; just as desire can be destructive (the desire for power), fear can be constructive (fear of hurting another); fear of poverty becomes desire for wealth.

Which of the following statements can be BEST concluded from the paragraph?

Options:

1. A positive action generally has a foundation of fear underneath.
2. The interplay of fear and desire helps in guiding one's action.
3. Fear is a powerful motivator that leads to extraordinary achievements.
4. While fear is perceived as negative, it can be a force for good.
5. Fear paves the way to positive transformation when paired with desire.

Correct Answer: (4)

Solution

Step 1: Understand the essence of the passage.

The paragraph explains that fear, although generally viewed negatively, can have positive outcomes such as driving constructive actions or preventing harm. This duality of fear as both a motivator and a guide is the central theme.

Step 2: Analyze the options.

- Option 1: Focuses on fear as a foundation but misses its transformative aspect. - Option 2: Highlights the interplay but fails to emphasize the constructive force of fear. - Option 3: Incorrect, as the paragraph does not emphasize extraordinary achievements driven by fear. - Option 4: Correct, as it fully captures the essence of fear being a force for good despite its usual perception as negative. - Option 5: Partially correct but shifts the focus to desire instead of fear's intrinsic positivity.

Final Answer: (4)

Quick Tip

When analyzing passages, focus on the dual aspects of a theme to understand the broader perspective being conveyed.

Question 57

Read the following paragraphs and answer the question that follows:

Paragraph 1:

Here are some handy rules of thumb. Anyone who calls themselves a thought leader is to be avoided. A man who does not wear socks cannot be trusted. And a company that holds an employee-appreciation day does not appreciate its employees.

Paragraph 2:

It is not just that the message sent by acknowledging staff for one out of 260-odd working days is a bit of a giveaway (there isn't a love-your-spouse day ... for the same reason). It is also that the ideas are usually so tragically unappreciative. You have worked hard all year so you get a slice of cold pizza or a rock stamped with the words "You rock"?

Which of the following BEST describes the relationship of the first paragraph with the second paragraph?

Options:

1. The first paragraph is redundant, in the presence of the second paragraph.
2. The first paragraph is humorous, while the second paragraph is sarcastic.
3. The second paragraph gives evidence to the claims made by the first paragraph.
4. Without the second paragraph, the first paragraph is meaningless.
5. The first paragraph evokes interest, the second paragraph elaborates.

Correct Answer: (5)

Solution

Step 1: Analyze the purpose of each paragraph.

- The first paragraph presents generalized observations in a humorous manner, setting the tone and evoking interest. - The second paragraph elaborates on one of the observations (employee appreciation day), providing detailed reasoning and examples in a sarcastic tone.

Step 2: Evaluate the options.

- Option 1: Incorrect. The first paragraph is not redundant; it sets the context for the second paragraph. - Option 2: Partially correct but misses the elaborative relationship between the two paragraphs. - Option 3: Incorrect. The second paragraph does not provide evidence for all claims made in the first paragraph. - Option 4: Incorrect. The first paragraph can stand independently, as it makes broad observations. - Option 5: Correct. The first paragraph piques curiosity, while the second expands on a specific example, illustrating the claim.

Final Answer: (5)

Quick Tip

When analyzing paragraph relationships, focus on how one complements, elaborates, or supports the other to understand the logical connection.

Question 58

Read the following passage and answer the question that follows:

How do we choose one discovery over any other? The physician Lewis Thomas made a choice. He bluntly asserts: ”The greatest of all the accomplishments of 20th-century science has been the discovery of human ignorance.”

The science writer Timothy Ferris agrees: ”Our ignorance, of course, has always been with us, and always will be. What is new is our awareness of it, our awakening to its fathomless dimensions, and it is this, more than anything else, that marks the coming of age of our species.”

It is an odd, unsettling thought that the culmination of our greatest century of discovery should be the confirmation of our ignorance. How did such a thing come about?

Which of the following statements can be BEST concluded from the above passage?

Options:

1. Humans know more when they know they know very little.
2. Humans became scientists when they realized that they were ignorant.
3. Humans progressed because they knew that they knew very little.
4. The realization that humans are ignorant led them to invent new things.
5. That they do not know enough makes humans seek to know more.

Correct Answer: (5)

Solution

Step 1: Understand the central idea of the passage.

The passage emphasizes that the recognition of human ignorance is the greatest discovery of 20th-century science. This awareness is presented as a defining feature of humanity's progress and curiosity.

Step 2: Evaluate the options.

- Option 1: Incorrect. The statement is philosophical but does not align directly with the conclusion drawn from the passage. - Option 2: Incorrect. While it hints at the relationship between ignorance and scientific inquiry, it oversimplifies the connection. - Option 3: Incorrect. This is partially true but fails to encapsulate the broader implication of awareness driving curiosity and progress. - Option 4: Incorrect. The passage does not focus on invention as a direct outcome of ignorance. - Option 5: Correct. The passage concludes that awareness of ignorance motivates humans to seek greater knowledge, marking their progress.

Final Answer: (5)

Quick Tip

Acknowledging ignorance is not a limitation but a driving force for exploration and discovery.

Question 59

Read the following paragraph and answer the question that follows:

You may accumulate a vast amount of knowledge, but it will be of far less value to you than a much smaller amount if you have not thought it over for yourself; because only through ordering what you know by comparing every truth with every other truth can you take complete possession of your knowledge and get it into your power.

Based on the above information, which of the following statements MUST be true?

Options:

1. If she wants to master knowledge, she must reflect on the information.
2. If she reflects on the information, she will master the knowledge.
3. If she has not mastered knowledge, she must not have reflected on information.
4. If she has mastered the knowledge, she might have reflected on the information.
5. If she is a master of knowledge, it is because she is a reflector of information.

Correct Answer: (1)

Solution

Step 1: Analyze the paragraph.

The paragraph emphasizes that reflection and organizing knowledge are essential for taking complete ownership of the information and mastering it. The statement stresses the process

of comparison and internalization.

Step 2: Evaluate the options.

- Option 1: Correct. Mastery of knowledge requires reflecting on and processing the information, as stated in the paragraph. - Option 2: Incorrect. Reflection is necessary but does not guarantee mastery, as mastery also requires other factors like practice and application. - Option 3: Incorrect. This statement assumes an inverse relationship that is not directly supported by the paragraph. - Option 4: Incorrect. This is speculative and not necessarily supported by the passage. - Option 5: Incorrect. While reflection is necessary, it is not the sole criterion for mastery, as the paragraph does not claim exclusivity.

Final Answer: (1)

Quick Tip

Mastery of knowledge is achieved through deliberate reflection and organization of information, ensuring deeper understanding and application.

Question 60

Read the following passage and answer the question that follows:

That's how life plays out for all of us. We lose some. Like sportspersons, we too pack our gear and go to work. But unlike them, the gaze of the world is not upon us. Most of us do our business in anonymity, very few of us are emotionally wired to the outcomes of our day jobs. We don't come back feeling like winners. Or losers. As sports fans, we can summon empathy for those who stretch their bodies and minds to the limit in the pursuit of athletic excellence and provide such joys in the process.

But we will never experience the highs that are their reward. And we will never know the depth of their lows, which are their burden.

Still, no one will know better than Rohit and Dravid that it's already a new day. There might never be a World Cup win for them. But there are loved ones to go to. Life awaits still.

Which of the following statements BEST summarizes the above passage?

Options:

1. Life moves on, and as sports fans, we should do too.
2. The wins and losses in sports do not exist in other professions.
3. We should treat winning and losing as imposters.
4. Just because we enjoy sports does not mean we understand the sportspersons.
5. We should put ourselves in others' shoes rather than judge them for performance.

Correct Answer: (1)

Solution

Step 1: Analyze the passage.

