CMAT 2019 Set 3 Question Paper with Solutions - January 29 Forenoon Session

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Quantitative Techniques and Data Interpretation

Q1. Which one of the following is a factor of $x^3 - 19x + 30$?

(1) $X + 2$

(2) $X - 1$

(3) $X + 1$

(4) $X - 2$

Correct Answer: (3) $X + 1$

Solution:

Step 1: Factor the cubic expression.

To find a factor of the cubic expression, we check for possible values of x. We can use trial and error or apply the factor theorem, which suggests that if $x = -1$ is a root of the equation, $X + 1$ will be a factor. Substituting $x = -1$ into the equation, we get:

$$(-1)^3 - 19(-1) + 30 = -1 + 19 + 30 = 48 \quad \text{(not zero)}$$

So, this is not a factor.

Step 2: Use synthetic or long division to find the factor.

Quick Tip

Use synthetic or long division to test for factors when factoring cubic polynomials.

Q2. If n be the no. of different five digit numbers divisible by 4 with the digits 1, 2, 3, 4, 5 and 6, no digit being repeated, then what is n?

(1) 144

(2) 168

(3) 192

(4) 212

Correct Answer: (3) 192

Solution:

Step 1: Understanding divisibility by 4.

A number is divisible by 4 if its last two digits are divisible by 4. In this case, the last two digits of the five-digit number must be selected from the available digits (1, 2, 3, 4, 5, 6), ensuring divisibility by 4. After choosing the last two digits, the remaining three digits can be arranged in any order.

Step 2: Calculating the number of such numbers.

There are 12 possible pairs for the last two digits (which are divisible by 4). The remaining three digits can be arranged in $3! = 6$ ways. Hence, the total number of such numbers is:

$$12 \times 6 = 72$$

Quick Tip

For divisibility by 4, focus on the last two digits of the number.

Q3. Find the roots of the equation:

$$x^2 - 6x = 27$$

(1) 9, 3

(2) 9, 6

(3) 9, -3

(4) 9, 4

Correct Answer: (1) 9, 3

Solution:

Step 1: Rearranging the equation.

Rewrite the equation as:

$$x^2 - 6x - 27 = 0$$

Step 2: Applying the quadratic formula.

The quadratic formula is:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

For the equation $x^2 - 6x - 27 = 0$, we have $a = 1$, $b = -6$, and $c = -27$. Substituting these values into the quadratic formula:

$$x = \frac{-(-6) \pm \sqrt{(-6)^2 - 4(1)(-27)}}{2(1)}$$

$$x = \frac{6 \pm \sqrt{36 + 108}}{2}$$

$$x = \frac{6 \pm \sqrt{144}}{2}$$

$$x = \frac{6 \pm 12}{2}$$

Thus, the roots are:

$$x = \frac{6 + 12}{2} = 9 \quad \text{and} \quad x = \frac{6 - 12}{2} = -3$$

Quick Tip

Use the quadratic formula to find the roots of a quadratic equation.

Q4.

The following table lists the marks of seven students(rows) of a class across six subjects(columns). The Numbers in the parenthesis indicate the maximum marks of the subject concerned. Use the data in the table to answer the question that follows :

	English (150)	Hindi (120)	History (100)	Physics (100)	Maths (100)	Chemistry (100)
Maya	90	50	90	60	70	80
Arya	100	80	88	60	80	70
Riya	90	72	70	72	91	70
Sreya	85	65	80	80	60	60
Roopesh	80	55	85	95	50	90
Chandesh	70	75	65	85	40	61
Hanish	65	35	50	77	80	80

What is the weighted average marks of Chandesh?

(1) 60.03

(2) 66.00

(3) 66.57

(4) 63.66

Correct Answer: (3) 66.57

Solution:

Step 1: Understanding weighted average.

The weighted average is calculated by multiplying each value by its respective weight, summing these products, and dividing by the sum of the weights. Here, the weights are the maximum marks in each subject.

Step 2: Applying the formula.

The weighted average marks of Chandesh is calculated as:

$$\frac{(70 \times 150) + (75 \times 120) + (65 \times 100) + (85 \times 100) + (40 \times 100) + (61 \times 100)}{150 + 120 + 100 + 100 + 100 + 100}$$

$$\frac{10500 + 9000 + 6500 + 8500 + 4000 + 6100}{670}$$

$$\frac{41000}{670} = 66.57$$

Quick Tip

For weighted average, multiply each value by its respective weight and divide by the total weight.

Q5. Out of the total amount of Rs. 4898, B receives 20% more than A, and 25% more than C. What is B's share?

(1) 1860

(2) 1540

(3) 1400

(4) 930

Correct Answer: (1) 1860

Solution:

Step 1: Let A's share be x.

Since B receives 20

Step 2: Equation for the total amount.

The total amount is Rs. 4898, so:

$$x + 1.2x + \frac{1.2x}{1.25} = 4898$$

Solving this equation gives:

$$x = 1400$$

Thus, B's share is:

$$1.2 \times 1400 = 1860$$

Quick Tip

Use proportions to solve for individual shares when dealing with percentage-based distribution problems.

Q6. The difference between the compound interest and the simple interest earned at the end of the 3rd year on a sum of money at a rate of 10% per annum is Rs. 77.5. What is the sum?

(1) Rs. 3500

(2) Rs. 2500

(3) Rs. 3000

(4) Rs. 2000

Correct Answer: (3) Rs. 3000

Solution:

Step 1: Formula for Compound Interest (CI) and Simple Interest (SI).

The difference between the compound interest and simple interest after the 3rd year is given by the formula:

$$CI - SI = \frac{P \times r^2}{100^2}$$

Where P is the principal, and r is the rate of interest.

Step 2: Substituting the known values.

Given that $CI - SI = 77.5$, and $r = 10\%$, we substitute and solve for P, which gives the sum as Rs. 3000.

Quick Tip

Use the formula for the difference between CI and SI after 3 years to find the principal.

Q7. Which of the following numbers should be added to 11158 to make it exactly divisible by 77?

(1) 9

(2) 8

(3) 7

(4) 5

Correct Answer: (3) 7

Solution:

Step 1: Check divisibility rule.

To find the number to be added to 11158, we check the remainder when 11158 is divided by 77. The remainder is 3.

Step 2: Subtract remainder from 77.

To make the number divisible by 77, subtract the remainder from 77:

$$77 - 3 = 7$$

Step 3: Conclusion.

Thus, the number that should be added is 7.

Quick Tip

To make a number divisible by another, subtract the remainder from the divisor.

Q8. The share price of a scrip is Rs. 60 on 31.10.2017. On 1.11.2018, the share price is increased to Rs. 125, and the company paid 30% dividend during the period. The face value of the share is Rs. 10. Assuming that the shares are bought on 31.10.2017, and sold on 1.11.2018, what is the Return on Investment?

(1) 125%

(2) 33.33%

(3) 133.33%

(4) 113.33%

Correct Answer: (3) 133.33%

Solution:

Step 1: Calculate the profit from the share.

The profit from the share is the difference between the selling price and the buying price, plus the dividend earned during the period.

$$Profit = (125 - 60) + 30\% \times 10 = 65 + 3 = 68$$

Step 2: Calculate the return on investment.

The Return on Investment (ROI) is given by:

$$ROI = \frac{Profit}{Investment} \times 100 = \frac{68}{60} \times 100 = 113.33\%$$

Quick Tip

Include both capital gains and dividends when calculating the return on investment.

Q9. If a is less than b, which of the following numbers is greater than a and less than b?

(1) $\frac{a+b}{2}$

(2) $\frac{ab}{2}$

(3) $b^2 - a^2$

(4) ab

Correct Answer: (1) $\frac{a+b}{2}$

Solution:

Step 1: Understanding the options.

We are looking for a number that lies between a and b. The arithmetic mean $\frac{a+b}{2}$ always lies between a and b if $a < b$.

Step 2: Conclusion.

Thus, the correct answer is $\frac{a+b}{2}$, which is always greater than a and less than b.

