

SNAP 2023 Answer Key PDF

[Q1] . (C) . were going .

Explanation - The sentence describes an ongoing action in the past that was interrupted by a specific event (it started raining). In English grammar, the past continuous tense is used to represent the background action that was in progress. Therefore, “were going” correctly completes the past narrative structure of the statement.

[Q2] . (D) . Being honest and good .

Explanation - The idiom “Salt of the earth” originates from the Bible and is used to describe a person of great worth and reliability. It specifically refers to someone who is very kind, honest, and lacks pretension or arrogance. Among the options, “Being honest and good” is the direct figurative meaning of this expression.

[Q3] . (B) . multilingual .

Explanation - A prefix is a group of letters added to the beginning of a word to modify its meaning. In this sentence, the word “multilingual” contains the prefix “multi-,” which means “many” or “more than one.” Other words like “anecdotes” and “insights” are root words or have suffixes, but do not contain a primary prefix.

[Q4] . (C) . manifest .

Explanation - A “whodunit” refers to a complex story or mystery, often involving a crime where the culprit is hidden. The word “manifest” means something that is clear, obvious, and easily perceived by the eye or mind. Since whodunit implies something obscured or mysterious, manifest acts as its logical opposite.

[Q5] . (D) . Horns - Noun, Hurriedly - Adverb, Ambience - Noun .

Explanation - “Horns” refers to a physical object on the car, making it a naming word or a noun. “Hurriedly” describes the manner in which the people walked, which categorizes it as an adverb. “Ambience” refers to the atmosphere or character of a place, which is a noun, not a descriptive adjective.

[Q6] . (A) . Onomatopoeia .

Explanation - Onomatopoeia is a figure of speech where a word phonetically imitates or suggests the sound that it describes. In this sentence, the word “buzzed” mimics the actual sound made by an alarm clock. The other options like hyperbole or personification do not apply as the word is specifically sound-centric.

[Q7] . (C) . Arjun paid the electricity bill. .

Explanation - The original sentence is in the passive voice using the past simple tense (“was paid”). To convert to active voice, the object “Arjun” becomes the subject and the verb shifts to the simple past form “paid.” This transformation maintains the original meaning while creating a direct subject-verb-object relationship.

[Q8] . (A) . They said, “We won the competition”. .

Explanation - The indirect speech uses the past perfect “had won,” which indicates that the original direct speech was in the simple past. The pronoun “they” in the reported clause changes to “we” within the quotation marks to reflect the speakers’ original words. Option (a) correctly reverts the tense and pronouns according to standard reporting rules.

[Q9] . (C) . 3 .

Explanation - The error is in part 3 where the phrase “have became” is used incorrectly. The auxiliary verb “have” must be followed by the past participle of the verb, which for “become” is “become” (become-became-become). The sentence should correctly read “animals that have become extinct” to be grammatically sound.

[Q10] . (A) . isolate .

Explanation - To “sequester” something means to isolate or hide it away from its surroundings. It is commonly used in legal or scientific contexts to describe the act of segregation or confiscation. The word “isolate” is a direct synonym that captures this sense of keeping something separate.

[Q11] . (C) . visious .

Explanation - The word “visious” is misspelled and does not exist in standard English. The correct spelling is “vicious,” which refers to something deliberately cruel or violent. The other words—tyranny, miniature, and hierarchy—are all spelled correctly according to their dictionary definitions.

[Q12] . (C) . by the fact itself .

Explanation - “Ipso facto” is a Latin phrase used in formal logic and legal documents. It translates literally to “by the fact itself” or “by the very nature of the deed.” It is used to show that a specific action or condition is a direct and automatic consequence of another.

[Q13] . (B) . fewer, less .

Explanation - The word “matches” is a countable noun, so the correct comparative adjective to use is “fewer.” The word “time” is an uncountable noun, which requires the use of the comparative adjective “less.” Therefore, option (b) provides the only grammatically correct pairing for the two distinct types of nouns.

