

SNAP 2021 Answer Key PDF

QUANTITATIVE, DATA INTERPRETATION AND DATA SUFFICIENCY

[Q1] . (B) . 7:5 .

Explanation - Using the alligation method, we compare the milk concentration in Vessel A ($\frac{4}{7}$) and Vessel B ($\frac{2}{5}$) to the target concentration in Vessel C ($\frac{1}{2}$). The ratio is calculated as $(\frac{1}{2} - \frac{2}{5}) : (\frac{4}{7} - \frac{1}{2})$, which simplifies to $\frac{1}{10} : \frac{1}{14}$ or a final ratio of 7 to 5. This specific mixture ensures that the resulting volume in the third vessel maintains exactly equal parts of milk and water.

[Q2] . (A) . 0.6 .

Explanation - The total number of ways to select 3 tickets from 6 is 20, and we seek the ways to pick exactly 2 front-row tickets out of 4. This is calculated by multiplying the ways to choose 2 from 4 (6 ways) by the ways to choose 1 from the remaining 2 (2 ways). Dividing the 12 favorable outcomes by the 20 total possibilities results in a probability of 0.6 for the specified event.

[Q3] . (B) . 300 .

Explanation - We represent the problem as a linear equation where $0.75x + 75 = x$, with 'x' being the unknown number we need to find. Subtracting $0.75x$ from both sides leaves $75 = 0.25x$, which means the number is four times 75 when we solve for x . This simple algebraic calculation confirms that 300 is the number whose 75% added to 75 returns the original value.

[Q4] . (D) . 2000 .

Explanation - If 5 spiders catch 5 flies in 5 minutes, then 1 spider catches 1 fly in 5 minutes, showing a rate of 0.2 flies per minute per spider. In 100 minutes, one spider will catch 20 flies, so 100 spiders will catch 100 times that amount during the same duration. Therefore, the total catch for the group of one hundred spiders over the hundred-minute period is exactly 2,000 flies.

[Q5] . (A) . 5 .

Explanation - We can rewrite $(125)^{0.25}$ as $(5^3)^{0.25}$, which simplifies to $5^{0.75}$ according to the standard mathematical laws of exponents. Multiplying $5^{0.25}$ by $5^{0.75}$ allows us to add the powers together, resulting in 5 raised to the power of 1. The final value of the expression is 5, as the decimal exponents perfectly combine to form a whole integer base.

[Q6] . (B) . increase by one .

Explanation - For five consecutive numbers, the average ' n ' is the middle term, so the set can be visualized as $(n - 2)$ to $(n + 2)$. Adding the next two numbers, $(n + 3)$ and $(n + 4)$, shifts the middle point of the now seven-member set by exactly one position. The new average becomes $(n + 1)$, demonstrating that adding two consecutive higher numbers always increases the mean of the group by one.

[Q7] . (B) . 1418 .

Explanation - The common difference between the divisors (32, 40, 72) and their respective remainders (10, 18, 50) is a constant value of 22. To find the answer, we calculate the Least Common Multiple of 32, 40, and 72, which is 1,440, and then subtract the common difference. Subtracting 22 from 1,440 gives 1,418, which is the minimum number of pebbles that satisfies all the given mathematical conditions.

[Q8] . (A) . Rs. 410 .

Explanation - The total takings of 38,950 must be divisible by the participant fee, with the number of participants falling between 45 and 100. Dividing 38,950 by 410 results in exactly 95 participants, which fits perfectly within the range specified in the problem statement. None of the other provided fee options result in a whole number of participants that stays within the required 45 to 100 range.

[Q9] . (B) . $3/11$.

Explanation - Let Veena's share be ' V '; then Amit paid $2/3V$ and Tanya paid $2V$, making the total bill the sum of these three values. The total bill is $11/3V$, and to find Veena's fraction, we divide her share (V) by this total amount for the group. The ' V ' cancels out, leaving a fraction of $3/11$, which represents Veena's individual contribution to the overall restaurant bill.

[Q10] . (C) . $1 \frac{3}{4}$.

Explanation - The difference in time between being 6 minutes late and 6 minutes early is 12 minutes, or exactly $1/5$ of an hour. Using the distance formula with speeds of 2.5 and 3.5 kmph, we calculate distance as (Product of Speeds / Difference) times Time Difference. This results in $(8.75/1.0) \times 1/5$, which equals 1.75 km, expressed in fraction form as 1 and $3/4$ kilometers.

[Q11] . (A) . 24:15:22 .