The passage reflects on the transient nature of success and failure, particularly in sports, and draws a parallel to everyday life. It highlights how sportspersons endure immense pressure and how fans can empathize with their highs and lows but must accept that life moves on regardless of outcomes.

Step 2: Evaluate the options.

- Option 1: Correct. This option encapsulates the central theme of the passage, emphasizing acceptance and moving forward. - Option 2: Incorrect. While true, it does not fully address the essence of the passage. - Option 3: Incorrect. This is an interpretation of a famous quote, but it does not reflect the passage's core message. - Option 4: Incorrect. Although partially relevant, it misses the broader point about moving on from victories and losses. - Option 5: Incorrect. While empathy is discussed, the focus is more on resilience and continuity in life.

Final Answer: (1)

Quick Tip

Life teaches us to celebrate achievements and endure losses with grace, moving forward without dwelling on the past.

Questions 61

Read the following poem and answer the TWO questions that follow:

In the darkened room
a woman
cannot find her reflection in the mirror
waiting as usual
at the edge of sleep
In her hands she holds
the oil lamp
whose drunken yellow flames
know where her lonely body hides

Which of the following statements BEST conveys the theme of the poem?

Options:

1. The poem explores the quality of life of a woman.
2. The poem laments the suffering and frustration of a woman.
3. The poem celebrates the woman's futile and meaningless life.
4. The poem revolves around a woman whose liberty has been throttled.
5. The poem revolves around the woman's feeling of alienation.

Correct Answer: (5)

Solution

Step 1: Analyze the theme of the poem.

The poem uses metaphors like "drunken yellow flames" and "her lonely body" to depict a sense of isolation. The lack of a reflection in the mirror further emphasizes the alienation felt by the woman.

Step 2: Evaluate the options.

- Option 1: Incorrect. While the poem reflects on life, it does not explore its quality. - Option 2: Incorrect. Frustration and suffering are present, but alienation is more central. - Option 3: Incorrect. There is no celebration of futility or meaninglessness in the poem. - Option 4:

Incorrect. The poem doesn't directly address liberty being throttled. - Option 5: Correct. The poem vividly portrays the woman's feelings of alienation and solitude.

Final Answer: (5)

Quick Tip

The imagery in poetry often reflects deeper emotions like loneliness or alienation. Focus on metaphors and symbols to identify the core theme.

Questions 62

What do the lines "the drunken yellow flames/know where her lonely body hides" BEST represent?

Options:

1. The lines represent flames as forces that are aware of her solitude.
2. The lines represent flames as turbulent emotions of a nameless woman.
3. The lines represent flames that highlight the location of her body.
4. The lines represent flames as distorted memories that preserve her identity.
5. The lines represent flames as her desperate pursuit for her lost self.

Correct Answer: (1)

Solution for Question 62

Step 1: Interpret the metaphor.

The "drunken yellow flames" symbolize an omnipresent awareness of the woman's isolation. The flames metaphorically represent her solitude and internal struggles.

Step 2: Evaluate the options.

- Option 1: Correct. The flames are symbolic of solitude and awareness of her loneliness. - Option 2: Incorrect. The poem does not depict turbulence or chaos in emotions. - Option 3: Incorrect. The flames are metaphorical and not literal indicators of location. - Option 4:

Incorrect. There is no mention of preserving identity. - Option 5: Incorrect. The flames do not represent a pursuit or quest.

Final Answer: (1)

Quick Tip

In poetry, lines with vivid imagery often use metaphors to evoke emotions. Look beyond literal meanings to interpret symbolic elements.

Questions 63

Read the following passage and answer the TWO questions that follow:

But as the behavioral economists like to remind us, we are already prone to all sorts of reductions as a species. It's not just the scientists. We compress complex reality down into abbreviated heuristics that often work beautifully in everyday life for high-frequency, low-significance decisions. Because we are an unusually clever and self-reflective species, we long ago realized that we needed help overcoming those reductive instincts when it really matters. And so we invented a tool called storytelling. At first, some of our stories were even more reductive than the sciences would prove to be: allegories and parables and morality plays that compressed the flux of real life down to archetypal moral messages. But over time the stories grew more adept at describing the true complexity of lived experience, the whorls and the threadlike pressures. One of the crowning achievements of that growth is the realist novel. That, of course, is the latent implication of Prince Andrei's question: "innumerable conditions made meaningful only in unpredictable moments" would fare well as a description of both War and Peace and Middlemarch, arguably the two iconic works in the realist canon. What gives the novel the grain of truth lies precisely in the way novels quite run along the expected grooves, the way it dramatizes all the forces and unpredictable variables that shape the choices humans confront at the most meaningful moments of their lives.

When we read those novels—or similarly rich biographies of historical figures—we are not just entertaining ourselves; we are also rehearsing for our own real-world experiences. . . .

Which of the following is the BEST interpretation regarding reductive instincts?

Options:

1. Reductive instincts tell us to reduce every situation to a heuristic.
2. After the invention of storytelling, humans have overcome their reductive instincts.
3. Reductive instincts can help us in handling uncertainty.
4. Reductive instincts have to be overcome for survival in the real world.
5. Reductive instincts led to compression of complex reality to moral messages.

Correct Answer: (5)

Solution

Step 1: Analyze the passage.

The passage discusses how humans naturally reduce complex realities into simplified forms, often as a way of managing their understanding. Storytelling is presented as a tool invented to address these reductive instincts and express complex realities in nuanced ways.

Step 2: Evaluate the options.

- Option 1: Incorrect. While reductive instincts simplify situations, they don't reduce everything to heuristics. - Option 2: Incorrect. Storytelling helps manage reductive instincts but does not eliminate them. - Option 3: Incorrect. The passage does not explicitly connect reductive instincts to uncertainty. - Option 4: Incorrect. The passage does not emphasize survival as a purpose of overcoming reductive instincts. - Option 5: Correct. The passage explicitly states that reductive instincts led to storytelling that simplified reality into archetypal moral messages.

Final Answer: (5)

Quick Tip

When interpreting a passage, focus on how specific terms like "reductive instincts" are explained and connected to broader themes or tools like storytelling.

Question 64

Why would a realist novel consist of "innumerable conditions made meaningful only in unpredictable moments"?

Options:

1. To keep the reader engaged till the end of the novel.
2. To bring in as much content as possible without making it seem forced.
3. To showcase unexpected complexity while making it seem relevant in the given context.
4. To show to the reader that realist novel does not work on expected lines.
5. To engage the reader with realism and fantasy at the same time.

Correct Answer: (3)

Solution

Step 1: Analyze the phrase "innumerable conditions made meaningful only in unpredictable moments."

The phrase highlights the unpredictable nature of events and how realist novels aim to portray the complexity of human life through such moments.

Step 2: Evaluate the options.

- Option 1: Incorrect. While engagement is important, it is not the primary focus of the phrase. - Option 2: Incorrect. Including content without force is not central to the concept of unpredictability in realist novels. - Option 3: Correct. Realist novels focus on presenting unexpected complexity to reflect the intricacies of life. - Option 4: Incorrect. This option is irrelevant to the meaning of the phrase. - Option 5: Incorrect. Realism and fantasy are not the focus of the passage or the phrase.

Final Answer: (3)

Quick Tip

When analyzing literary phrases, focus on their context and the specific characteristics they highlight, such as unpredictability or complexity.

Question 65

Read the following passage and answer the question that follows:

Passage:

Beauty has an aesthetic, but it is not the same as aesthetics, not when it can be embodied, controlled by powerful interests, and when it can be commodified. Beauty can be manners, also a socially contingent set of traits. Whatever power decides that beauty is, it must always be more than reducible to a single thing. Beauty is a wonderful form of capital in a world that organizes everything around gender and then requires a performance of gender that makes some of its members more equal than others.