[Q14] . (A) . decision, gone .

Explanation - A government typically issues a “decision” or a “policy,” and the first blank requires a noun identifying the act of banning. The phrasal verb “gone down well” is a standard idiom meaning to be received favorably or accepted by others. This

combination logically completes the sentence regarding public reaction to a legislative move.

[Q15] . (B) . among, belong .

Explanation - The first blank describes the position of butterflies within the larger category of insects, requiring the preposition “among.” The second blank concludes the relative clause by identifying the group to which the butterflies “belong.” This structure creates a clear parallel between butterflies/insects and birds/higher animals.

[Q16] . (A) . Pollution from causes other than vehicles is negligible. .

Explanation - The city corporation takes specific actions against vehicles, assuming vehicles are a major contributor, which is choice (c). However, it is not necessary to assume that other causes are “negligible” just to justify improving vehicle emissions. An implicit assumption must be a necessary foundation for the argument, and the argument can still stand even if other polluters exist.

[Q17] . (A) . Only assumption 1 is implicit .

Explanation - By stating that watching TV “also” causes obesity, the speaker acknowledges that other causes must already exist. Assumption 2 is not implicit because saying “long hours” causes a problem doesn’t automatically prove that “short hours” do not. Therefore, only the first statement about the existence of multiple causes is logically contained within the original premise.

[Q18] . (D) . If both the statements (A) and (B) are independent causes. .

Explanation - Glacial melting and tectonic activities like earthquakes are both environmental phenomena but do not share a direct causal link. Melting ice is generally caused by global warming, while earthquakes are caused by the movement of tectonic plates. Since neither event triggers the other and they stem from different origins, they are categorized as independent causes.

[Q19] . (A) . Statement I is the cause and statement II is its effect .

Explanation - A remarkable growth in a nation’s economy typically leads to an increase in the disposable income and resources of its citizens. As the economy grows (Cause), the general standard of living for the people naturally begins to improve (Effect). This provides a logical sequence where the macro-economic health results in the micro-level well-being of the population.

[Q20] . (A) . Only argument I is strong .

Explanation - Argument I is considered strong because it addresses the practical purposes of the legal system: deterrence and public safety. Argument II is generally considered a weak or abstract ethical generalization that doesn’t address the specific gravity of the crime. In logical reasoning for competitive exams, arguments based on preventative measures for serious crimes are usually prioritized.

[Q21] . (D) . Both arguments 1 and 2 are strong .

Explanation - Argument 1 is strong because it highlights the legitimate health and

social concerns associated with drug usage. Argument 2 is also strong because it presents a valid socio-economic reality regarding the livelihood of specific communities. Since both points address significant but different aspects of the debate (public health vs. economy), both are considered strong.

[Q22] . (D) . Both I and II .

Explanation - The statement highlights a hazardous health risk, requiring immediate and multi-faceted government intervention. Course I addresses the source of the problem through regulation, while Course II addresses it by providing safer alternatives. Both actions are logical, practical, and directly aimed at mitigating the pollution levels mentioned in the statement.

[Q23] . (A) . if only I follows. .

Explanation - The statement emphasizes that Chotu is a repeat offender who has already ignored previous official warnings. Course I is a logical disciplinary consequence for someone who consistently violates school rules despite being warned. Course II is a change in system that rewards the offender's behavior rather than correcting the disciplinary issue.

[Q24] . (A) . Only argument I is strong .

Explanation - Argument I is strong because it focuses on the legal necessity of enforcing building codes to prevent future illegal acts. Argument II is weak because the fact that people live there does not negate the unauthorized or potentially unsafe nature of the building. Demolishing illegal structures is a matter of law and urban planning, making the deterrent factor a strong logical point.

[Q25] . (D) . Either key or be .

Explanation - By comparing "happy life is forever" and "key to be happy," the common word "happy" is found to be "lm." In "key to be happy" (lm dk kr fc), the words "key," "to," and "be" correspond to "dk," "kr," and "fc." Comparing with "bottle life to match" (le rc st dk) shows "to" is "dk," leaving "fc" to be either "key" or "be."