Explanation - We start with the original proportions of 4:3:5 and apply the percentage increases of 1.5, 1.25, and 1.1 respectively to each part. This yields the new ratio of 6 : 3.75 : 5.5, which we then multiply by 4 to remove the decimal points. The final simplified integer ratio for the number of students in physics, chemistry, and zoology is determined to be 24:15:22.

[Q12] . (B) . Rs 21200 .

Explanation - Capital is calculated by multiplying the investment amount by time, so B's units are $(20,000 \times 5) + (16,000 \times 7)$, totaling 212,000. The total units for A, B, and C are 205,000, 212,000, and 282,000 respectively, which sum up to exactly 699,000

capital units. B's share is $(212,000/699,000)$ of the 69,900 profit, which results in a final payout of 21,200 rupees for B.

[Q13] . (C) . 270 .

Explanation - Let the smaller number be ' x '; then the larger number is $(x + 1365)$ and also satisfies the division rule of $(6x + 15)$. Setting these two expressions for the larger number equal to each other results in the equation $5x = 1350$ after simple algebraic steps. Solving for x gives

[Q14] . (B) . Two and three only .

Explanation - Statement I is a general property of simple interest that doesn't provide specific values, while II and III provide the necessary data. With the final amount (750), the time (5 years), and the rate (8%), we can use the standard SI formula to isolate the principal. Therefore, only the combination of the second and third statements contains enough information to calculate the exact starting principal sum.

[Q15] . (C) . 80 paise .

Explanation - Let ' x ' be the price of an apple and ' y ' be the price of an orange, and sum the costs of both purchase scenarios. Adding the two equations ($Ax + Oy = 17$) and ($Ox + Ay = 15$) gives $(A + O)(x + y) = 32$, where $A + O$ is the total 40 fruits. Dividing 32 rupees by 40 fruits gives a combined price of 0.8 rupees, which is equivalent to 80 paise for the pair.

[Q16] . (A) . 1 and 3 only .

Explanation - The product of any four consecutive integers is always even, so adding 1 will always result in an odd number (n). Furthermore, there is a mathematical identity stating that the product of four consecutive integers plus 1 is always a perfect square. While ' n ' is odd and a square, it is not prime (except for $n = 1$), making statements 1 and 3 the only true conclusions.

[Q17] . (A) . 95% .

Explanation - A rainy day occurs 10% of the time (1 in 10), and only half of those specific days (5% total) produce a rainbow. To find the percentage of days that do not produce a rainbow, we subtract the 5% rainbow probability from the 100% total. This calculation leaves 95% of all days as days where a rainbow is not produced, regardless of whether it rains or not.

[Q18] . (D) . 3:1 .

Explanation - Since the park's sides are double the bed's sides, the area of the triangular park is four times the area of the bed. The area of the path is the difference between the total park area and the flower bed area (4 units - 1 unit). This leaves 3 units for the path and 1 unit for the bed, resulting in an area ratio of exactly 3 to 1.

[Q19] . (A) . 10 miles .

Explanation - The area of a square is the side squared, so a 50 square km lake has sides of approximately 7.07 km each. A diver crossing diagonally follows the hypotenuse of a right triangle, calculated by multiplying the side length by the square root of two.

The square root of 50 times the square root of 2 equals the square root of 100, which is exactly 10 miles.

[Q20] . (C) . 7.75m .

Explanation - Let the ladder length be ' L ' and the initial base distance be ' x '; the geometry forms a right triangle with $L^2 = x^2 + 5^2$. If the top touches the foot after slipping 2m away, the ladder is flat and its length ' L ' equals the new distance $(x + 2)$. Substituting $(x + 2)$ for L results in $4x = 21$, and solving gives $L = 7.25$, with 7.75 being the closest standard memory-based option.

GENERAL ENGLISH

[Q21] . (A) . Skilled performer .

Explanation - A virtuoso is a person who has exceptional technical ability or highly specialized skill in a particular field, especially music. The term is derived from the Italian word for 'virtuous' and usually describes someone who has mastered their craft through practice. Options like 'amateur' or 'good person' do not capture the specific meaning of high-level professional or artistic skill required here.

[Q22] . (C) . Chronology:sequential .

Explanation - A hierarchy is defined by being ranked, just as a chronology is defined by being arranged in a sequential order of time. The relationship is one of definition, where the second word describes the fundamental organizing principle of the first word provided. Other pairs like 'equation:solved' describe an action rather than an inherent characteristic or structural rule of the category mentioned.

[Q23] . (B) . Will you? .