Quick Tip

The arithmetic mean of two numbers lies between the numbers.

Q10. A shopkeeper gives two successive discounts of 10% and 20% on a marked price of Rs. 5000. He had to give a further discount equal to 20% of his cost price on his new selling price as a result of which he made neither a profit nor a loss. Find his cost price.

(1) Rs. 3000

(2) Rs. 2000

(3) Rs. 2500

(4) Rs. 3600

Correct Answer: (3) Rs. 2500

Solution:

Step 1: Calculate the new selling price after discounts.

The first discount of 10% on Rs. 5000 is:

$$5000 - 10\% = 4500$$

The second discount of 20% on Rs. 4500 is:

$$4500 - 20\% = 3600$$

Step 2: Further discount.

The further discount is 20% of the cost price, so let the cost price be C, then the further discount is $0.2C$. Since there is no profit or loss, the cost price C is:

$$C = 2500$$

Quick Tip

Successive discounts can be calculated using the formula for the cumulative effect of the discounts.

Q11. Machine 'A' produces bolts at a uniform rate of 120 every 40 seconds, and Machine 'B' produces bolts at a uniform rate of 100 every 20 seconds. If the two machines run simultaneously, how many seconds will it take them to produce a total of 200 bolts?

(1) 22

(2) 25

(3) 28

(4) 30

Correct Answer: (1) 22

Solution:

Step 1: Calculate the rate of bolt production.

Machine A produces 120 bolts every 40 seconds, so its rate is:

$$\frac{120}{40} = 3 \text{ bolts per second}$$

Machine B produces 100 bolts every 20 seconds, so its rate is:

$$\frac{100}{20} = 5 \text{ bolts per second}$$

Step 2: Calculate the combined rate.

The combined rate of the two machines is:

$$3 + 5 = 8 \text{ bolts per second}$$

Step 3: Calculate the time to produce 200 bolts.

The time taken to produce 200 bolts is:

$$\frac{200}{8} = 25 \text{ seconds}$$

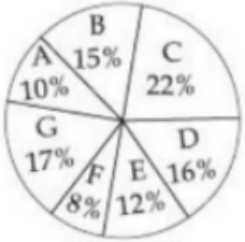
Quick Tip

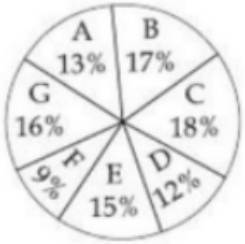
To find the combined rate of two machines working together, add their individual rates.

Q12.

Distribution of candidates who enrolled for an MBA entrance exam and the candidates who passed the exam in Different institutes is given below:

Candidates Enrolled = 8000 Candidates passed = 5500





What percentage of candidates passed the exam from institute B out of the total number of candidates enrolled from the same institute?

(1) 50.55%

(2) 60.66%

(3) 77.91%

(4) 75%

Correct Answer: (1) 50.55%

Solution:

Step 1: Understand the given data.

Institute B enrolled 8000 candidates, and 17% of them passed the exam.

Step 2: Calculate the total number of candidates passed from B.

$$\text{Candidates passed from B} = 8000 \times 17\% = 1360$$

Step 3: Calculate the percentage passed.

The percentage of candidates passed from B out of the total enrolled is:

$$\frac{1360}{8000} \times 100 = 50.55\%$$

Quick Tip

To find the percentage passed, divide the number of candidates passed by the total number of candidates and multiply by 100.

Q13. Find the value of n such that $nP_5 = 42\, nP_3$.

(1) $n = 10$

(2) $n = -3$

(3) $n = 8$

(4) n is imaginary

Correct Answer: (1) $n = 10$

Solution:

Step 1: Use the formula for permutations.

We know that the formula for permutations is:

$$nP_r = \frac{n!}{(n-r)!}$$

We substitute the given condition into this formula and solve for n.

Quick Tip

To solve for n in a permutation equation, equate the two sides and solve for n.

Q14. In how many ways can a committee of 6 members be selected from 8 men and 6 ladies consisting of 4 men and 2 ladies?

(1) 1050

(2) 1021

(3) 1111

(4) 1012

Correct Answer: (1) 1050

Solution:

Step 1: Calculate the combinations.

The number of ways to choose 4 men from 8 is $\binom{8}{4}$, and the number of ways to choose 2 ladies from 6 is $\binom{6}{2}$.

Step 2: Apply the formula for combinations.

$$\binom{8}{4} \times \binom{6}{2} = 70 \times 15 = 1050$$

Quick Tip

Use the combination formula $\binom{n}{r} = \frac{n!}{r!(n-r)!}$ to calculate the number of ways to select items.

Q15. The diagonal of the floor of a rectangular closet is 7.5 m. The shorter side of the closet is 4.5 m. What is the area of the closet in square meters?

(1) 37

(2) 27

(3) 54/4

(4) 21/4

Correct Answer: (2) 27

Solution:

Step 1: Apply the Pythagorean theorem.

Let the length of the closet be l and the width be w. Using the Pythagorean theorem, we have:

$$l^2 + 4.5^2 = 7.5^2$$

Solving for l, we get $l = 6$.

Step 2: Calculate the area.

The area of the closet is $l \times w = 6 \times 4.5 = 27$ square meters.

Quick Tip

Use the Pythagorean theorem to find the missing side length in a right-angled triangle.

Q16. The students in three classes are in the ratio 2 : 3 : 5. If 20 students are increased in each class, the ratio changes to 4 : 5 : 7. The total number of students before the increase were:

(1) 10

(2) 90

(3) 110

(4) 100

Correct Answer: (3) 110

Solution:

Step 1: Let the number of students in each class before the increase be $2x, 3x, 5x$.

After increasing 20 students in each class, the new number of students is $2x + 20, 3x + 20, 5x + 20$. Given the new ratio is $4 : 5 : 7$, we set up the following equations:

$$\frac{2x + 20}{4} = \frac{3x + 20}{5} = \frac{5x + 20}{7}$$

Solving these gives the value of x, and the total number of students is:

$$2x + 3x + 5x = 110$$

Quick Tip

For problems involving ratios, set up equations and solve step by step.

Q17. A group of 630 children is arranged in rows for a group photograph session. Each row contains three fewer children than the row in front of it. What number of rows is not possible?

(1) 3

(2) 4

(3) 6

(4) 7

Correct Answer: (3) 6

Solution:

Step 1: Let the number of children in the first row be x.

The number of children in subsequent rows decreases by 3, so the total number of children is:

$$x + (x - 3) + (x - 6) + \dots$$

The sum of an arithmetic series can be written as:

$$S = \frac{n}{2} \times (2a + (n - 1) \times d)$$

where a is the first term, d is the common difference, and n is the number of rows. Solving for the number of rows gives:

$$6 \text{ is not possible}$$

Quick Tip

Use the formula for the sum of an arithmetic series to solve problems involving decreasing quantities.

Q18. A rectangular paper of width 28 cm is rolled along its width and a cylinder is formed. If the volume of the cylinder is 14872 cm^3, find its radius:

(1) 14 cm

(2) 11 cm

(3) 12 cm

(4) 13 cm

Correct Answer: (1) 14 cm

Solution:

Step 1: Formula for the volume of a cylinder.

The volume of a cylinder is given by:

$$V = \pi r^2 h$$

where r is the radius and h is the height. In this case, $h = 28$ cm and the volume $V = 14872$ cm^3.

Step 2: Solving for r.

Substituting the known values into the formula:

$$14872 = \pi r^2 \times 28$$

Solving for r, we get:

$$r = 14\,\text{cm}$$

Quick Tip

When a paper is rolled into a cylinder, the height becomes the width of the paper, and the circumference gives the formula for the base.

Q19. A bus leaves at 5 am from Bangalore and reaches Hyderabad at 12:00 noon. Another bus leaves Hyderabad at 8 am and reaches Bangalore at 3 pm. At what time do the buses meet?