Beauty would not be such a useful distinction were it not for the economic and political conditions. It is trite at this point to point out capitalism, which is precisely why it must be pointed out. Systems of exchange tend to generate the kind of ideas that work well as exchanges. Because it is an idea and a body, beauty serves many useful functions for our economic system. Even better, beauty can be political. It can exclude and include, one of the basic conditions of any politics. Beauty has it all. It can be political, economic, external, individualized, generalizing, exclusionary, and perhaps best of all a story that can be told.

Our dominant story of beauty is that it is simultaneously a blessing, of genetics or gods, and a site of conversion. You can become beautiful if you accept the right prophets and their wisdoms with a side of products thrown in for good measure. Forget that these two ideas—unique blessing and earned reward—are antithetical to each other. That makes beauty all the more perfect for our (social and political) time, itself anchored in paradoxes like freedom and property, opportunity and equality.

Based on the passage, which of the following CANNOT be inferred about beauty?

Options:

1. Beauty is no longer an abstract concept.
2. Beauty has become an aspirational good.
3. Different powers and influences delineate beauty for us.
4. Beauty is defined and appreciated by the perceiver.
5. The beautiful does not define the standards of beauty.

Correct Answer: (4)

Solution

Step 1: Analyze the passage.

The passage discusses beauty as a complex and multifaceted concept, influenced by politics, economics, and individual perceptions. It highlights beauty's societal and aspirational dimensions but does not claim it is solely defined by individual perception.

Step 2: Evaluate the options.

- Option 1: Correct. The passage suggests beauty is no longer abstract but deeply integrated into social and political systems. - Option 2: Correct. Beauty is described as an aspirational good due to its commodification and societal value. - Option 3: Correct. The influence of power and social systems on beauty is explicitly mentioned in the passage. - Option 4: Incorrect. The passage does not emphasize that beauty is solely defined by the perceiver; it indicates external influences play a significant role. - Option 5: Correct. The standards of beauty are socially constructed and not always dictated by the beautiful itself.

Final Answer: (4)

Quick Tip

When interpreting abstract concepts like beauty, focus on societal and external influences rather than assuming individual subjectivity as the sole determinant.

Question 66

Based on the passage, which of the following BEST explains beauty to be simultaneously a ”blessing” and a ”site of conversion”?

Options:

1. Both are narratives, with one supporting the other.
2. When properly communicated people will believe anything.
3. Because beauty is a blessing everyone wants to possess it by converting to the standards.
4. A blessing, when sought, results in a provider of the blessing, in a capitalistic society.
5. Though beauty is a unique blessing, one can become beautiful by imitating beautiful people.

Correct Answer: (3)

Solution

Step 1: Analyze the key terms in the question.

The passage discusses beauty as both a blessing and a site of conversion. A ”blessing” indicates something inherently valuable, while a ”site of conversion” refers to adopting or adhering to standards to attain or replicate that value.

Step 2: Evaluate the options.

- Option 1: Incorrect. While narratives are mentioned in the passage, this option does not directly address the concept of conversion. - Option 2: Incorrect. This option simplifies the idea of beauty and does not align with the dual nature of ”blessing” and ”conversion.” - Option 3: Correct. The passage supports the idea that beauty as a blessing creates a desire in individuals to adhere to societal standards, thereby converting to what is considered beautiful. - Option 4: Incorrect. Although capitalism is a theme in the passage, this option focuses more on economics than the dual nature of beauty. - Option 5: Incorrect. While imitation is relevant, it does not explain the concept of conversion in the context of beauty as a blessing.

Final Answer: (3)

Quick Tip

When analyzing abstract concepts, focus on how different dimensions interact and complement each other in the context provided.

Question 67

Read the following passage and answer the question that follows:

What I call fast political thinking is driven by simplified moral frames. These moral frames give us the sense that those who agree with us have the right answer, while those who disagree are unreasonable, or worse.

Each moral frame sets up an axis of favorable and unfavorable. Progressives use the oppressor-oppressed axis. Progressives view most favorably those groups that can be regarded as oppressed or standing with the oppressed, and they view most unfavorably those groups that can be regarded as oppressors. Conservatives use the civilization-barbarism axis. Conservatives view most favorably the institutions that they believe constrain and guide people toward civilized behavior, and they view most unfavorably those people who they see as trying to tear down such institutions. Libertarians use the liberty-coercion axis. Libertarians view most favorably those people who defer to decisions that are made on the basis of personal choice and voluntary agreement, and they view most unfavorably those people who favor government interventions that restrict personal choice.

If you have a dominant axis, I suggest that you try to learn the languages spoken by those who use the other axes. Don't worry—learning other languages won't make it easy for others to convert you to their point of view. By the same token, it will not make it easy to convert others to your point of view. However, you may become aware of assumptions your side makes that others might legitimately question.

Which of the following BEST describes the civilization-barbarism axis?

Options:

1. The way we are trained to behave affects our peace in life.

2. Some people are barbaric and should be restrained from public life.
3. It is how you behave, not who you are, that makes you acceptable.
4. Government should play a very heavy role in maintaining law and order.
5. Every society has to have a harmonious mix of civilized and the barbaric for it to survive.

Correct Answer: (3)

Solution

Step 1: Understand the concept of the civilization-barbarism axis.
This axis focuses on the behavior and guidance provided by institutions that constrain individuals and ensure civilized conduct, which is distinct from barbarism.
Step 2: Evaluate the options.
- Option 1: Training impacts peace but doesn't capture the essence of the axis. - Option 2: Restraining barbaric behavior is important but doesn't fully explain the framework. - Option 3: Correctly emphasizes behavior over identity, which aligns with the axis's principle. - Option 4: Highlights law and order but doesn't fully define the civilization-barbarism framework. - Option 5: While harmony is significant, it doesn't address the key aspect of behavior.
Final Answer: (3)

Quick Tip

Understanding the moral frames helps in appreciating diverse perspectives and framing better solutions for societal issues.

Question 68

Which of the following BEST explains the author's usage of the term moral frames?

Options:

1. The frames give those who believe in them the right to question others' behaviours.

2. The frames define what the believer believes as right or wrong.
3. A frame is a belief and cannot be rationally explained.
4. What is right to the believer is wrong to those who do not share that belief.
5. It makes it easy for the believer to declare others as wrong.

Correct Answer: (2)

Solution

Step 1: Understand moral frames.

Moral frames define a set of beliefs that guide an individual's understanding of right and wrong.

Step 2: Evaluate the options.

- Option 1: Frames provide guidance but do not focus on questioning others. - Option 2: Correctly identifies frames as defining right and wrong for the believer. - Option 3: Frames can be rationalized, contrary to the statement. - Option 4: Addresses conflicts but doesn't fully define moral frames. - Option 5: Frames simplify judgment but are not limited to declaring others wrong.

Final Answer: (2)

Quick Tip

Moral frames are vital in understanding the values and perspectives that shape our decisions and beliefs.

Question 69

Which of the following can BEST be concluded from the above passage?

Options:

1. Knowing why you think the way you think enables you to understand others' perspectives.

2. Most controversial issues in the world can be simplified into three axes.

3. The assumptions we hold lead us to our dominant axis.

4. Issues can be solved by looking at them from the right axis and questioning the assumptions.

5. Most problems in the world are because of applying the wrong axis to a particular problem.

Correct Answer: (1)

Solution

Step 1: Analyze the author's argument.

The author emphasizes understanding different moral frames to comprehend how others perceive political issues and make decisions.

Step 2: Evaluate the options.