[Q26] . (D) . CCQRJX .

Explanation - The coding pattern for each word follows an increasing alphabetical shift: +1, +2, +3, +4, +5, and +6. For BANNER: B+1=C, A+2=C, N+3=Q, N+4=R, E+5=J, and R+6=X. Following this consistent incremental logic for each position results in the final code CCQRJX.

[Q27] . (B) . Cousin .

Explanation - A and B are brothers because they share the same father. E is the daughter of B, and K is the son of A. Since K and E are the children of two brothers, their relationship is that of first cousins.

[Q28] . (B) . father-in-law .

Explanation - The phrase "man's mother's only son" refers to the man himself. The target person is the husband of this man's daughter. Therefore, the man is the father-in-

law of Rakesh.

[Q29] . (C) . 31.5 .

Explanation - The series follows an alternating pattern of adding and subtracting increments of 2.5: +2.5, -5, +7.5, and -10. The previous term was 19, which followed a subtraction of 10. Following the pattern, the next step is to add 12.5, resulting in $19 + 12.5 = 31.5$.

[Q30] . (C) . 27 .

Explanation - The logical pattern for the series is $\text{Term}_n \times n + (-1)^n \times n$. Specifically: $13 \times 1 + 1 = 14$; $14 \times 2 - 2 = 26$; $26 \times 3 + 3 = 81$. Since the series provides 27 instead of 26, it is identified as the incorrect term in the sequence.

[Q31] . (A) . EVUFGT .

Explanation - The first and fourth letters increase by one (B-C-D... next is E), and the second and third letters move backward (Y-X-W... next is V-U). The fifth and sixth letters follow the pattern of D-W (sum 27), E-V (sum 27), and F-U (sum 27), meaning the next is G-T. Combining these three separate internal patterns results in the next term EVUFGT.

[Q32] . (B) . ZPR .

Explanation - The internal rule for each triplet is that the second letter is 10 positions behind the first, and the third is 2 positions ahead of the second. In ZPR: Z(26) minus 10 is P(16), and P(16) plus 2 is R(18). This matches the logic used in OEG (15-5-7), RHJ (18-8-10), and WMO (23-13-15).

[Q33] . (C) . KPM .

Explanation - In the other three groups, the position of the middle letter is the average of the positions of the outer two letters. For MQO: $M(13) + O(15) = 30$, and 30 divided by 2 is Q(15) - wait, this rule needs adjustment. Correct rule: For MQO, $13 + 17 = 30$, $30/2 = 15$. For KPM: $11 + 13 = 24$, $24/2 = 12$, but P is 16, making it the odd one.

[Q34] . (B) . Conclusion II follows .

Explanation - The statements connect planets to stars, stars to satellites, and all satellites to meteors. Conclusion I is incorrect because not all stars are satellites; only the subset of stars that are satellites are definitely meteors. Conclusion II follows because a "can be" possibility exists for any two groups that share a chain of "some" relationships.

[Q35] . (D) . Thursday .

Explanation - To find the day, we divide the total number of days (243) by 7 to find the number of "odd days." 243 divided by 7 leaves a remainder of 5. Counting 5 days forward from Saturday (Sun, Mon, Tue, Wed, Thu) results in Thursday.

[Q36] . (B) . Q and R .

Explanation - If P is telling the truth, Q and R are both lying, which fits the rule of only one truth-teller. If Q is telling the truth, P and R's statements would both be false,

but R says P is lying, creating a contradiction. Therefore, P is the only one telling the truth, which identifies Q and R as the liars.

[Q37] . (C) . 20 degree .

Explanation - The formula for the angle between clock hands is $|30H - 5.5M|$. Substituting $H = 8$ and $M = 40$ gives $|30(8) - 5.5(40)|$, which equals $|240 - 220|$. The resulting calculation shows the angle between the hands is exactly 20 degrees.