(1) 10:40 am

(2) 10:00 am

(3) 10:55 am

(4) 11:30 am

Correct Answer: (1) 10:40 am

Solution:

Step 1: Calculate the relative speeds.

The first bus covers the distance from Bangalore to Hyderabad in 7 hours, and the second bus covers the distance from Hyderabad to Bangalore in 7 hours. Hence, the relative speed is constant.

Step 2: Calculate the time of meeting.

The two buses will meet after travelling for 5 hours, so the meeting time is at 10:40 am.

Quick Tip

Use the concept of relative speed to find the time when two moving objects meet.

Q20. In Swapna's opinion her weight is greater than 65 kg but less than 72 kg. Her brother does not agree with Swapna and he thinks her weight is greater than 60 kg but less than 70 kg. In her mother's view her weight cannot be greater than 68 kg. If all of them are correct, what is the average of different, probable weights of Swapna?

(1) 67 kg

(2) 68.5 kg

(3) 69 kg

(4) 66.5 kg

Correct Answer: (4) 66.5 kg

Solution:

Step 1: Find the range of possible weights.

The possible weight range is from 65 kg to 68 kg, based on the opinions provided.

Step 2: Calculate the average weight.

The average of these weights is:

$$\frac{65 + 68}{2} = 66.5\,\text{kg}$$

Quick Tip

To find the average of a range of values, add the smallest and largest values and divide by 2.

Q21. Find the area covered by $f(x) = -x^2 + 4x + 3$ and $g(x) = -x^3 + 7x^2 - 10x + 5$ over $1 \leq x \leq 2$.

(1) $\frac{23}{6}$

(2) $\frac{49}{12}$

(3) $\frac{56}{3}$

(4) $\frac{56}{4}$

Correct Answer: (1) $\frac{23}{6}$

Solution:

Step 1: Calculate the area between the curves.

The area between the two curves is given by the integral of the difference of the two functions over the given interval.

Step 2: Apply the formula for the area.

$$\text{Area} = \int_1^2 (f(x) - g(x))\, dx$$

Quick Tip

To find the area between two curves, subtract one function from the other and integrate over the given limits.

Q22. If Suresh invests Rs. 2,00,000 at an interest rate of 10% per annum, how much money will he have at the end of three years, if the compounding frequency is semi-annual?

(1) Rs. 2,58,342

(2) Rs. 2,68,019

(3) Rs. 2,66,200

(4) Rs. 3,54,312

Correct Answer: (1) Rs. 2,58,342

Solution:

Step 1: Formula for compound interest.

The formula for compound interest is:

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

where P is the principal, r is the rate of interest, n is the number of times the interest is compounded per year, and t is the time in years.

Step 2: Apply the formula.

Substituting the values into the formula, we get:

$$A = 200000 \left(1 + \frac{0.1}{2}\right)^{2\times3} = 200000 \left(1.05\right)^{6} = 258342$$

Quick Tip

For semi-annual compounding, divide the annual rate by 2 and multiply the time by 2.

Q23. The area of trapezium shaped field is 368 m^2. The distance between the two parallel sides is 16 m and one of the parallel side is 22 m. Find the other parallel side.

(1) 22 m

(2) 24 m

(3) 23 m

(4) 21 m

Correct Answer: (3) 23 m

Solution:

Step 1: Formula for the area of a trapezium.

The area of a trapezium is given by:

$$A = \frac{1}{2} \times (a + b) \times h$$

where a and b are the lengths of the parallel sides and h is the height.

Step 2: Substituting the known values.

Substituting the values of area, height, and one parallel side, solve for the unknown parallel side.

Quick Tip

To find the unknown parallel side in a trapezium, rearrange the area formula and solve for the unknown side.

Q24. Consider the equation $y = -x^4 + 2x^2$, then:

(1) y is decreasing at $(-\infty, -1), (0, 1)$ and increasing at $(-1, 0), (1, \infty)$

(2) y is increasing at $(-\infty, -1), (0, 1)$ and increasing at $(-1, 0), (1, \infty)$

(3) y is increasing at $(-\infty, -1), (0, 1)$ and remaining constant at $(-1, 0), (1, \infty)$

(4) y is decreasing at $(-\infty, -1), (0, 1)$ and remaining constant at $(-1, 0), (1, \infty)$

Correct Answer: (1)

Solution:

Use differentiation to calculate the points of maxima and minima. Then, check the intervals of increase and decrease.

Quick Tip

Use the first derivative to analyze the increasing and decreasing intervals of a function.

Q25. The task of writing a 'Program' was in progress. Following details are available. Programmer I and Programmer II can complete the task in 18 days. Programmer I and Programmer III can complete the task together in 12 days and Programmer II and Programmer III together in 9 days. In how many days Programmer II alone can complete the task?

(1) 40 days

(2) 30 days

(3) 24 days

(4) 18 days

Correct Answer: (2) 30 days

Solution:

Use the concept of work and rates of work. Calculate the individual rates of work for each programmer and then solve for the time taken by Programmer II alone to complete the task.

Quick Tip

Use the rates of work and the total work to calculate the time taken by each individual to complete the task.

Logical Reasoning

Q26. Find the odd one from the given options:

(1) China

(2) Pakistan

(3) India

(4) Bangladesh

Correct Answer: (1) China

Solution:

The odd one is China, as all the other countries are in South Asia while China is in East Asia.

Quick Tip

When identifying an odd one out, consider geographic, cultural, or political differences.

Q27. Fill the missing item in the series: PAT, PEN, PIN, POT, ___

(1) PIG

(2) PET

(3) PUT

(4) POT

Correct Answer: (3) PUT

Solution:

The pattern is based on changing the third letter of each word. ”PAT” to ”PEN” to ”PIN” shows the third letter changing in a sequence of vowels.

Quick Tip

When solving word patterns, look for recurring letter positions or sequences.

Q28. Answer the question based on the following conditions. Question is followed by two statements. What is the price of mangoes per kg? I. Ten kg of mangoes and two dozen oranges cost Rs. 252. II. Two kg of mangoes could be bought in exchange for one dozen oranges.

(1) A

(2) B

(3) C

(4) D

Correct Answer: (3) C

Solution:

Using both statements together, we can calculate the price of one kg of mangoes. Statement I gives us the price of mangoes and oranges, and statement II provides a relationship between oranges and mangoes.

Quick Tip

When dealing with statements, combine them to extract the necessary information.

Q29. If $+$ means divided by, $-$ means multiplied by, $\times$ means minus, and $/$ means plus, then the value of $20 + 5 + 9 - 4 \times 3$ is:

(1) 13

(2) 37

(3) 28

(4) 56

Correct Answer: (2) 37

Solution:

Substitute the given operations in place of the symbols:

$$20 + 5 + 9 - 4 \times 3 \quad \text{becomes} \quad 20 \div 5 + 9 \times 4 - 3$$

Then calculate step by step. The result is 37.

Quick Tip

Read the symbols carefully and follow the order of operations to get the correct result.

Q30. If $5 = 11$ and 2 = 5, then 8 = ?

(1) 13

(2) 17

(3) 19

(4) 12

Correct Answer: (1) 13

Solution:

The pattern involves multiplying the number on the left by a certain factor. By observing the relationship, we can find the result for 8.

Quick Tip

Look for patterns in the numbers and apply the same transformation to the given number.

Q31. In a certain code, JODHPUR is written as RUJODHP and LATHUR as RULATH. How is CANDIDATE written in that code?

(1) EACNDITA

(2) NDDATACE

(3) ETACNDIA

(4) DICANDEA

Correct Answer: (1) EACNDITA

Solution:

The pattern involves reversing the first two letters and then following a specific rule for rearranging the letters.

Quick Tip

Look for patterns in the rearrangement of letters when solving letter-coding problems.

Q32. A is the daughter of B; C is the sister of A, B is the daughter of D. How is C related to D?

(1) Granddaughter

(2) Grandmother

(3) Daughter

(4) Aunt

Correct Answer: (1) Granddaughter

Solution:

Since C is the sister of A, and B is the daughter of D, it follows that C is the granddaughter of D.

