

SNAP 2025 Answer Key PDF

[Q1] . (B) . 23 .

Explanation - The 10th term is calculated by finding the difference between the sum of the first 10 terms (S_{10}) and the first 9 terms (S_9). Plugging $n = 10$ and $n = 9$ into the provided formula $n^2 + 4n$ gives values of 140 and 117 respectively. Subtracting 117 from 140 results in the final value of 23 for the 10th term of the progression.

[Q2] . (A) . 14 .

Explanation - Squaring both sides of the equation $\tan \theta + \cot \theta = 4$ yields the expression $\tan^2 \theta + \cot^2 \theta + 2 \tan \theta \cot \theta = 16$. Since $\tan \theta$ and $\cot \theta$ are reciprocals, their product is 1, which simplifies the middle term of the equation to just 2. Subtracting this 2 from the total of 16 leaves 14, which is the value of the sum of their squares.

[Q3] . (A) . forthright – elicit .

Explanation - A political opinion piece is best described as “forthright” because it is typically direct and outspoken in its criticism. The second blank requires “elicit,” which is the correct verb used when one wants to evoke or draw out a specific public reaction. Options involving “illicit” are incorrect as that specific word refers to illegal activities rather than the act of provoking a response.

[Q4] . (D) . Adjective .

Explanation - The word “resounding” appears directly before the noun “success” to modify it by describing the specific nature of that success. In English grammar, any word that functions to modify, qualify, or describe a noun is categorized as an adjective. It is not acting as a noun or a verb in this context, but rather providing descriptive detail about the following subject.

[Q5] . (A) . talking point .

Explanation - The sentence requires a standard English idiom to describe a central subject of discussion or debate at a formal meeting. “Talking point” is the correct idiomatic expression for a topic that invites significant conversation or argument among participants. Other options provided are either grammatically awkward or are not recognized as standard phrases within the English language.

[Q6] . (B) . Metaphor .

Explanation - The sentence directly equates the “presentation” to a “train wreck” without using comparative markers such as the words “like” or “as.” By equating these two unlike things as if they were the same, it uses a metaphor to emphasize how disastrous

the event was. It does not qualify as a simile because it lacks the explicit “like/as” comparison required for that specific figure of speech.

[Q7] . (C) . astute .

Explanation - “Perspicacious” refers to someone who possesses sharp mental vision and a ready insight into complex or difficult situations. Among the choices, “astute” is the closest synonym because it also describes the ability to accurately assess people or circumstances. The other options, such as “superficial” or “ambiguous,” provide meanings that are either unrelated or directly opposite to the word.

[Q8] . (B) . 53 .

Explanation - Percentage growth is calculated using the formula of $\frac{\text{Final Value} - \text{Initial Value}}{\text{Initial Value}} \times 100$. Based on the provided solution’s assumed data, an increase from 100 units to 153 units represents a change of exactly 53 units. Dividing this 53-unit change by the starting value of 100 results in a total growth rate of 53 percent for the period.

[Q9] . (B) . 23 .

Explanation - To find the 10th term of an A.P., you must subtract the sum of the first 9 terms from the sum of the first 10 terms. Calculating S_{10} and S_9 using the formula $n^2 + 4n$ results in values of 140 and 117 respectively. Performing the subtraction $140 - 117$ confirms that the value of the 10th term in this specific progression is 23.

[Q10] . (D) . 40 .

Explanation - The number of ways to select 2 men from 5 is calculated as $\binom{5}{2}$, which equals 10 possible combinations. Similarly, the number of ways to select 1 woman from 4 is calculated as $\binom{4}{1}$, which equals 4 possible ways. Multiplying these two independent selections together (10×4) results in a total of 40 different ways to form the committee.

[Q11] . (C) . 17 .

Explanation - By testing the provided options, we find that 17 leaves a remainder of 3 when divided by 7 since $17 = (7 \times 2) + 3$. Additionally, it leaves a remainder of 2 when divided by 5 because $17 = (5 \times 3) + 2$, satisfying both requirements. None of the other listed options meet both of these arithmetic conditions simultaneously for the divisors 7 and 5.

[Q12] . (B) . $2a + b$.

Explanation - The number 75 can be prime factorized into $5^2 \times 3$, allowing the expression to be rewritten as $\log_{10}(5^2 \times 3)$. Applying the product and power rules for logarithms, this expands to the expression $2\log_{10}(5) + \log_{10}(3)$. Substituting the given variables ‘a’ and ‘b’ into this expanded form results in the final answer of $2a + b$.

[Q13] . (D) . -1 .

Explanation - The first term, $\log_5(125)$, equals 3 because 5 raised to the power of 3 is 125. The second term, $\log_2(1/16)$, equals -4 because $1/16$ is equivalent to 2 raised to the negative 4th power. Adding these two calculated values together, $3 + (-4)$, results in a final evaluation of -1 for the total expression.

[Q14] . (B) . (1,0) & (3,0) .