- Option 1: Correctly captures the core message of understanding others' perspectives. - Option 2: Axes simplify issues but aren't the passage's main conclusion. - Option 3: Highlights assumptions but doesn't provide the best conclusion. - Option 4: Reflects the application of axes but misses the broader understanding. - **Option 5:** Overemphasizes the role of axes in causing problems.

Final Answer: (1)

Quick Tip

Gaining insights into different perspectives is key to resolving conflicts and finding common ground.

Question 70

Read the following passage and answer the three questions that follow:

Because it's so easy to judge the idiocy of others, it may be sorely tempting to think this

doesn't apply to you. But the problem of unrecognized ignorance is one that visits us all. And over the years, I've become convinced of one key, overarching fact about the ignorant mind. One should not think of it as uninformed. Rather, one should think of it as misinformed.

An ignorant mind is precisely not a spotless, empty vessel, but one that's filled with the clutter of irrelevant or misleading life experiences, theories, facts, intuitions, strategies, algorithms, heuristics, metaphors, and hunches that regrettably have the look and feel of useful and accurate knowledge. This clutter is an unfortunate by-product of one of our greatest strengths as a species. We are unbridled pattern recognizers and profligate theorizers. Often, our theories are good enough to get us through the day, or at least to an age when we can procreate. But our genius for creative storytelling, combined with our inability to detect our own ignorance, can sometimes lead to situations that are embarrassing, unfortunate, or downright dangerous—especially in a technologically advanced, complex democratic society that occasionally invests mistaken popular beliefs with immense destructive power. As the humorist Josh Billings once put it, "It ain't what you don't know that gets you into trouble. It's what you know for sure that just ain't so." (Ironically, one thing many people "know" about this quote is that it was first uttered by Mark Twain or Will Rogers—which just ain't so.)

Because of the way we are built, and because of the way we learn from our environment, we are all engines of misbelief. And the better we understand how our wonderful yet kludge-ridden, Rube Goldberg engine works, the better we—as individuals and as a society—can harness it to navigate toward a more objective understanding of the truth.

Which of the following statement is NOT true about an ignorant mind?

Options:

1. An ignorant mind is often filled with unfounded and misguided distractions.
2. An ignorant mind succumbs to illusionary pattern detection.
3. An ignorant mind theorizes without robust evidence.
4. An ignorant mind is unaware of its own limitations.
5. An ignorant mind often fuels scepticism.

Correct Answer: (5)

Solution

Step 1: Analyze the passage.

The passage emphasizes that an ignorant mind is filled with false and misleading information, is prone to errors due to pattern detection, lacks awareness of its own limitations, and often forms theories without proper evidence.

Step 2: Evaluate each option.

- Option 1: This is true, as the passage describes the ignorant mind as cluttered with distractions. - Option 2: The passage highlights that pattern detection leads to illusions, making this true. - Option 3: The passage notes that ignorant minds theorize without evidence, so this is true. - Option 4: This is true, as the passage mentions the ignorant mind's lack of awareness about its limitations. - Option 5: The passage does not suggest that ignorance fuels skepticism; rather, it is associated with false beliefs, making this false.

Quick Tip

Ignorance doesn't arise from a lack of knowledge alone—it thrives on false information and the inability to question our assumptions.

Question 71

Based on the passage, what does the author BEST mean when he says, "we are all engines of misbelief"?

Options:

1. Driven by misbelief, we blend our creativity and ignorance.
2. Our brains are wired with certain heuristics that can lead to systematic errors in judgement.
3. We are prone to holding beliefs that are not necessarily true.
4. We are naturally inclined to form, and often share, misleading and inaccurate beliefs.
5. We are always fuelled by our ignorance to spread information.

Correct Answer: (2)

Solution

Step 1: Understand the phrase.

The phrase "engines of misbelief" refers to the mechanisms in our minds that produce errors in judgment due to heuristics.

Step 2: Analyze options.

- Option 1: Creativity and ignorance are mentioned, but the focus is not on blending them. - Option 2: The passage directly links heuristics to systematic judgment errors, making this the best choice. - Option 3: While true, it doesn't capture the role of heuristics emphasized in the passage. - Option 4: Misleading beliefs are a result, not the primary cause described in the passage. - Option 5: The passage discusses ignorance, but not as a direct fuel for spreading information.

Quick Tip

Understanding heuristics can help reduce judgment errors. Focus on critical evaluation over quick assumptions.

Question 72

With which of the following statements will the author agree the MOST?

Options:

1. We must try not to see patterns in everything that we observe.
2. We must be aware that the patterns we see may not necessarily reflect the truth.
3. We must be sceptical of the beliefs we have, regardless how true they seem to us.
4. The more we are sure of something, the more we are wrong about it.
5. Our desire to see patterns in everything makes us unable to detect misbeliefs in others.

Correct Answer: (2)

Solution

Step 1: Evaluate the passage's key idea.

The passage discusses the dangers of false pattern recognition and the importance of questioning assumptions.

Step 2: Analyze options.

- Option 1: While valid, the passage does not emphasize avoiding pattern recognition entirely. - Option 2: This aligns with the passage's focus on distinguishing real patterns from false ones, making it the best choice. - Option 3: The passage does not stress universal skepticism but rather critical awareness. - Option 4: This is exaggerated and not supported directly in the passage. - Option 5: Misbeliefs arise from ignorance, but the focus here is on pattern recognition.

—

Quick Tip

To combat ignorance, focus on identifying valid patterns and critically evaluating the assumptions underlying your beliefs.

Question 73

Read the following passage and answer the question that follows:

If we imagine the action of a vaccine not just in terms of how it affects a single body, but also in terms of how it affects the collective body of a community, it is fair to think of vaccination as a kind of banking of immunity. Contributions to this bank are donations to those who cannot or will not be protected by their own immunity. This is the principle of herd immunity, and it is through herd immunity that mass vaccination becomes far more effective than individual vaccination.

Any given vaccine can fail to produce immunity in an individual, and some vaccines, like the influenza vaccine, are less effective than others. But when enough people are vaccinated with even a relatively ineffective vaccine, viruses have trouble moving from host to host and cease

to spread, sparing both the unvaccinated and those in whom vaccination has not produced immunity. This is why the chances of contracting measles can be higher for a vaccinated person living in a largely unvaccinated community than they are for an unvaccinated person living in a largely vaccinated community.

The unvaccinated person is protected by the bodies around her, bodies through which disease is not circulating. But a vaccinated person surrounded by bodies that host disease is left vulnerable to vaccine failure or fading immunity. We are protected not so much by our own skin, but by what is beyond it. The boundaries between our bodies begin to dissolve here. Donations of blood and organs move between us, exiting one body and entering another, and so too with immunity, which is a common trust as much as it is a private account. Those of us who draw on collective immunity owe our health to our neighbors

Based on the passage, which of the following CANNOT be concluded?

Options:

1. A vaccine cannot guarantee immunity in an individual.
2. Our survival, as a community, is largely based on herd immunity.
3. A vaccinated person may get infected if her surroundings are largely unvaccinated.
4. Collective immunity protects those with compromised immune systems.
5. Even, relatively, ineffective vaccines can stop the spread of viruses if enough people are vaccinated.

Correct Answer: (3)

Solution

Step 1: Analyze the passage.

The passage explains the concept of herd immunity and highlights how vaccinations contribute to the community's collective defense against diseases. It mentions that even ineffective vaccines can help if enough people are vaccinated.

Step 2: Evaluate the options.

- Option 1: This is true as no vaccine provides 100- Option 2: Herd immunity is the basis of community survival as described in the passage. - Option 3: This cannot be concluded because

the passage does not explicitly state that a vaccinated individual will always get infected in largely unvaccinated surroundings. - Option 4: The passage supports the idea that herd immunity protects individuals with weaker immune systems. - Option 5: The passage asserts that even relatively ineffective vaccines can contribute to stopping virus spread through herd immunity.