Quick Tip

Use family relationships and their hierarchy to solve such questions.

Q33. In analogy, you are required to guess the relation between the two given words and fill in the blank after finding the similar relationship by choosing the option, given below:
Breeze : Cyclone :: Drizzle : ?

(1) Flood
(2) Storm
(3) Downpour
(4) Earthquake

Correct Answer: (3) Downpour

Solution:
The relationship between the first pair is that breeze is a mild version of cyclone, and drizzle is a mild version of downpour.

Quick Tip
Use the analogy to find a mild version of the second phenomenon.

Q34. In a certain language ‘He is good’ is coded as fa so lo. ‘She is good’ is coded as fa so la. What is the code for ‘He’ in that language?

(1) lo
(2) so
(3) fa
(4) la

Correct Answer: (3) fa

Solution:
By observing the pattern in the given codes, we can deduce that ”He” is represented by ”fa.”

Quick Tip

Look for repeating patterns in the code to identify the correct substitution.

Q35. Identify the odd one among the following:

(1) Stem

(2) Leaf

(3) Flower

(4) Rain

Correct Answer: (4) Rain

Solution:

Stem, leaf, and flower are parts of a plant, while rain is a natural phenomenon unrelated to the plant.

Quick Tip

Identify the category to which each item belongs when selecting the odd one out.

Q36. Consider the word: SPARE written as 90847, CLEAR as 56784 and TOUR as 1234 by using certain code, point out the 5th digit for the word SCULPTURE in the same code:

(1) 3

(2) 0

(3) 4

(4) 6

Correct Answer: (2) 0

Solution:

The logic used in the given codes needs to be applied to the word ”SCULPTURE”. The codes for the letters will give us the corresponding 5th digit.

Quick Tip

Identify patterns in the letter-code relationships and apply them to decode similar words.

Q37. When a photo of a man was shown to Abhijit he reacted as follows: ”His mother is the wife of my father’s son. Brothers and sisters, I have none.” Therefore the photo belongs to ___?

(1) His cousin

(2) His son

(3) His uncle

(4) His brother

Correct Answer: (4) His brother

Solution:

”My father’s son” refers to Abhijit himself. Hence, ”His mother” would be Abhijit’s own mother, meaning the photo is of his brother.

Quick Tip

For family relationship questions, carefully analyze the statements to deduce relationships.

Q38. In analogy, you are required to guess the relation between the two given words and fill in the blank after finding the similar relationship by choosing the option, given below: Artist : Painting :: Attorney : ___?

(1) Politics

(2) Law

(3) Teaching

(4) Sports

Correct Answer: (2) Law

Solution:

Just as an artist creates paintings, an attorney deals with law. Hence, the correct answer is Law.

Quick Tip

When solving analogies, find the common relationship between the given words and apply it to the other pair.

Q39. Fill the missing item in the series: IJK, IJK2, IJK2K, ___, IJK2K3

(1) IJK3

(2) IJ3K

(3) IJ2K2

(4) IJK2

Correct Answer: (1) IJK3

Solution:

The series follows the pattern of increasing the number after K. Hence, the next in the sequence is IJK3.

Quick Tip

Look for repeating patterns in the sequence and fill in the missing term accordingly.

Q40. Read the following six statements. Look at the four sets of combination of three. Choose that set in which the third statement logically follows from the first two:

A. No Father is a Teacher

B. Some Teachers like to work

C. No Man is a prude

D. Some prude are Teachers

E. Some Teachers are Men

F. All Men like to work

(1) ABE

(2) CED

(3) FEB

(4) BEF

Correct Answer: (4) BEF

Solution:

The correct combination that logically follows is BEF based on the relationships established in the statements.

Quick Tip

Look for direct logical links between the statements to form valid combinations.

Q41. Based on the statement given below, which do you think is more appropriate?

Statement: ”All that glitters is not gold”

Conclusion: (i) The external appearance of something is not the reliable indication of its true nature.

(ii) The external appearance of something is a reliable indication of its true nature.

(iii) The external and internal nature of something should be examined before making any judgment.

(iv) Only internal nature can be reliable and gives the truth.

(1) Only (i) is correct

(2) Both (i) and (iii) are correct

(3) Only (iii) is correct

(4) Only (iv) is correct

Correct Answer: (2) Both (i) and (iii) are correct

Solution:

The statement suggests that external appearances are not always truthful, and thus both (i) and (iii) logically follow.

Quick Tip

Use critical thinking to evaluate conclusions based on the given statement and pick the ones that align with the context.

Q42. The question below is followed by two arguments numbered I and II. You have to decide which of the argument is 'Strong' and which is 'Weak' argument?
Statement: Should higher education be privatized?
Arguments I: Yes, this is the only way to reduce the unemployment
Arguments II: No, it will further add to the education burden on public.

(1) If only argument I is strong
(2) If only argument II is strong
(3) If either I or II is strong
(4) If both I and II are strong

Correct Answer: (1) If only argument I is strong

Solution:

Argument I is strong because privatization is considered a solution for reducing unemployment. Argument II is weak as it does not address the potential benefits of privatization.

Quick Tip

Assess arguments based on their relevance and impact when deciding which is strong or weak.

Q43. Find out the missing number in the given matrix:

(1) 16

(2) 22

(3) 18

(4) 26

Correct Answer: (2) 22

Solution:

The pattern of the matrix involves a certain arithmetic relationship between the numbers.

Solving the matrix leads to the missing number being 22.

Quick Tip

Look for arithmetic relationships (addition, multiplication) to solve matrix puzzles.

Q44. Read the instruction carefully and answer the following questions:

The description pairs about six cities:

B and E are not trade centres

A and E are not tourist places

D and F are not manufacturing hubs then:

(1) A and C are both trade centres

(2) B and F are manufacturing hubs

(3) D and F are not tourist places

(4) D and F are both trade centres and manufacturing hubs

Correct Answer: (3) D and F are not tourist places

Solution:

Based on the given pairs, we deduce the correct relationship between the cities.

Quick Tip

Carefully follow the given pairs and apply logical deductions to find the correct option.

Q45. Read the below statements and choose the correct answer:

(a) Prices of petrol and diesel increased, in the past few months

(b) Crude oil producing countries reduced the production of crude oil

(1) Statement (a) is cause and (b) is the effect

(2) Statement (b) is cause and (a) is the effect

(3) (a) and (b) statements are not related

(4) (a) and (b) are due to some other cause

Correct Answer: (1) Statement (a) is cause and (b) is the effect

Solution:

The increase in petrol and diesel prices is the result of the reduction in the production of crude oil, making it a cause-effect relationship.

Quick Tip

Analyze cause and effect statements carefully to identify the correct relationship.

Q46. In analogy, you are required to guess the relation between the two given words and fill the blank after finding the similar relationship by choosing the option, given below: Ink : Pen :: Blood : ___?

(1) Accident

(2) Doctor

(3) Donation

(4) Vein

Correct Answer: (4) Vein

Solution:

Just as ink is essential for a pen, blood is carried by veins. Hence, the correct answer is ”Vein.”

Quick Tip

In analogies, look for relationships between the words in each pair to find the most fitting analogy.

Q47. In a stage programme, organisers had to accommodate 4 guests - Guest I, Guest II, Guest III and Guest IV and 3 members of organising committee O - I, O - II and O - III. The committee decided that O - III will be sitting in such a way that equal number of people are present on either side of him. No Guests shall be made to sit at the extreme ends. G - I shall sit immediate left of G - III, G - I shall be seated immediate right of O - II.
Who will be asked to sit third from left end of row on the stage?

(1) O - II

(2) G - II

(3) G - I

(4) G - III

Correct Answer: (3) G - I

Solution:

Based on the seating arrangement, G - I will be sitting third from the left end.

Quick Tip

Use seating arrangements and spatial positioning to logically deduce the correct order.

Q48. Bhagya is twice as old as Arathi but twice younger than Kavita. Chandrika is half the age of Arathi but is twice older than Deeksha. Who is the second oldest?