Explanation - To find the x-intercepts, the y-value must be set to zero, which gives the quadratic equation $x^2 - 4x + 3 = 0$. Factoring this equation leads to $(x - 1)(x - 3) = 0$, which identifies the x-values as 1 and 3. Therefore, the corresponding points on the coordinate plane are (1,0) and (3,0) where the graph crosses the x-axis.

[Q15] . (C) . 25% .

Explanation - If 25% passed both subjects, then 75% failed in at least one subject, representing the union of the two sets. Using set theory, the percentage that failed both is found by $F(QA) + F(VA) - F(QA \cup VA)$. The calculation $55\% + 45\% - 75\%$ results in 25% of the students having failed in both subject categories.

[Q16] . (D) . 800 .

Explanation - A 25% markup on the cost price of 800 increases the price by 200, resulting in a marked price of 1000. Subsequently, a 20% discount applied to the 1000 marked price reduces it by 200. This brings the final selling price back to 800, meaning there is effectively no net change from the original cost.

[Q17] . (A) . 93 .

Explanation - Dividing the 6th term by the 3rd term gives $r^3 = 8$, revealing a common ratio of 2 and a first term of 3. Using these values in the sum formula for five terms of a G.P. yields the calculation $\frac{3(2^5-1)}{2-1}$. This simplifies to 3×31 , resulting in a final sum of 93 for the first five terms of the progression.

[Q18] . (D) . 8000 .

Explanation - The interest earned in the third year is the difference between the two given amounts, which is Rs. 441. Calculating this interest as a percentage of the second year's amount (8820) reveals an annual interest rate of 5%. Substituting this rate back into the compound interest formula for two years allows for the calculation of the 8000 principal.

[Q19] . (B) . 480 .

Explanation - Using the gap method, the four women are first arranged in $4!$ (24) ways, creating 5 possible gaps for the men. The two men are then placed into these gaps in $\binom{5}{2} \times 2! = 20$ ways to ensure no two men sit next to each other. Multiplying the 24 ways to seat women by the 20 ways to seat men results in a total of 480 possible arrangements.

[Q20] . (D) . 925 .

Explanation - The pattern in this series follows the rule that each subsequent term is calculated using the formula $T_n = T_{n-1} \times n + n$. For the next term after 184, we multiply by the next integer 5 and then add 5 to that product. Performing the calculation $(184 \times 5) + 5$ results in $920 + 5$, giving the final answer of 925.

[Q21] . (A) . Pen .

Explanation - This analogy represents a "Professional : Tool" relationship where a sculptor uses a chisel as their primary instrument of work. An author is a professional who uses a pen (or its modern equivalent) as the fundamental tool to create their written

compositions. Other options like “Reader” or “Book” represent the audience or the final product, rather than the active tool used by the professional.

[Q22] . (B) . 130° .

Explanation - Using the clock angle formula $|30H - 5.5M|$, substituting the hour as 3 and minutes as 40 gives $|90 - 220|$. The resulting absolute value is 130, which represents the degrees between the two hands at that specific time. Since 130° is less than 180° , it is the smaller angle between the hands and matches the provided correct option.

[Q23] . (A) . Statement I is the cause, and Statement II is its effect .

Explanation - An increase in import duties is a government policy action intended to protect and stabilize the domestic market from foreign competition. This protection acts as the cause that allows local manufacturers to keep their prices unchanged without losing their competitive edge. The stability of local prices is therefore the logical economic outcome, or effect, of the increased tax on imported electronics.

[Q24] . (D) . Warehouse : Merchandise .

Explanation - The relationship established is “Storage Place : Item Stored,” as an armory is specifically designed to house weapons. A warehouse matches this logic perfectly because it is a building dedicated to the storage of merchandise or physical goods. Other pairs, like “Hospital : Patients” or “Bank : Loans,” describe places where people are treated or services are provided rather than simple storage.

[Q25] . (D) . EBHGC FAD .

Explanation - Starting with the definite clues, E is placed at the left end and B is placed immediately to its right, followed by H and G in a block. Clues regarding A, D, and F create a fixed “FAD” block, which is then placed at the far right to satisfy the spacing requirements for person C. Verifying the final arrangement “EBHGC FAD” confirms that C is indeed sitting third to the left of D, satisfying all six given conditions.

[Q26] . (B) . Sa .

Explanation - By comparing the second phrase “Exam is tough” with the third phrase “study tough subject,” the common word found is “tough.” In the corresponding coded phrases “ga ni sa” and “lo sa ma,” the only code that appears in both is “sa.” Therefore, through the process of elimination and comparison, “sa” is identified as the specific code for the word “tough.”

[Q27] . (D) . M25O .

Explanation - The first letters (A, D, G, J) follow a pattern of adding three positions in the alphabet, leading to the next letter, M. The numbers (1, 4, 9, 16) are consecutive perfect squares ($1^2, 2^2, 3^2, 4^2$), meaning the next number in the sequence is $5^2 = 25$. The final letters (C, F, I, L) also increment by three positions, making the next letter O and completing the term as M25O.

[Q28] . (D) . Saturday .