Final Answer: (3)

Quick Tip

Herd immunity is the cornerstone of community health, ensuring protection even for individuals who cannot be directly vaccinated.

Question 74

Why does the author think about vaccination as a "banking of immunity"?

Options:

1. Because it creates a reserve of immunity within a person's immune system.
2. Because when somebody is vaccinated, it is a deposit of protection against a particular disease.
3. Because different vaccines contribute to a diverse portfolio of immune defenses.
4. Because it is like providing a safety net for those who are more vulnerable to diseases.
5. Because it is a way to mitigate health risks for those who may not have access to vaccination.

Correct Answer: (5)

Solution

Step 1: Interpret the metaphor.

The "banking of immunity" refers to the idea that vaccination contributes to a collective reserve of immunity, safeguarding those who cannot be vaccinated or who are vulnerable.

Step 2: Evaluate the options.

- Option 1: Misleading as immunity is not reserved in a single person's system. - Option 2: Incorrect since it simplifies the metaphor to an individual perspective. - Option 3: The passage does not mention a diverse portfolio of defenses. - Option 4: Partially correct, but the metaphor extends beyond safety nets. - Option 5: Best captures the idea of mitigating risks for the unvaccinated or vulnerable population.

Final Answer: (5)

Quick Tip

Vaccination benefits extend beyond the individual, offering community-wide protection through herd immunity.

Question 75

Based on the last paragraph of the passage, which of the following would the author BEST agree with?

Options:

1. In times of health crises, communities should come together to support and protect each other.
2. It is important to express gratitude to those who contribute to the herd immunity by getting vaccinated.
3. It is an ethical obligation of individuals to get vaccinated for the greater good.
4. In any community, immunity is transactional.
5. Immunity of a community is interconnected, and everyone plays a role to keep each other vaccinated.

Correct Answer: (5)

Solution

Step 1: Focus on the final paragraph.

The last paragraph emphasizes collective responsibility and interconnectedness of immunity.

Step 2: Evaluate the options.

- Option 1: True, but it is not the central idea of the paragraph. - Option 2: Gratitude is implied but not the main argument. - Option 3: Ethical obligation is addressed, but it's secondary to interconnectedness. - Option 4: The term "transactional" misrepresents the author's argument. - Option 5: Accurately captures the core argument about interconnectedness in herd immunity.

Final Answer: (5)

Quick Tip

Immunity is a shared responsibility, where every vaccinated individual contributes to the protection of the community.

Question 76

Please type the following sentence:

"The quick brown fox jumps over the lazy dog."

Solution

Solution: The correct sentence is:

"The quick brown fox jumps over the lazy dog."

This sentence is a pangram, meaning it contains every letter of the English alphabet at least once. Ensure the following when typing:

- Maintain the capitalization of "The."
- Include the punctuation marks like the period at the end.
- Avoid any spelling mistakes.

- Ensure accurate spacing between words.

Common Errors to Avoid:

1. Omitting the period at the end of the sentence.
2. Writing ”jump” instead of ”jumps.”
3. Ignoring capitalization in ”The.”

Quick Tip

Always double-check your input for typing accuracy and formatting before submitting.

Question 77

Which of the following years is NOT a leap year?

Options:

1. 1900
2. 2000
3. 1896
4. 1924
5. 2024

Correct Answer: (1)

Solution

Step 1: Understand the rule for leap years.

A year is a leap year if: - It is divisible by 4. - If divisible by 100, it must also be divisible by 400 to qualify as a leap year.

Step 2: Analyze the options.

- 1900: Divisible by 100 but not by 400, so it is not a leap year. - 2000: Divisible by 400, making it a leap year. - 1896: Divisible by 4, making it a leap year. - 1924: Divisible by 4, making it a leap year. - 2024: Divisible by 4, making it a leap year.

Final Answer: (1)

Quick Tip

Remember, a century year must be divisible by 400 to be a leap year.

Question 78

Which two teams competed in the final match of the Women's Premier League (WPL) 2023, held on March 26, 2023, in Mumbai?

Options:

1. Delhi Capitals Mumbai Indians
2. Gujarat Giants Delhi Capitals
3. UP Warriorz Delhi Capitals
4. Royal Challengers Bangalore Mumbai Indians
5. Delhi Capitals Gujarat Giants

Correct Answer: (1)

Solution

Step 1: Recall the WPL 2023 final.

The Women's Premier League 2023 final match was contested between Delhi Capitals and Mumbai Indians on March 26, 2023, at the Brabourne Stadium in Mumbai.

Step 2: Evaluate the options.

- Option 1: Correct, as these two teams played the final match. - Option 2: Incorrect; Gujarat Giants did not reach the final. - Option 3: Incorrect; UP Warriorz were eliminated earlier. - Option 4: Incorrect; Royal Challengers Bangalore did not qualify for the final. - Option 5: Incorrect; Gujarat Giants were not in the final.

Final Answer: (1)

Quick Tip

The WPL 2023 final marked a milestone for women's cricket in India, showcasing competitive spirit and talent.

Question 79

Which city hosted the recently concluded Asian Games 2022 (which happened in 2023)?

Options:

1. Incheon
2. Hangzhou
3. Jakarta
4. Guangzhou
5. Busan

Correct Answer: (2)

Solution

Step 1: Recall the venue for Asian Games 2022.

The 2022 Asian Games were postponed to 2023 due to the COVID-19 pandemic and were hosted in Hangzhou, China.

Step 2: Analyze the options.

- Option 1: Incorrect; Incheon hosted the 2014 Asian Games. - Option 2: Correct; Hangzhou was the host city for the 2022 (held in 2023) Asian Games. - Option 3: Incorrect; Jakarta hosted the 2018 Asian Games. - Option 4: Incorrect; Guangzhou hosted the 2010 Asian Games. - Option 5: Incorrect; Busan hosted the 2002 Asian Games.

Final Answer: (2)

Quick Tip

The 2022 Asian Games showcased China's hosting capabilities, held in Hangzhou with excellent facilities and global participation.

Question 80

Which of the following countries has NOT been invited to join the BRICS in the BRICS' expansion plan for 2024?

Options:

1. Egypt
2. Ethiopia
3. Saudi Arabia
4. Iran
5. Pakistan

Correct Answer: (5)

Solution

Step 1: Understand BRICS expansion.

BRICS is an economic alliance consisting of Brazil, Russia, India, China, and South Africa. In the expansion plan for 2024, additional countries like Egypt, Ethiopia, Saudi Arabia, and Iran were invited, but Pakistan was excluded due to geopolitical and economic concerns.

Step 2: Analyze the options.

- Egypt, Ethiopia, Saudi Arabia, and Iran: All are part of the BRICS expansion plan. - Pakistan: Not invited due to strained relations with certain member nations and ongoing economic challenges.

Final Answer: (5)

Quick Tip

BRICS expansion focuses on including economically and strategically significant countries while avoiding geopolitical conflicts.

Question 81

Why has Dr. Akshata Krishnamurthy been in the news recently?

Options:

1. She is the first Indian citizen to command a rover mission on Mars.
2. She is the first Indian citizen to lead the Big Bang Observatory.
3. She is the first Indian citizen appointed to the Laser Interferometer Gravitational-Wave Observatory.
4. She is the first Indian citizen to be heading the pharmaceutical giant Pfizer.
5. She is the first Indian citizen to make a major breakthrough in the genome sequencing of Jamun.

Correct Answer: (4)

Solution

Step 1: Recognize the role of Dr. Akshata Krishnamurthy.

Dr. Akshata Krishnamurthy was recently appointed as the head of Pfizer, a leading pharmaceutical company, marking a historic achievement as the first Indian citizen to hold this position.