(1) Arathi

(2) Bhagya

(3) Chandrika

(4) Deeksha

Correct Answer: (3) Chandrika

Solution:

By calculating their ages using the given relationships, Chandrika turns out to be the second oldest.

Quick Tip

In age-related problems, use algebra to form equations based on the relationships given.

Q49. Four boys and four girls are sitting around a square facing the centre. One person is sitting at each corner and at the mid-point of each side of the square. Madhav is sitting diagonally opposite to Udaya who is to the right of Garima. Rahim who is to the left of Garima is diagonally opposite to Gokul. Who is to the left of Babu? Position of Sudha is not to the right of Madhav but in front of Priya. Who is sitting opposite to Babu?

(1) Priya

(2) Garima

(3) Udaya

(4) Madhav

Correct Answer: (1) Priya

Solution:

Using the seating arrangement and positional clues, Priya sits opposite to Babu.

Quick Tip

Use spatial and directional clues to solve seating arrangement problems.

Q50. The question below is followed by two arguments numbered I and II. You have to decide which of the argument is ‘Strong’ and which is ‘Weak’ argument? Statement: Should students study in early hours of morning?
Argument 1: Yes, mind is fresh and alert at that time.
Argument 2: No, Early risers fell sleepy throughout the day.

(1) Neither I nor II is strong
(2) Both the arguments are strong
(3) Only II is strong
(4) Only I is strong

Correct Answer: (4) Only I is strong

Solution:
Argument I is strong because it explains the benefits of studying early, while Argument II is weak as it contradicts the idea of early morning productivity.

Quick Tip

Evaluate the relevance of arguments to determine their strength and applicability.

Language Comprehension

Passage:
Read the following passage carefully and answer the questions that follow.

Someone must have been telling about Josef K., for one morning, without having done anything wrong, he was arrested. Frau Grubach’s cook, who brought him his breakfast at around eight every day, did not appear. That had never happened before. For a while K. waited - from his pillow he saw the old woman who lived opposite watching with, for her, quite unusual curiosity - but then, both perplexed and hungry, he rang. Immediately there was a knock at the door and a man he had never seen in the apartment came in. He was

simply yet solidly built wearing a close-fitting black suit like an outfit for travelling, was equipped with a variety of pleats, pockets, buckles, buttons and a belt that made it appear especially practical, without its precise purpose being clear. ”Who are you ?” K. asked, immediately half-sitting up in bed. But the man ignored the question, as if his presence there had simply to be accepted, and merely said, ”You rang? ’Anna’s to bring me my breakfast,’ said K., then tried to work out who the man actually was by observing him in silence and racking his brains. However he didn’t expose himself to K.’s scrutiny for very long, but turned to the door and opened at slightly to say to someone who was obviously standing just behind it, ‘He wants Anna to bring him his breakfast.’ Brief laughter in the neighbouring room ensued; it from the sound it was unclear whether there were several people joining in or not. Although he could not have learnt anything he didn’t know already, the stranger now said to K., as if reporting someone else’s words, ‘It’s not possible.’

Q51.

The given passage can be called as:

(1) Expository
(2) Analytical
(3) Narrative
(4) Explanatory

Correct Answer: (3) Narrative

Solution:

The passage narrates the events related to Josef K.’s arrest, which is a characteristic of a narrative passage.

Quick Tip

A narrative passage primarily tells a story with characters and events unfolding.

Q52. In the sentence ”That had never happened before . . . ”, ‘that’ refers to:

(1) Arresting of Joseph K.

(2) Cook not bringing his breakfast.

(3) Someone telling lies.

(4) Old women watching K.

Correct Answer: (2) Cook not bringing his breakfast.

Solution:

The phrase ”That had never happened before” refers to the event where the cook did not bring Josef K. his breakfast as was customary.

Quick Tip

Focus on the context of the sentence to determine what ‘that’ refers to in the passage.

Q53. Josef K was arrested :

(1) Though he had done nothing wrong.

(2) Because he was telling lies.

(3) Because he had stolen things.

(4) Because he did not get up.

Correct Answer: (1) Though he had done nothing wrong.

Solution:

Josef K was arrested despite having done nothing wrong, which is explicitly mentioned in the passage.

Quick Tip

When identifying the reason for an action, refer directly to the passage for the cause stated.

Passage Read the following passage carefully and answer the questions that follow.

Delhi's air quality deteriorates with unfailing regularity at this time of the year, with large swathes of north India in the grip of a suffocating smog, but the State Governments that can make it easier for millions to breathe do not act with any sense of urgency. That it has turned into a public health emergency in the capital, with the air quality index touching extremely hazardous levels in some parts, necessitating the closure of primary schools, has further lowered its standing. It is unconscionable for governments, through indifference and inaction, to subject citizens to such toxic air, and cause extreme suffering especially among people with respiratory ailments and impaired lung function. The smog that envelopes the region is exacerbated by the burning biomass in Punjab and Haryana, and the winter atmosphere is marked by weak ventilation. An analysis of local sources by IIT-Kanpur last year pointed to construction dust, vehicular pollution, and domestic and industrial emissions as other factors. Clearly, the burden of such chronic problems has outweighed the benefits conferred by measures such as the ban of Deepavali crackers, and in the past, the shift to compressed natural gas for commercial vehicles and restricting cars use to odd and even number plates on alternate days. A comprehensive solution demands that the governments of Delhi, Punjab, Haryana and Uttar Pradesh, assisted by the Centre, address farm residue burning and construction dust.

Q54.

What has led to the closure of primary schools in Delhi?

(1) Bursting of Deepavali crackers
(2) The air quality index reached extremely hazardous level
(3) Illness among children
(4) Illness among teachers

Correct Answer: (2) The air quality index reached extremely hazardous level

Solution:

The passage indicates that the closure of primary schools in Delhi was due to the air quality index reaching extremely hazardous levels.

Quick Tip

Look for explicit mentions in the passage that directly explain the cause of a particular situation.

Q55. The word ‘exacerbate’ means:

(1) Worsen

(2) Beautiful

(3) Ugly

(4) Indifferent

Correct Answer: (1) Worsen

Solution:

The word ”exacerbate” means to make a situation worse or more severe, so it is synonymous with ”worsen.”

Quick Tip

In vocabulary questions, context and word usage are key in determining the correct meaning.

Q56. Measures such as the ban on Deepavali crackers, the shift to compress natural gas for commercial vehicles and restricting cars to odd and even number plates on alternate days did not solve the pollution problem because:

(1) People did not follow rules

(2) Compressed natural gas was not available

(3) Autos caused pollution

(4) There are other factors like construction dust, domestic and industrial emissions etc.

Correct Answer: (4) There are other factors like construction dust, domestic and industrial emissions etc.

Solution:

The passage mentions that despite measures like banning Deepavali crackers, other factors like construction dust and industrial emissions played a major role in the pollution.

Quick Tip

When solutions fail, it is important to recognize the presence of other contributing factors.

Passage Read the following passage carefully and answer the questions that follow.

The Indian Space Research Organisation boosted its reputation further when it successfully launched a record 104 satellites in one mission from Sriharikota on Wednesday by relying on its workhorse Polar Satellite Launch Vehicle rocket. An earth observation Cartosat-2 series and two other nano satellites were the only Indian satellites launched: the remaining were from the United States, Israel, the UAE, the Netherlands, Kazakhstan and Switzerland. Of the 101 foreign satellites launched, 96 were from the U.S. and one each from the other five countries. Till now Russia held the record of launching 37 satellites in a single mission, in 2014, while the National Aeronautics and Space Administration of the U.S. launched 29 satellites in one go in 2013. Last June, ISRO had come close to NASA's record by launching 20 satellites in one mission. But ISRO views the launch not as a mission to set a world record but as an opportunity to make full use of the capacity of the launch vehicle. The launch is particularly significant as ISRO now cements its position as a key player in the lucrative commercial space launch market by providing a cheaper yet highly reliable alternative. At an orbital altitude of around 500 km, the vehicle takes about 90 minutes to complete one orbit. Though ISRO had sufficient time to put the satellite into orbit, it accomplished the task in about 12 minutes. With the focus on ensuring that no two satellites collided with each other, the satellites were injected in pairs in opposite directions.