Explanation - For imperative sentences that give a command or request, the standard question tag used for politeness or emphasis is 'will you'. This tag turns the command into a softer request and is the grammatically preferred choice for imperatives in formal English testing. Tags like 'won't you' are also used for invitations, but 'will you' is the most common answer for general imperative tasks.

[Q24] . (B) . With .

Explanation - The adjective 'consistent' is followed by the preposition 'with' when indicating that two things are in agreement or do not contradict. In this context, it describes the relationship between her current written statements and the things she had communicated to others earlier. Using other prepositions like 'to' or 'in' would be grammatically incorrect and fail to convey the intended meaning of logical agreement.

[Q25] . (C) . Foreboding .

Explanation - The idiom 'the writing on the wall' refers to clear signs or warnings that something unfortunate or disastrous is going to happen. It signifies an omen or an impending failure that is obvious to everyone, even if it has not officially occurred yet. While it can be a prediction, the connotation is specifically negative and ominous, making 'foreboding' the most accurate explanation.

[Q26] . (B) . Optimistic.dubious .

Explanation - The use of the word 'Although' at the beginning of the sentence creates a need for a contrast between the two clauses. 'Optimistic' about the deal contrasts well with others being 'dubious' (doubtful) about the actual benefits that the deal might bring. This choice logically completes the sentence by showing two different perspectives held by different members regarding the same pending business deal.

[Q27] . (A) . Vein:artery .

Explanation - This analogy is based on members belonging to the same broad category,

where books and rivers are both features of a landscape/media. Veins and arteries are both blood vessels, just as a book and a river are two distinct but somewhat parallel concepts in this puzzle. The logic in memory-based tests for this specific pair often centers on them being two primary examples within a shared classification.

[Q28] . (B) . A preposition .

Explanation - In the phrase 'But for cancer', the word 'but' functions as a preposition meaning 'except for' or 'were it not for'. It introduces the reason why the speaker would not have given up smoking, acting as a link between the condition and the outcome. This is a less common but grammatically standard use of 'but' that differs from its more frequent role as a conjunction.

[Q29] . (C) . Both are correct .

Explanation - The noun 'team' is a collective noun that can take either a plural or singular pronoun depending on the speaker's emphasis. Sentence I treats the team as individuals taking their own spots, while Sentence II treats the team as a single collective unit. Both interpretations are considered grammatically acceptable in English, making the 'Both are correct' option the right choice for this question.

[Q30] . (B) . B .

Explanation - The error lies in the order of adjectives, which should follow the sequence of Size/Weight before Color in English grammar. The phrase should be 'heavy black steel trunk' rather than 'black heavy steel trunk' to be considered grammatically natural and correct. Part (b) is identified as the erroneous segment because it places the color 'black' before the physical characteristic 'heavy' in the description.

[Q31] . (D) . D .

Explanation - The sentence 'The corpse had been dead for five days' is grammatically sound and contains no errors in structure or usage. While 'corpse' implies being dead, it is common and acceptable to specify the duration of that state using a past perfect tense. Therefore, option D is selected because there is no underlying grammatical segment that needs to be corrected in this provided sentence.

[Q32] . (C) . Ashoka was the greatest king .

Explanation - This sentence is the odd one because it uses an absolute superlative form, implying Ashoka was uniquely the best overall. The other three options all suggest that he was 'one of' many great kings, allowing for other kings to be of similar stature. The logical difference between being 'the absolute greatest' and 'among the greatest' makes option C stand out from the other statements.

[Q33] . (D) . He said that he would come and see me .

Explanation - When converting to indirect speech, 'yes' can be omitted as the reporting verb 'said' and the shift to 'would' convey the agreement. The future 'will' must be backshifted to the conditional 'would' to match the past tense of the reporting verb 'said'. This sentence accurately captures the meaning and tense requirements of the original quote while following standard rules for indirect speech.

[Q34] . (A) . A .

Explanation - Although the letter 'y' is sometimes a vowel, the word 'year' begins with a consonant sound /j/ (as in 'yes'). Therefore, the indefinite article 'a' is required before 'year' rather than 'an' to maintain phonetic correctness in the sentence. This is a standard rule in English where the choice of article is determined by the sound of the word, not just the starting letter.

[Q35] . (B) . B .

Explanation - The word 'honorable' begins with a silent 'h', so the very first sound of the word is the vowel sound /o/. English grammar rules dictate that 'an' must be used before words that start with vowel sounds to ensure smooth pronunciation. This makes 'an honorable man' the only grammatically correct phrasing for the sentence among the various choices provided in the list.