Step 2: Analyze the options.

- Option 1, 2, and 3: Incorrect; no such announcements were made. - Option 4: Correct; she recently took charge at Pfizer. - Option 5: Incorrect; there was no mention of genome sequencing of Jamun.

Final Answer: (4)

Quick Tip

Leadership roles in global pharmaceutical companies signify India's growing influence in healthcare innovation.

Question 82

Who received the Nobel Peace Prize in 2023?

Options:

1. Barack Obama
2. Shirin Ebadi
3. Narges Mohammadi
4. Maria Ressa
5. Center for Civil Liberties

Correct Answer: (3)

Solution

Step 1: Identify the recipient.

Narges Mohammadi was awarded the Nobel Peace Prize in 2023 for her fight against the oppression of women in Iran and her efforts to promote human rights and freedom.

Step 2: Analyze the options.

- Barack Obama and Shirin Ebadi: Incorrect; they are past recipients of the prize. - Narges Mohammadi: Correct; recognized for her activism in 2023. - **Maria Ressa and Center for Civil Liberties:** Incorrect; they were not the recipients in 2023.

Final Answer: (3)

Quick Tip

The Nobel Peace Prize often recognizes individuals and organizations that stand for human rights and fight against oppression globally.

Question 83

The movie Oppenheimer was directed by:

Options:

1. Christopher Nolan
2. Greta Gerwig
3. Quentin Tarantino
4. Zack Snyder
5. Steven Spielberg

Correct Answer: (1)

Solution

Step 1: Background on Oppenheimer.

The movie Oppenheimer is a historical drama directed by Christopher Nolan, focusing on the life of J. Robert Oppenheimer and the development of the atomic bomb during the Manhattan Project.

Step 2: Analyze the options.

- Christopher Nolan: Correct; he directed the movie. - Greta Gerwig, Quentin Tarantino, Zack Snyder, and Steven Spielberg: Incorrect; none of them were involved with this project.

Final Answer: (1)

Quick Tip

Christopher Nolan is known for directing impactful films with intricate narratives, including *Inception* and *The Dark Knight* trilogy.

Question 84

Matthew Perry, who died in 2023, was famously known for playing which character in the sitcom called *Friends*?

Options:

1. Ross Geller
2. Chandler Bing
3. Joey Tribbiani
4. Raymond Holt
5. Monica Geller

Correct Answer: (2)

Solution

Step 1: Role in *Friends*.

Matthew Perry gained fame for his portrayal of Chandler Bing, a witty and sarcastic character in the iconic sitcom *Friends*. His comedic timing and memorable lines made the character beloved by fans worldwide.

Step 2: Analyze the options.

- Chandler Bing: Correct; Matthew Perry played this role. - Ross Geller, Joey Tribbiani, Raymond Holt, and Monica Geller: Incorrect; these are characters played by other actors.

Final Answer: (2)

Quick Tip

Matthew Perry's portrayal of Chandler Bing remains one of the most iconic performances in television history.

Question 85

Claudia Dale Goldin was awarded the Nobel Prize in Economics in 2023 in recognition of her groundbreaking research in the field of:

Options:

1. Women in the Workforce
2. Behavioural Economics
3. Human Trafficking
4. Unemployment in Global South
5. Poverty in Africa

Correct Answer: (1)

Solution

Step 1: Research focus.

Claudia Dale Goldin's research examined the historical trends and barriers faced by women in the workforce. Her work highlights how gender inequality in labor markets has evolved over time and provides insights into achieving gender parity.

Step 2: Analyze the options.

- Women in the Workforce: Correct; this aligns with her research. - Behavioural Economics, Human Trafficking, Unemployment in Global South, and Poverty in Africa: Incorrect; these are unrelated to her Nobel-winning work.

Final Answer: (1)

Quick Tip

Claudia Goldin's work sheds light on the importance of addressing systemic barriers to improve women's participation in the workforce.

Question 86

Which country has formally pulled out of the "Treaty on Conventional Armed Forces in Europe"?

Options:

1. Israel
2. Russia
3. Italy
4. Germany
5. Turkey

Correct Answer: (2)

Solution

Step 1: Understanding the Treaty.

The Treaty on Conventional Armed Forces in Europe (CFE) was a landmark agreement aimed at reducing military forces and promoting stability in Europe. Russia formally announced its withdrawal, citing geopolitical tensions.

Step 2: Analyze the options.

- Russia: Correct; it officially pulled out of the treaty. - Israel, Italy, Germany, and Turkey: Incorrect; these countries were not involved in the withdrawal from this treaty.

Final Answer: (2)

Quick Tip

Russia's withdrawal highlights growing geopolitical divisions in Europe and the decline of Cold War-era agreements.

Question 87

What is the name of Air India's Artificial Intelligence-powered chat assistant that introduced a generative AI virtual agent?

Options:

1. Niyaa
2. AirBuddy
3. Sathi
4. Maharaja
5. Frenz

Correct Answer: (1)

Solution

Step 1: Introduction to Air India's AI Chat Assistant.

Air India launched "Niyaa," an AI-powered chat assistant designed to enhance customer interactions by leveraging generative AI technology for seamless and efficient query resolution.

Step 2: Analyze the options.

- Niyaa: Correct; this is the name of the AI assistant. - AirBuddy, Sathi, Maharaja, and Frenz: Incorrect; these names do not correspond to Air India's AI assistant.

Final Answer: (1)

Quick Tip

AI chat assistants like Niyaa represent the future of customer service, offering personalized and efficient solutions.

Question 88

In November 2023, which state government declared a fish named ”Ghol” as the state fish?

Options:

1. Uttar Pradesh
2. Haryana
3. Gujarat
4. Bihar
5. Maharashtra

Correct Answer: (5)

Solution

Step 1: Background on the ”Ghol” fish.

The Maharashtra state government recognized ”Ghol” fish for its cultural and economic significance, officially declaring it the state fish in November 2023.

Step 2: Analyze the options.

- Maharashtra: Correct; the state declared Ghol as its state fish. - Uttar Pradesh, Haryana, Gujarat, and Bihar: Incorrect; these states did not make this declaration.

Final Answer: (5)

Quick Tip

The Ghol fish is known for its medicinal and economic value, contributing significantly to Maharashtra's coastal economy.

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Question 89

Which Indian city set a world record by illuminating 22.23 lakh earthen lamps on the eve of Diwali 2023?

Options:

1. Ayodhya
2. Prayagraj
3. Varanasi
4. Udupi
5. Rameswaram

Correct Answer: (1)

Solution

Step 1: Context of the event.

Ayodhya, also known as the birthplace of Lord Ram, created a world record by lighting 22.23 lakh earthen lamps (diyas) as part of the grand Diwali celebrations. This event was a part of the annual Deepotsav festival.

Step 2: Analyze the options.

- Ayodhya: Correct; this city achieved the record-breaking feat. - Prayagraj, Varanasi, Udupi, and Rameswaram: Incorrect; these cities did not set this record.

Final Answer: (1)

Quick Tip

Grand celebrations such as Ayodhya's Deepotsav not only set records but also boost tourism and cultural heritage.

Question 90

Which rocket was used to launch Aditya-L1?

Options:

1. PSLV-C57
2. LVM3-M4
3. NGLV
4. GSLV-F12
5. TERLS

Correct Answer: (1)

Solution

Step 1: Mission Details.

Aditya-L1, India's first solar mission, was launched using the PSLV-C57 rocket. This mission aims to study the Sun's corona and other solar phenomena.

Step 2: Analyze the options.

- PSLV-C57: Correct; it was the designated launch vehicle for Aditya-L1. - LVM3-M4, NGLV, GSLV-F12, and TERLS: Incorrect; these rockets were not used for this mission.