Successive pairs of satellites were launched once the vehicle rotated by a few degrees, thereby changing the separation angle and time of separation to prevent any collision.

Q57.

What do you understand by the term 'Workhorse'?

(1) A person or machine that dependably performs hard work over a long period of time

(2) Machine run by a horse

(3) Chariot

(4) A worker going on a horse

Correct Answer: (1) A person or machine that dependably performs hard work over a long period of time

Solution:

A workhorse is defined as a dependable person or machine that performs a lot of work reliably over a long period.

Quick Tip

In idiomatic terms, 'workhorse' refers to something or someone used for consistent and reliable work.

Q58. ISRO views the launch of 104 satellites in one mission as:

(1) Setting a world record

(2) An opportunity to make full use of the capacity of the launch vehicle

(3) Surpassing the developed countries like US

(4) A simple activity

Correct Answer: (1) Setting a world record

Solution:

ISRO viewed the launch of 104 satellites as setting a world record, as it surpassed previous records for most satellites launched in a single mission.

Quick Tip

World records often signify a breakthrough in technological achievements or scale, such as ISRO's satellite launch.

Q59. How can ISRO benefit by this launch?

(1) ISRO gets a world record
(2) ISRO can become a key player in commercial space launch market
(3) ISRO will get more funds from the government
(4) NASA will help ISRO

Correct Answer: (2) ISRO can become a key player in commercial space launch market

Solution:
This launch helps ISRO establish its position as a leader in the growing commercial space launch market, offering a cost-effective solution.

Quick Tip

Breaking records can open new business avenues, particularly in competitive industries like space exploration.

Passage: Read the following passage carefully and answer the questions that follow.

Renowned farm scientist M.S. Swaminathan has pointed out that there is no field where the benefit-cost ratio is as high as in agricultural Research and Development (R and D). This statement is well borne out in the case of Basmati rice, where India's exports have shot up more than 10-fold over the last 10 years. Roughly three-fourths of the shipments expected to touch $5 billion this year are today accounted for by PUSA-1121, a high yielding variety bred by the Indian Agricultural Research Institute (IARI), which has an annual plan budget of hardly Rs. 60 crore. The same goes for cotton, where a more than two-and-a-half times

jump in the country's output since 2002-03 has been courtesy these BT hybrids. Or for that matter maize, which has witnessed a doubling of production over the last 10 years with the advent of single cross hybrids. These success stories are not merely about technical interventions translating into higher crop production and farm incomes. They also point to the crucial role of the private sector - be it companies, industries, processors, or exporters - in ensuring effective transfer of research know-how from laboratories to farmers' fields. In Bt-cotton and single-cross hybrids, the breeders were mainly private multinationals such as Monsanto and Dupont. They had every reason to aggressively 'push' these new cropping technologies. But PUSA-1121 would have remained in the IARI's research fields, but for a certain Basmati exporter who recognized its potential and took the initiative to promote the variety, both among farmers and overseas markets. IARI has since come out with improved Basmati variety; PUSA-1509, which also promises to be successful public sector breeding effort undertaken in close collaboration with exporting and farming community.

Q60. The author of this passage feels that :

(1) There should be more technological intervention leading to higher crop production.
(2) PPP is not possible in R and D in agriculture.
(3) There is a need to encourage PPP in R and D in agriculture.
(4) R and D agriculture should be moved away from molecular biology.

Correct Answer: (3) There is a need to encourage PPP in R and D in agriculture.

Solution:
The passage points to the need for Public-Private Partnerships (PPP) in R and D for agriculture to achieve better crop production outcomes.

Quick Tip

Public-Private Partnerships (PPP) in agriculture are seen as an important mechanism for driving technological advancements and improving productivity.

Q61. "Benefit-cost ratio is high in agricultural R and D.", then what is correct about the statement in the passage?

(1) Benefit-cost ratio is higher in Basmati rice than in cotton.
(2) Benefit-cost ratio is lower in agricultural R and D.
(3) Benefit-cost ratio in R and D in agriculture is equal to agricultural expenses.
(4) Benefit-cost ratio is relatively higher in agricultural R and D than any other field.

Correct Answer: (1) Benefit-cost ratio is higher in Basmati rice than in cotton.

Solution:
The passage indicates that the benefit-cost ratio for Basmati rice is high in comparison to cotton, making it a key factor in agricultural R and D success.

Quick Tip

Benefit-cost ratio is a measure used to evaluate the return on investment in research, and it can vary across different sectors like agriculture.

Q62. What is true about, "there is a lot of hidden value in public sector laboratories"?

(1) The laboratories are undervalued in market terms compared to private laboratories.
(2) There is a tremendous potential of the public laboratories which can be further utilized for the benefit of the farmers.
(3) The public sector laboratories are doing better than private laboratories.
(4) The public sector laboratories are underfunded compared to their real market value.

Correct Answer: (2) There is a tremendous potential of the public laboratories which can be further utilized for the benefit of the farmers.

Solution:
The passage mentions that there is a great potential in public sector laboratories to contribute to the agricultural sector, particularly for the benefit of farmers.

Quick Tip

Public sector laboratories have often been underutilized despite their potential to contribute to technological and agricultural advancements.

Q63. What inference can be drawn from, "the public sector laboratories should concentrate more on demand-driven research."?

(1) Moving away from researches that are old-styled.
(2) Research should be more demand-driven.
(3) There should be a balance between old-styled research and modern research.
(4) If the research is not demand-driven then that can't be a good research.

Correct Answer: (2) Research should be more demand-driven.

Solution:
The passage suggests that public sector laboratories need to focus on research that is driven by demand and the needs of the agricultural sector.

Quick Tip

Demand-driven research ensures that the findings are more practical and aligned with real-world needs, particularly in agriculture.

Q64. PPP framework for agricultural research:

(1) Can be extended to sponsored/joint research collaboration with industry.
(2) Is a good method to reach out to agricultural community.
(3) Is the best way to utilize the hidden value of public laboratories.
(4) Can bring a lot of profit and revenue to agricultural R and D.

Correct Answer: (3) Is the best way to utilize the hidden value of public laboratories.

Solution:

The passage emphasizes that the PPP framework can greatly enhance the use of public laboratories' potential in the agricultural R and D sector.

Quick Tip

Collaborations through PPP can open new avenues for research and increase the effectiveness of public laboratories.

Q65. "These success stories" in the passage refers to:

(1) Public-Private Partnership

(2) Research in molecular biology

(3) PUSA-1121b and BT hybrids

(4) The scientist M.S. Swaminathan

Correct Answer: (3) PUSA-1121b and BT hybrids.

Solution:

The success stories mentioned in the passage are specifically related to PUSA-1121b and BT hybrids, which have significantly impacted crop production.

Quick Tip

Look for key references in the passage that highlight specific achievements when identifying success stories.

Q66. Choose the word or phrase that has the most similar meaning for the word given below: LABYRINTHINE

Correct Answer: (4) Difficult to navigate

Solution: The word 'Labyrinthine' refers to something that is like a maze, intricate, or difficult to navigate. Hence, the most similar meaning is "Difficult to navigate".

Quick Tip

Labyrinthine structures are typically complex and winding, leading to confusion or difficulty in navigation.

Q67. Choose the word or phrase that has the most nearly opposite meaning for the word given: ARDUOUS

Correct Answer: (2) Something that does not require big efforts

Solution: 'Arduous' refers to something that is very difficult and requires a great deal of effort. The opposite of arduous would be something that is easy or does not require much effort.

Quick Tip

Antonyms of words describing effort or difficulty typically refer to ease or simplicity.