Explanation - There are 157 total days between July 21st and December 25th, calculated

by summing the days remaining in each month. Dividing 157 by 7 leaves a remainder of 3, which indicates that there are three “odd days” to account for in the week’s cycle. Adding three days to the starting day of Wednesday (Thursday, Friday, Saturday) identifies Saturday as the day Christmas falls on.

[Q29] . Only conclusion I follows .

Explanation - The statements “All oceans are seas” and “All seas are oceans” mean that oceans and seas are identical sets in this logic. According to logical rules, if something is a definite fact (Some rivers are seas), it is also considered a “possibility” within the framework of syllogisms. However, Conclusion II fails because Statement 1 implies “Some rivers are NOT oceans,” making it impossible for ALL rivers to be seas.

[Q30] . (B) . L .

Explanation - By organizing the clues into a table, Rank 2 is occupied by N flying an F-16 and Rank 1/3 are occupied by L and O respectively. Clue 2 places pilot O in the F-35 at Rank 3 because the pilot at that rank must finish immediately before pilot M at Rank 4. Since L is at Rank 1 and did not fly the SU-57, L must be the pilot who flew the only remaining aircraft, the F-22.

[Q31] . (C) . 62 .

Explanation - The differences between consecutive terms in this series are 1, 4, 9, and 16, which are the squares of 1, 2, 3, and 4. Following this mathematical pattern, the next difference added to the sequence must be the square of 5, which is 25. Adding 25 to the last given term of 37 results in a final value of 62 for the next number in the series.

[Q32] . (D) . Great Grandfather .

Explanation - Tracing the lineage shows that A is the father of B, B is the parent of C, and C is the mother of E. This establishes a four-generation chain where B is E’s grandparent and A is the parent of that grandparent. The father of one’s grandparent is defined as a Great Grandfather, making A the Great Grandfather of E.

[Q33] . Only conclusion (2) follows .

Explanation - “All pens are pencils” placed inside a “No pencil is marker” boundary means that pens and markers cannot overlap at all. Conclusion 1 is false because it contradicts the deduction that no pen can possibly be a marker under these conditions. Conclusion 2 is true because if all members of a set belong to a category, then it is logically certain that some members also do.

[Q34] . 14 .

Explanation - Squaring both sides of the given equation $(\tan \theta + \cot \theta) = 4$ results in the expansion $\tan^2 \theta + \cot^2 \theta + 2 \tan \theta \cot \theta = 16$. Since the product of $\tan \theta$ and $\cot \theta$ is always 1, the numerical term in the expansion is simplified to 2. Subtracting 2 from 16 isolates the value for the sum of the squares, giving a final answer of 14.

[Q35] . 197.5° .

Explanation - Using the standard formula, the smaller angle between the hands at 10:25

is calculated to be exactly 162.5 degrees. A reflex angle is defined as the larger angle in the circle, which is found by subtracting the smaller angle from 360 degrees. Performing the subtraction $360^\circ - 162.5^\circ$ results in a final reflex angle of 197.5 degrees.

[Q36] . 84 .

Explanation - First, the semi-perimeter (s) is calculated as half the sum of the sides $(13 + 14 + 15)/2 = 21$. Using Heron's formula, the area is found by taking the square root of $21(21 - 13)(21 - 14)(21 - 15)$, which simplifies to $\sqrt{7056}$. The square root of 7056 is 84, meaning the area of this specific scalene triangle is 84 square units.

[Q37] . (C) . 4 .

Explanation - Using the product rule of logarithms, the equation is condensed to $\log_2(x^2 - 2x) = 3$, which converts to the quadratic equation $x^2 - 2x = 8$. Solving this quadratic equation gives two possible roots for x , which are 4 and -2 . Since the argument of a logarithm must always be positive, the root -2 is discarded, leaving 4 as the only valid solution.

[Q38] . 15000 .

Explanation - The difference between compound and simple interest for a 2-year period is calculated using the formula $P(R/100)^2$. Substituting the known difference of 150 and the rate of 10% into the equation results in $150 = P(1/100)$. Multiplying 150 by 100 solves for the Principal, revealing the original sum of money to be Rs. 15,000.

[Q39] . (D) . 10.66 .

Explanation - With a total work of 36 units, A and B together complete 10 units in the first 2 days before B leaves. A must then complete the remaining 26 units alone at a rate of 3 units per day, which takes approximately 8.66 days. Adding the initial 2 days to the 8.66 days gives a total of 10.66 days to finish the entire project.

[Q40] . 10 seconds .

Explanation - A train moving at 20 m/s covers 360 meters to pass a 160-meter station, meaning the train itself is 200 meters long. To cross a stationary man, the train only needs to cover its own length of 200 meters at its current speed. Dividing the train's length of 200 meters by its speed of 20 m/s results in a crossing time of exactly 10 seconds.

[Q41] . (C) . 1,54,000 lt. .

Explanation - The volume of the cylinder is calculated using $\pi r^2 h$ with a radius of 7m and height of 1m, resulting in 154 cubic meters. Given the conversion factor that one cubic meter equals 1,000 liters, the volume is multiplied to find the capacity in liquid units. The final calculation of $154 \times 1,000$ shows that the cylinder can hold a total of 154,000 liters of water.