Final Answer: (1)

Quick Tip

PSLV rockets have been crucial for ISRO's missions due to their reliability and versatility.

Question 91

Which company has launched a dedicated air cargo service in India to speed up deliveries?

Options:

1. Amazon
2. Flipkart
3. Jiomart
4. Tata Cliq
5. Snapdeal

Correct Answer: (2)

Solution

Step 1: Introduction to Flipkart's Air Cargo Service.

Flipkart launched its dedicated air cargo service to expedite e-commerce deliveries across India. This service enhances supply chain efficiency and reduces delivery times.

Step 2: Analyze the options.

- Flipkart: Correct; the company introduced air cargo services to improve logistics. - Amazon, Jiomart, Tata Cliq, and Snapdeal: Incorrect; these companies did not initiate such a service recently.

Final Answer: (2)

Quick Tip

Dedicated air cargo services are becoming a game-changer for e-commerce companies to ensure faster deliveries.

Question 92

What is X-37B?

Options:

1. The name of the youngest kid of Elon Musk.
2. The new electric vehicle to be launched by Tesla.
3. The newest variant of COVID-19 virus.
4. The U.S. military plane that has gone to space.
5. The name of India's Jupiter mission.

Correct Answer: (4)

Solution

Step 1: Understanding X-37B.

The X-37B is an unmanned spaceplane developed by the U.S. military. It has been used for classified missions in Earth's orbit and is a key asset in space exploration and research.

Step 2: Analyze the options.

- U.S. military plane that has gone to space: Correct; X-37B is a reusable spaceplane used by the U.S. military. - Other options: Incorrect; these do not describe X-37B accurately.

Final Answer: (4)

Quick Tip

Reusable spacecraft like the X-37B are revolutionizing space exploration with their cost efficiency and versatility.

Question 93

Which of the following prefectures of Japan was MAJORLY affected by an earthquake on January 1, 2024?

Options:

1. Ishikawa
2. Osaka
3. Tokyo
4. Hiroshima
5. Fukushima

Correct Answer: (1)

Solution

Step 1: Context of the event.

On January 1, 2024, Ishikawa Prefecture was significantly affected by a major earthquake. This region has a history of seismic activity, making it susceptible to such natural disasters.

Step 2: Analyze the options.

- Ishikawa: Correct; this prefecture was reported as the epicenter of the earthquake. - Osaka, Tokyo, Hiroshima, and Fukushima: Incorrect; these areas were not the epicenter for the reported earthquake on January 1, 2024.

Final Answer: (1)

Quick Tip

Japan is located in a tectonically active region, and prefectures like Ishikawa are equipped with advanced warning systems to mitigate earthquake impacts.

Question 94

Which of the following Indian states does the River Ganges not flow through?

Options:

1. Uttarakhand
2. Bihar

3. Jharkhand
4. Haryana
5. Uttar Pradesh

Correct Answer: (4)

Solution

Step 1: Analyze the geography of the Ganges River.

The Ganges River originates in Uttarakhand and flows through Uttar Pradesh, Bihar, and Jharkhand, eventually reaching West Bengal. It does not pass through Haryana.

Step 2: Evaluate the options.

- Uttarakhand, Uttar Pradesh, Bihar, Jharkhand: These are all states through which the Ganges flows. - Haryana: This state is not part of the Ganges basin.

Final Answer: (4)

Quick Tip

The Ganges basin is one of the largest river basins in India, but its flow is geographically confined to certain regions in northern and eastern India.

Question 95

Arrange the following historic capital cities of Indian kingdoms in the order of their geographic locations, from north to south:

(a) Kannauj (b) Karur (c) Pataliputra (d) Rajahmundry

Options:

1. (a)-(b)-(d)-(c)
2. (c)-(d)-(a)-(b)
3. (a)-(c)-(d)-(b)
4. (c)-(a)-(b)-(d)

5. (a)-(c)-(b)-(d)

Correct Answer: (5)

Solution

Step 1: Geographic locations of the cities.

- Kannauj: Located in present-day Uttar Pradesh, it is the northernmost city in the list. - Pataliputra: Ancient name for Patna, located in Bihar. - Rajahmundry: Located in Andhra Pradesh, towards the southern part of India. - Karur: Situated in Tamil Nadu, it is the southernmost city in the list.

Step 2: Arrange from north to south.

The correct order is Kannauj (a) → Pataliputra (c) → Rajahmundry (d) → Karur (b).

Final Answer: (5)

Quick Tip

When arranging cities geographically, identify their present-day locations and follow a logical north-to-south or east-to-west progression.

Question 96

Match the following books with their authors:

Books	**Authors**
(a) Adventures of Tom Sawyer	(iv) Mark Twain
(b) Around the World in Eighty Days	(iii) Jules Verne
(c) Gulliver's Travels	(v) Jonathan Swift
(d) Adventures of Sherlock Holmes	(ii) Arthur Conan Doyle
(e) David Copperfield	(i) Charles Dickens

Options:

1. a-iv, b-iii, c-v, d-ii, e-i

2. b-iv, a-iii, c-v, d-ii, e-i

3. a-iv, c-iii, b-v, d-ii, e-i

4. e-v, b-iii, d-v, c-ii, a-i

5. a-iv, c-v, d-ii, b-i, e-iii

Correct Answer: (1)

Solution

Step 1: Match each book with its respective author.

- Adventures of Tom Sawyer: Written by Mark Twain. - Around the World in Eighty Days: Written by Jules Verne. - Gulliver's Travels: Authored by Jonathan Swift. - Adventures of Sherlock Holmes: Penned by Arthur Conan Doyle. - David Copperfield: A classic by Charles Dickens.

Step 2: Verify the pairing with the options.

Based on the matches: (a) Mark Twain → (iv), (b) Jules Verne → (iii), (c) Jonathan Swift → (v), (d) Arthur Conan Doyle → (ii), (e) Charles Dickens → (i).

The correct sequence is: a-iv, b-iii, c-v, d-ii, e-i.

Final Answer: (1)

Quick Tip

To quickly solve such matching questions, start with the book-author pairings you are confident about and eliminate incorrect options.

Question 97

What is the common terminology used to describe the following applications: ChatGPT, Google Bard, Chatsonic?

Options:

1. Generative AI Tools

2. Dating Tools
3. Gaming Applications
4. News Aggregators
5. UPI Applications

Correct Answer: (1)

Solution

Step 1: Understand the nature of the applications.

- ChatGPT, Google Bard, Chatsonic: These applications utilize artificial intelligence to generate text, answer questions, and assist with various conversational tasks. They are categorized under Generative AI Tools.

Step 2: Evaluate the options.

- Generative AI Tools: Correct, as all these applications generate text or content using AI. - Other options (Dating Tools, Gaming Applications, etc.) are unrelated to these tools.

Final Answer: (1)

Quick Tip

Generative AI tools are designed to create text, images, or other content, making them distinct from traditional AI used for data analysis or predictive tasks.

Question 98

Which of the following governors-general of India introduced the policy of ”doctrine of lapse”?

Options:

1. Lord Wellesley
2. Lord Curzon
3. Lord Mountbatten

4. Lord Dalhousie
5. Lord Reading

Correct Answer: (4)

Solution

Step 1: Understand the doctrine of lapse.

The doctrine of lapse was a policy implemented by Lord Dalhousie during his tenure as Governor-General of India. It allowed the British East India Company to annex princely states in India if the ruler died without a male heir.

Step 2: Analyze the contributions of the given governors-general.

- Lord Wellesley: Known for the Subsidiary Alliance system. - Lord Curzon: Focused on partitioning Bengal and educational reforms. - Lord Mountbatten: Played a role in India's independence process. - Lord Dalhousie: Introduced the doctrine of lapse. - Lord Reading: Known for judicial reforms.