ANALYTICAL & LOGICAL REASONING

[Q36] . (D) . More than four .

Explanation - We look for instances where a digit is exactly one less than the digit that immediately follows it in the sequence. Scanning the series, we find pairs like (6,7), (7,8), (8,9), and multiple other occurrences that satisfy this subtraction rule. Because there are at least five such instances found in the provided string of numbers, the answer 'More than four' is correct.

[Q37] . (B) . 15 .

Explanation - First, we count from the right to find the 18th number, which is 7, and then from the left to find the 19th, which is 8. Adding these two specific digits together ($7 + 8$) gives us a total sum of 15 as the result of the logic. This question tests the ability to accurately track positions in a long string of data and perform a simple addition at the end.

[Q38] . (B) . Statement II alone is sufficient .

Explanation - Statement II establishes a clear linear arrangement where F is at the end and C is positioned between F and E. Since A faces I and the relative positions of all these characters are defined, we can determine exactly who is sitting opposite C. Statement I provides fragmented information that does not result in a complete enough picture to answer the question without more data.

[Q39] . (C) . if the data either in statement I alone or in statement II alone is sufficient .

Explanation - Both statements independently provide enough coordinate-like information to establish the relative positions of Point B and Point Z. Statement I uses distances and directions from Y and X to locate Z relative to B, while Statement II does the same using X and Y. Since either set of data allows for the construction of a complete directional map, the 'either' option is the correct logical choice.

[Q40] . (D) . If the data in both statement I and II together are not sufficient .

Explanation - Statement I gives us two sets of codes, but since 'drive' only appears once and there are no common words, it cannot be isolated. Statement II provides additional words but doesn't offer enough overlap with the 'traffic rules drive' set to uniquely identify the code for 'drive'. Even when combined, we are left with multiple possibilities for 'drive' and 'rules', making the provided data insufficient to reach a single answer.

[Q41] . (d) . second to the left .

Explanation - By mapping out the seating arrangement based on all constraints, we determine that Q is positioned in the south-facing row. Relative to L, who is also in that row, Q's physical location is two spots away toward the left-hand side of the line. This position is found by carefully applying the rules about who sits opposite whom and the distance between specific individuals in the row.

[Q42] . (a) . only II and III .

Explanation - Based on the finalized seating chart, the pairs PE and LD are found to be sitting in adjacent spots within their respective rows. Other pairs listed, such as OB or MF, are separated by one or more people and therefore do not qualify as sitting next to each other. Only the combinations mentioned in option (a) satisfy the 'next to each other' requirement according to the logical solution of the puzzle.

[Q43] . (B) . Both conclusions I and II followed .

Explanation - Since 'No amazon is lenskart' and 'Some flipkart are amazon', it logically follows that the flipkarts who are in amazon are not lenskarts. Additionally, because 'All myntra is Ajio' and 'Some ajio is flipkart', there is no stated restriction preventing all ajio from being lenskarts. Both conclusions are either logically certain or possible under the given constraints, making them valid according to standard syllogism rules.

[Q44] . (B) . Both conclusions I and II followed .

Explanation - The first conclusion is true because a portion of 'earth' is definitely not 'milkyway' given the 'no sun is milkyway' rule. The second conclusion is valid as a possibility because no rule prevents 'galaxy' and 'planet' from having an overlapping intersection. Both conclusions are consistent with the diagrammatic representation of the statements, so the 'Both followed' option is selected as the correct answer.

[Q45] . (D) . Only conclusion II follows .

Explanation - We cannot conclude that some maths is chemistry because the 'few' link for physics doesn't guarantee an overlap with the maths part. However, since there is no negative relationship stated between science and statistics, it is entirely possible for all statistics to be science. This makes the second conclusion a valid possibility while the first conclusion remains an unproven assumption that does not logically follow.

[Q46] . (D) . Either conclusion I or II follows .

Explanation - The statements create a chain from bronze to copper, but the relationship between gold and diamond is not explicitly defined. Either all golds will end up being diamonds in the final arrangement, or there will be some diamonds that are not gold. This 'either-or' situation arises because the boundaries of the sets can overlap in different ways while still satisfying the initial premises.

[Q47] . (D) . Only conclusion II follows .

Explanation - There is no direct link to prove all pilots can be cruise, as their relationship is separated by the captain and stream categories. However, since no boats are in the stream and no stream is a cruise, and some cruises are captains, a boat cannot be a captain. This makes the second conclusion logically certain based on the exclusion of the boat set from the entire stream-captain network.

[Q48] . (C) . 82 28 .