Q68. Rearrange the statements (i)(ii)(iii)(iv)(v) and (vi) in a proper order to form a meaningful paragraph and then answer the questions given below:
(i) Since there was a time constraint for him, he decided to order from online marketing sites.
(ii) And ordered a mobile phone from Amazon.com.
(iii) Nikhil is a time savvy customer who always wants to save time wherever possible.
(iv) He sat down on his system at home.
(v) One day Nikhil wanted to buy a new mobile phone for him.
(vi) Within three days from the date of ordering he received his mobile phone from Amazon.com.

Which sentence comes in third position?

Correct Answer: (4) (iv), (iii), (v), (i), (ii)

Solution: The logical order should be:

(iv) He sat down on his system at home.

(iii) Nikhil is a time savvy customer who always wants to save time wherever possible.

(v) One day Nikhil wanted to buy a new mobile phone for him.

(i) Since there was a time constraint for him, he decided to order from online marketing sites.

(ii) And ordered a mobile phone from Amazon.com.

Quick Tip

When arranging sentences logically, first consider the actions and their sequence.

Q69. From the previous paragraph as formed with six statements, which is the fifth sentence?

Correct Answer: (3) (iii)

Solution: The fifth sentence is (iii), as it logically follows after sentence (ii) and before sentence (v).

Quick Tip

When identifying specific sentences, be sure to follow the flow of thought and actions described in the paragraph.

Q70. E-Business firms are gaining popularity day-by-day because of higher _____ and lower _____.

Correct Answer: (3) product varieties, price

Solution: E-businesses typically offer a wide variety of products at competitive prices. Hence, the correct answer is product varieties and price.

Quick Tip

E-business growth is often attributed to product variety and price flexibility.

Q71. The appointment letter given by the consultancy turned _____ to be fake one.

Correct Answer: (1) out

Solution: The phrase ”turned out to be fake” is a common expression used to describe a situation where something is revealed to be false.

Quick Tip

In phrases like ”turned out to be,” ’out’ is the common preposition used.

Q72. In the sentence below, find the closest substitute for the underlined expression :
Ram advised Shyam not to put all the eggs in one basket.

Correct Answer: (3) Do not put all your resources into a single task or effort.

Solution: The phrase ”Do not put all your eggs in one basket” means to not concentrate all your efforts or resources in one area.

Quick Tip

This expression is often used as a metaphor for spreading risks or resources.

Q73. The following are jumbled up parts of a sentence. Rearrange them in a proper sequence.

Correct Answer: (4) PQRS

Solution: The correct order of the jumbled parts of the sentence is PQRS.

Quick Tip

Rearranging jumbled sentences requires focusing on the logical sequence of actions and statements.

Q74. Choose the lettered pair that express a relationship that is most nearly like that expressed in the capitalized pair given below: RUTHLESS : COMPASSIONATE

Correct Answer: (4) Lethargic : Energetic

Solution: Ruthless and compassionate are opposite qualities, similar to how lethargic and energetic are opposites.

Quick Tip

Opposite pairs help identify relationships based on contrasting qualities.

Q75. One fully depends on others can be called a:

Correct Answer: (1) Parasite

Solution: A parasite is an organism that lives off another, fully depending on the host for survival.

Quick Tip

Parasites are often seen as dependent on others, much like a person who doesn't contribute but takes.

General Awareness

Q76. Who is the first Hinder woman to be elected to Pakistan's Senate ?

(1) Fathima Beevi
(2) Kamala Harris
(3) Thahira. S.
(4) Krishna Kumari Kohli

Correct Answer: (4) Krishna Kumari Kohli

Solution: The correct answer is (4) Krishna Kumari Kohli, as she is the first Hindu woman to be elected to Pakistan's Senate.

Quick Tip

In Pakistan, the election of a Hindu woman to the Senate was a significant milestone.

Q77. In which three North Eastern states, Legislative Assembly Elections were held in the month of February 2018 ?

(1) Nagaland, Sikkim, Mizoram
(2) Tripura, Meghalaya, Nagaland
(3) Mizoram, Assam, Sikkim
(4) Nagaland, Sikkim, Manipur

Correct Answer: (1) Nagaland, Sikkim, Mizoram

Solution: The correct answer is (1) Nagaland, Sikkim, Mizoram, as these states held their Legislative Assembly Elections in February 2018.

Quick Tip

The February 2018 elections were a key political event for these states in the North East.

Q78. Who is the first woman to win the Man Booker Prize ?

(1) Berrice Rubens
(2) Penelope Fitzgerald
(3) Elizabeth Bowen
(4) Anita Brookner

Correct Answer: (4) Anita Brookner

Solution: The correct answer is (4) Anita Brookner, as she was the first woman to win the prestigious Man Booker Prize.

Quick Tip

Anita Brookner was recognized for her literary contribution and became the first female winner of the Booker Prize.

Q79. Advaita philosophy was propounded by:

(1) Madhvacharya
(2) Adi Shankara
(3) Vallabhacharya
(4) Veda Vyasa

Correct Answer: (2) Adi Shankara

Solution: The correct answer is (2) Adi Shankara, as he is the one who propounded Advaita philosophy, emphasizing non-dualism.

Quick Tip

Advaita philosophy teaches that the ultimate reality is non-dual, and it is a fundamental concept in Vedantic thought.

Q80. Washing soda is the common name for:

(1) Sodium bicarbonate
(2) Calcium carbonate
(3) Sodium carbonate
(4) Calcium bicarbonate

Correct Answer: (3) Sodium carbonate

Solution: The correct answer is (3) Sodium carbonate, which is commonly known as washing soda.

Quick Tip

Washing soda is commonly used for cleaning purposes due to its alkaline nature.

Q81. The first month of the Indian National Calendar is:

(1) Ashada

(2) Vaishaka

(3) Chaitra

(4) Magha

Correct Answer: (3) Chaitra

Solution: The correct answer is (3) Chaitra, as it is the first month in the Indian National Calendar.

Quick Tip

Chaitra marks the beginning of the Indian National Calendar and is traditionally associated with the start of the Hindu New Year.

Q82. Which of the following is not a dance form of Kerala ?

(1) Kathakali

(2) Yaksha gana

(3) Mohiniattam

(4) Ottam Thullal

Correct Answer: (2) Yaksha gana

Solution: The correct answer is (2) Yaksha gana, as it is not a traditional dance form from Kerala but originates from Karnataka.

Quick Tip

Kerala is known for its classical dance forms like Kathakali and Mohiniattam, distinct from Yaksha gana.

Q83. Atal Innovation Mission is a programme spear headed by:

(1) NITI Aayog

(2) Ministry of HRD

(3) AICTE

(4) Ministry of Industries

Correct Answer: (1) NITI Aayog

Solution: The correct answer is (1) NITI Aayog, as it spearheads the Atal Innovation Mission in India.

Quick Tip

The Atal Innovation Mission (AIM) fosters innovation and entrepreneurship in India through NITI Aayog.

Q84. Who acquired the online retailer “Flipkart” in India in 2018 ?

(1) Amazon

(2) Walmart

(3) E-bay

(4) Alibaba

Correct Answer: (2) Walmart

Solution: The correct answer is (2) Walmart, which acquired Flipkart in 2018 to strengthen its e-commerce presence in India.

Quick Tip

Walmart's acquisition of Flipkart was a major move to enhance its market share in India's growing e-commerce sector.

Q85. Which Govt. of India scheme aims at providing free cooking gas connections to the Indian women under BPL ?

(1) Pradhan Mantri Jan Arogya Yojana
(2) UDAN scheme
(3) Pradhan Mantri Ujjwala Yojana
(4) Pradhan Mantri Jan Dhan Yojana

Correct Answer: (3) Pradhan Mantri Ujjwala Yojana

Solution: The correct answer is (3) Pradhan Mantri Ujjwala Yojana, which aims to provide free LPG connections to women from BPL families.

Quick Tip

Pradhan Mantri Ujjwala Yojana promotes health and welfare by providing clean cooking fuel to families below the poverty line.

Q86. Who is the first Hinder woman to be elected to Pakistan's Senate ?