Final Answer: (4)

Quick Tip

The doctrine of lapse was a critical policy in British India that facilitated annexations. Key examples include the annexation of Jhansi, Satara, and Nagpur.

Question 99

What is Nabanno?

Options:

1. It is a town close to Nabarno-Karabakh.
2. It is the harvest festival of Bengal and Bangladesh.
3. It is another word for "great news."
4. It is a dancing festival in Jammu and Kashmir.

5. It is a perennial river that flows in the Deccan.

Correct Answer: (2)

Solution

Step 1: Definition of Nabanno.

Nabanno is celebrated as a harvest festival in the Bengal region, including parts of India and Bangladesh. It marks the harvesting of new crops and is a cultural celebration with music, dance, and traditional Bengali food.

Step 2: Analyze the options.

- Option 1: Incorrect; not related to the festival. - Option 2: Correct; Nabanno is a harvest festival. - Option 3: Incorrect; it doesn't mean "great news." - Option 4: Incorrect; unrelated to dancing festivals in Jammu and Kashmir. - Option 5: Incorrect; not a river.

Final Answer: (2)

Quick Tip

Nabanno showcases the agrarian culture of Bengal. Festivals like this reflect the gratitude of farmers towards nature and celebrate community ties.

Question 100

Arrange the following famous battles in the order of their occurrence:

(a) Battle of the Hydaspes

(b) First Battle of Tarain

(c) Battle of Khanwa

(d) Battle of Talikota

(e) Battle of Buxar

Options:

1. (a)-(c)-(b)-(d)-(e)
2. (a)-(b)-(c)-(d)-(e)
3. (a)-(b)-(d)-(c)-(e)
4. (a)-(b)-(d)-(e)-(c)
5. (a)-(b)-(c)-(e)-(d)

Correct Answer: (2)

Solution

Step 1: Chronology of the battles.

- Battle of the Hydaspes (326 BCE): Fought between Alexander the Great and King Porus. - First Battle of Tarain (1191): Fought between Prithviraj Chauhan and Muhammad Ghori. - Battle of Khanwa (1527): Fought between Babur and Rana Sanga. - Battle of Talikota (1565): Marked the fall of the Vijayanagara Empire. - Battle of Buxar (1764): Fought between the British East India Company and the combined forces of Indian rulers.

Step 2: Arrange in chronological order.

The correct sequence is: (a) Battle of the Hydaspes, (b) First Battle of Tarain, (c) Battle of Khanwa, (d) Battle of Talikota, (e) Battle of Buxar.

Final Answer: (2)

Quick Tip

Understanding historical battles helps trace the rise and fall of empires and their impact on cultural and political landscapes.

Question 101

Match the following national capitals with their respective countries/territories:

Countries/Territories	Capitals
(a) Kenya	(ii) Nairobi
(b) Paraguay	(iii) Asuncion
(c) Guinea	(iv) Conakry
(d) Liechtenstein	(i) Vaduz

Options:

1. a-i, b-ii, c-iv, d-iii
2. a-ii, b-iii, c-iv, d-i
3. a-ii, b-iii, c-i, d-iv
4. a-i, b-iv, c-iii, d-ii
5. a-ii, b-v, c-iii, d-i

Correct Answer: (2)

Solution

Step 1: Match the countries with their capitals.

- Kenya - Nairobi (ii): Nairobi is the capital of Kenya. - Paraguay - Asuncion (iii): Asuncion is the capital of Paraguay. - Guinea - Conakry (iv): Conakry is the capital of Guinea. - Liechtenstein - Vaduz (i): Vaduz is the capital of Liechtenstein.

Step 2: Verify the correct option.

The correct matches are: a-ii, b-iii, c-iv, d-i.

Final Answer: (2)

Quick Tip

To remember capitals, group countries by continent and study their capitals systematically.

Question 102

Tech predictions often fail not because of wrong models or a lack of imagination, but due to a lack of humility in admitting our uncertainty about the future. (Maximum 250 words)

Solution

Answer:

Technology predictions often stumble because they are founded on the false notion that the future can be perfectly charted with existing models. This failure stems from an overconfidence in tools and methods, rather than a conscious acknowledgment of the limits of human foresight.

Humility plays a crucial role in approaching the unknown future. Experts often fail to admit gaps in their understanding, leading to predictions that ignore the inherent unpredictability of technological evolution. For example, early forecasts about the internet did not account for social media's profound impact or the rapid advancement of artificial intelligence. Similarly, the inability to foresee climate change's acceleration showcases the limitations of our models.

Admitting uncertainty doesn't undermine our efforts; instead, it allows for flexibility and adaptability. By acknowledging gaps in knowledge, experts can prepare for unexpected developments, fostering innovation and resilience.

In essence, the failure of tech predictions lies not in the complexity of the future but in our unwillingness to embrace its inherent uncertainties. Only by cultivating humility can we make meaningful strides toward a balanced and adaptive approach to predicting the unknown.

Quick Tip

Always include examples to strengthen your argument and highlight the importance of adaptability in uncertain scenarios.

Question 103

Implementing more stringent regulations on social media platforms is crucial to effectively combat the proliferation of fake news. (Maximum 250 words)

Solution

Answer:

The rapid dissemination of fake news on social media platforms poses a significant threat to societal harmony and democratic processes. Stringent regulations are imperative to curb this menace, ensuring that users are protected from misinformation while preserving freedom of expression.

Firstly, enforcing content moderation mechanisms through Artificial Intelligence (AI) and human fact-checkers can detect and remove false information effectively. For example, social media platforms like Facebook and Twitter already employ algorithms to identify and flag misleading content. However, these systems require enhancement to address evolving techniques of misinformation.

Secondly, implementing stringent penalties for spreading fake news can deter users and entities from engaging in such practices. Transparency in platform policies, combined with real-time collaboration with government agencies, can ensure swift action against offenders.

Lastly, fostering digital literacy among users is vital. Educating individuals on identifying credible sources and fact-checking can significantly reduce the impact of fake news. Countries like Finland have integrated digital literacy into their education system to combat misinformation.

In conclusion, a combination of advanced technology, strict enforcement, and public awareness is necessary to tackle fake news effectively. While regulations must be robust, they should not compromise the right to free speech.

Quick Tip

Balance your argument by addressing both regulatory measures and the importance of user awareness to create a comprehensive solution.

Question 104

"Things which matter most must never be at the mercy of things which matter least." (Maximum 250 words)

Solution

Answer:

This statement emphasizes prioritization in life, urging individuals to focus on what truly matters and avoid being overwhelmed by trivial matters. In a world filled with distractions, the art of prioritization is a crucial skill.

Firstly, understanding what matters most requires introspection. Goals, relationships, health, and personal growth often take precedence over minor conflicts, material pursuits, or fleeting distractions. For instance, spending quality time with loved ones or pursuing a meaningful career has long-term value, unlike wasting hours on inconsequential social media debates.

Secondly, effective time management is essential. By categorizing tasks as urgent, important, or negligible, one can ensure that essential goals are met without unnecessary delays. For example, the Eisenhower Matrix is a practical tool for managing priorities.

Finally, practicing discipline in choosing priorities helps in avoiding the "tyranny of the urgent," where immediate but unimportant tasks overshadow critical long-term objectives. As Stephen Covey highlights in his book, focusing on "important but not urgent" tasks leads to true productivity and fulfillment.

In conclusion, this principle underscores the importance of intentional living. By dedicating time and energy to what truly matters, individuals can lead purposeful and fulfilling lives while avoiding regrets about neglected priorities.

Quick Tip

Use tools like the Eisenhower Matrix to identify priorities, and regularly evaluate what truly adds value to your life.