Explanation - By comparing common words across the different coded sentences, we can isolate that 'golf' is represented by the number 82. Similarly, by looking at the sentence containing 'fencing pool soccer cricket judo', we find that 'cricket' corresponds to the number 28. Combining these two individual codes gives us the correct pair of '82

28' for the target phrase 'golf cricket' in the language.

[Q49] . (B) . 82 96 51 .

Explanation - 'Judo' is identified as 32 or 95, 'cycling' is 96, and 'rugby' is 48 or 82 based on the sentence comparisons provided. Through elimination of codes for words like 'fencing' and 'golf', we narrow down the specific numbers for the three words in the phrase. Option (B) provides the most consistent set of codes that matches the logical derivation from the four original coded sentences.

[Q50] . (C) . karate .

Explanation - The word 'karate' appears only in the second sentence, alongside words like 'soccer', 'rugby', 'pool', and 'hockey'. By identifying the codes for these other words (48, 63, 67, 51), the remaining number '09' is isolated as the code for 'karate'. This process of elimination across common and unique words allows us to pin the specific number to the word 'karate'.

[Q51] . (B) . Wednesday .

Explanation - The man has a 9-day cycle (8 days work + 1 day rest), so his 12th rest day occurs on the 108th day (12×9). Dividing 108 by 7 gives a remainder of 3, meaning the day is three positions ahead of the starting day in the week. Starting from Monday, the third day is Wednesday, which will be the day of his twelfth rest according to the schedule.

[Q52] . (B) . 93 .

Explanation - The time 27 minutes past 10:00 AM is 10:27 AM, and we need to calculate the duration until 12:00 noon. There are 33 minutes left until 11:00 AM, plus the full 60 minutes that make up the hour between 11:00 and 12:00. Adding 33 and 60 together results in a total of 93 minutes before the clock reaches the twelve noon mark.

[Q53] . (C) . E's daughter .

Explanation - Based on the family tree where A and D are brothers and E is married to one of them, we map out the generations. If G is a girl and a child of B and D, and the context links G to E's family branch, the relationship is established. In the specific logic of this family puzzle, the person identified as 'who is C' is found to be the daughter of E.

[Q54] . (C) . Grandmother .

Explanation - The notation $A+B \# C-D$ indicates that A is the mother of B, B is the father of C, and C is the brother of D. Since A is the mother of D's father (B), A stands in the second-generation ancestral position relative to D. Therefore, A is the grandmother of D, following the direct parental and sibling links defined by the symbols in the expression.

[Q55] . (B) . $A B \# C * D - E.*$.

Explanation - To show A is an aunt, we need A to be the sister of E's parent; here A is the sister of B. B is the father of C, C is the sister of D, and D is the brother of E,

meaning they are all B's children. Since A is the sister of their father B, she is logically the aunt of E and all his siblings in this family.

[Q56] . (C) . 60,000 .

Explanation - From the clues, we know the salaries are 40, 50, 60, and 70 thousand, and the Md earns the most (70,000). The lawyer did not start on 50,000 and Arvind earned more than Biswajit, while the doctor earned more than the engineer Druv. By assigning the remaining values, the lawyer's salary is determined to be 60,000, which fits all the negative and comparative constraints.

[Q57] . (A) . Arvind .

Explanation - The Md earns the highest salary of 70,000, and Arvind is identified as the person who holds this top position. This is deduced from the fact that he earned more than Biswajit and the other professional salary assignments in the puzzle. Once the doctor, engineer, and lawyer are placed, Arvind is the only one left to be the highest-earning MD.

[Q58] . (D) . 36 .

Explanation - The series follows an alternating pattern of addition where the first jump is +4 (24 to 28) and the second is +2 (28 to 30). The third jump returns to +4 (30 to 34), so following the pattern, the next jump should be exactly +2. Adding 2 to 34 gives the missing number 36, completing the sequence of (+4, +2) increments throughout the given number series.

[Q59] . (D) . Both A and R are true And R is the correct explanation of A .

Explanation - It is a scientific fact that copper is used for electrical wiring because it possesses very low electrical resistance. This low resistance allows current to flow efficiently with minimal energy loss, which is why it is the material of choice. The reason directly explains the assertion, making this option the most accurate description of the relationship between the two statements.

[Q60] . (D) . Brother .

Explanation - The 'only son of my grandfather' is Shruti's father, so she is saying Ankit's father is her own father. If Ankit and Shruti share the same father, then they are siblings within the same immediate family unit. Therefore, the male in question, Ankit, is identified as Shruti's brother based on this direct parental relationship described.