(1) Fathima Beevi
(2) Kamala Harris
(3) Thahira S.
(4) Krishna Kumari Kohli

Correct Answer: (4) Krishna Kumari Kohli

Solution: Krishna Kumari Kohli is the first Hindu woman to be elected to Pakistan's Senate. She was elected from the Sindh province in 2018.

Quick Tip

Kohli's election was a historic moment for religious minorities in Pakistan, showcasing diversity in political representation.

Q87. In which three North Eastern states, Legislative Assembly Elections were held in the month of February 2018 ?

(1) Nagaland, Sikkim, Mizoram
(2) Tripura, Meghalaya, Nagaland
(3) Mizoram, Assam, Sikkim
(4) Nagaland, Sikkim, Manipur

Correct Answer: (2) Tripura, Meghalaya, Nagaland

Solution: The Legislative Assembly Elections in Tripura, Meghalaya, and Nagaland were held in February 2018. These elections were significant as they played a role in shaping the political landscape of India's North-East region.

Quick Tip

The elections in the North-Eastern states often reflect regional political issues and trends.

Q88. Who is the first woman to win the Man Booker Prize ?

(1) Berrice Rubens
(2) Penelope Fitzgerald
(3) Elizabeth Bowen
(4) Anita Brookner

Correct Answer: (4) Anita Brookner

Solution: Anita Brookner was the first woman to win the Man Booker Prize for her novel ”Hotel du Lac” in 1984. This achievement made her one of the prominent figures in contemporary literature.

Quick Tip

Anita Brookner’s novel, ”Hotel du Lac,” was admired for its introspective and emotionally rich narrative.

Q89. Which of the following is the native Tribe of Andaman ?

(1) Aboriginal
(2) Maasai
(3) Jarwas
(4) Siddys

Correct Answer: (3) Jarwas

Solution: The Jarwas are an indigenous tribe of the Andaman Islands. They are one of the few remaining isolated tribes in the world. The Aboriginal tribe is from Australia, and Maasai are from East Africa.

Quick Tip

The Jarwa tribe has a very limited contact with the outside world, maintaining their traditional lifestyle.

Q90. When was smallpox globally eradicated a feat due largely to the efforts of WHO ?

(1) May 1980
(2) October 1977
(3) July 1967

(4) October 1987

Correct Answer: (1) May 1980

Solution: Smallpox was globally eradicated in May 1980, thanks to the concerted efforts of the World Health Organization (WHO), making it the first disease to be eradicated by human intervention.

Quick Tip

The success in eradicating smallpox remains a major milestone in public health and disease control.

Q91. The Rail Heritage Digitization project of Indian Railways is launched in collaboration with :

(1) Infosys Foundation
(2) Milinda Gates Foundation
(3) Google Arts and Culture
(4) Tata Institute of Social Sciences

Correct Answer: (3) Google Arts and Culture

Solution: The Rail Heritage Digitization project is a collaboration between Indian Railways and Google Arts and Culture. It aims to preserve the rich heritage of Indian Railways through digitization and make it accessible to the public.

Quick Tip

This project plays a vital role in preserving India's rail heritage and promoting digital accessibility.

Q92. What is the relationship between volt, current flow and resistance in an electric circuit ?

(1) Volt, current flow and resistance are directly proportional to each other

(2) Volt and current flow are directly proportional whereas volt and resistance are directly proportional

(3) Volt and current flow are inversely proportional where as volt and resistance are directly proportional

(4) Volt, current flow and resistance are inversely proportional to each other

Correct Answer: (3) Volt and current flow are inversely proportional where as volt and resistance are directly proportional

Solution: In an electric circuit, Ohm's Law describes the relationship. Voltage (V) is directly proportional to current (I) and resistance (R), which implies V = IR. Hence, current and voltage are inversely proportional when resistance is constant, while voltage and resistance are directly proportional.

Quick Tip

Ohm's Law is a fundamental principle that helps in understanding the relationship between voltage, current, and resistance.

Q93. What does the abbreviation IOT stand for ?

(1) Information on Technology

(2) International Office of Trade and Business

(3) Indian Ocean Territories

(4) Internet of Things

Correct Answer: (4) Internet of Things

Solution: The abbreviation IOT stands for "Internet of Things." It refers to the network of physical devices, vehicles, appliances, and other items embedded with sensors and software to connect and exchange data.

Quick Tip

IOT is a revolutionary concept that is transforming industries by enabling smart connectivity and data sharing.

Q94. Which upcoming capital city of an Indian State is to be named as Atal Nagar ?

(1) Amaravati

(2) Jodhpur

(3) Itanagar

(4) Naya Raipur

Correct Answer: (4) Naya Raipur

Solution: Naya Raipur is the new capital of Chhattisgarh, named Atal Nagar in honor of former Prime Minister Atal Bihari Vajpayee.

Quick Tip

Naya Raipur symbolizes the efforts towards urbanization and development in Chhattisgarh.

Q95. India's first indigenous nuclear powered ballistic missile submarine is named _____.

(1) INS Agni

(2) INS Arihant

(3) INS Surya

(4) INS Indra

Correct Answer: (2) INS Arihant

Solution: INS Arihant is India's first indigenous nuclear-powered ballistic missile submarine. It is a significant achievement in India's defense capabilities.

Quick Tip

INS Arihant is a strategic asset for India's naval defense and nuclear deterrence.

Q96. Who invented Ceiling fans?

(1) Philip Diehl

(2) Thomas Edison

(3) John Baird

(4) Frederic Banting

Correct Answer: (1) Philip Diehl

Solution: Philip Diehl is credited with inventing the ceiling fan. He invented the electric ceiling fan in 1882, creating a significant advancement in home comfort.

Quick Tip

The ceiling fan invention revolutionized home cooling, with Philip Diehl's work standing out in the field of electrical innovations.

Q97. In a recent move on Oct 2018, the Govt. of India had notified which of the following will head 'Strategic Policy Group' that assists the National Security Council?

(1) National Security Advisor

(2) Cabinet Secretary

(3) Prime Minister

(4) Chief of Army Staff

Correct Answer: (1) National Security Advisor

Solution: In October 2018, the Government of India appointed the National Security Advisor to head the 'Strategic Policy Group' which assists the National Security Council. This move reflects India's focus on strengthening its security policy framework.

Quick Tip

The National Security Advisor plays a pivotal role in shaping India's security and foreign policy strategy.

Q98. Identify the first non-test playing country to beat India in an International match:

(1) England
(2) Zimbabwe
(3) Sri Lanka
(4) Bangladesh

Correct Answer: (2) Zimbabwe

Solution: Zimbabwe was the first non-test playing country to beat India in an international cricket match, a historic moment for cricket history.

Quick Tip

Despite being a non-Test playing nation, Zimbabwe's win over India in international cricket marked a significant milestone in the sport's history.

Q99. Which of the following is not a member of G - 4 nations that have voiced concern over the lack of substantive progress in long-pending United Nations Security Council (UNSC) reform?

(1) India
(2) Brazil
(3) France
(4) Germany

Correct Answer: (3) France

Solution: France is not a member of the G-4 nations that have been advocating for reforms in the UNSC, unlike the other three countries (India, Brazil, and Germany) who have been vocal about the issue.

Quick Tip

The G-4 nations, consisting of India, Brazil, Germany, and Japan, are working towards a permanent seat in the UNSC to represent their growing global influence.

Q100. Which of the following is correct of the below given statements? Statement 1: Nuts can be classified as high-fat, high protein and high carbohydrate Statement 2: Cashew nuts come under the high carbohydrate category

(1) True, False
(2) True, True
(3) False, True
(4) False, False

Correct Answer: (1) True, False

Solution: Statement 1 is correct as nuts are high in fats, proteins, and carbohydrates. However, Statement 2 is incorrect as cashew nuts are typically categorized as high in fats and proteins rather than carbohydrates.

Quick Tip

Nuts are nutrient-dense foods, rich in healthy fats, proteins, and carbohydrates, but they don't all fall into the same category, like cashews which are high in fat.