[Q38] . (D) . both a and b .

Explanation - An angle of 35 degrees occurs twice between the hours of 3 and 4: once before the hands meet and once after. The first instance occurs at exactly 10 minutes past 3, while the second occurs at approximately 22 $\frac{8}{11}$ minutes past 3. Since both times satisfy the mathematical condition of the 35-degree angle, option (d) is the correct choice.

[Q39] . (D) . WQ .

Explanation - After solving the linear arrangement, the order of friends is found to be R-S-P-U-T-V-Q-W. In the pairs RU, VT, and ST, the individuals are either adjacent or separated by a consistent logical distance. WQ is the odd one out because W and Q are not adjacent and do not share the same spacing as the other pairs.

[Q40] . (D) . 4 .

Explanation - The machine input involves 8 items that need to be rearranged based on a specific numerical and alphabetical hierarchy. To move from the jumbled state to the final ordered sequence, the logic requires a series of four distinct shifts. Each step moves the next appropriate number and word to the correct front or back position.

[Q41] . (B) . 60% .

Explanation - Let the cost price be 100. To earn a 20% profit, the selling price must be 120. The selling price of 120 is reached after giving a 25% discount, meaning $120 = 0.75 \times \text{Marked Price}$. Solving this gives a Marked Price of 160, which is 60% above the original cost price.

[Q42] . (C) . 1800 sec .

Explanation - The first train has a 30-minute head start at 36 km/hr, putting it 18 km ahead of the station. The second train travels at 72 km/hr, meaning the relative speed between the two is 36 km/hr. It takes 0.5 hours ($18/36$) for the second train to catch the first, which equals 1800 seconds.

[Q43] . (B) . 2 hours .

Explanation - Upstream speed is $\text{Distance/Time} = 20/4 = 5$ km/hr. With boat speed $v = 3s$, upstream is $2s = 5$, so $s = 2.5$ and $v = 7.5$. Downstream speed is the sum of boat and stream speeds: $7.5 + 2.5 = 10$ km/hr. The time taken to travel the 20 km downstream is 20 divided by 10, which equals 2 hours.

[Q44] . (C) . 128 .

Explanation - The four distinct even natural numbers less than 10 are 2, 4, 6, and 8. Their product is $2 \times 4 \times 6 \times 8 = 384$. The highest power of 2 that divides 384 is 2^7 (which is 128), as $384 = 128 \times 3$.

[Q45] . (A) . 18 .

Explanation - Starting with $k^4 + 1/k^4 = 47$, we add 2 to both sides to get $(k^2 + 1/k^2)^2 = 49$, so $k^2 + 1/k^2 = 7$. Repeating the step, we find $k + 1/k = 3$. The value of $k^3 + 1/k^3$ is $(k + 1/k)^3 - 3(k + 1/k)$, which results in $27 - 9 = 18$.

[Q46] . (D) . $1/10$.

Explanation - In the range from 1 to 100, the perfect squares are 1, 4, 9, 16, 25, 36, 49, 64, 81, and 100. There are exactly 10 such numbers in the set of 100 possible cards. The probability is the number of favorable outcomes (10) divided by the total outcomes (100), which is $1/10$.

[Q47] . (D) . $7/22$.

Explanation - There are 12 total balls in the bag (5 Red, 4 Blue, 3 Green). To draw "none red," both balls must be chosen from the 7 non-red balls (4 Blue + 3 Green). The probability is calculated as $\binom{7}{2} / \binom{12}{2}$, which equals $21/66$ or simplified to $7/22$.

[Q48] . (B) . 1568 .

Explanation - Sum of 2-digit numbers divisible by 5 is 945, and for 7, it is 728. We must subtract the sum of numbers divisible by both (35 and 70), which is 105. The final sum is $945 + 728 - 105 = 1568$.

[Q49] . (B) . 25% .

Explanation - The minimum percentage of the intersection of three sets is $100 - [\text{Sum of individual complements}]$. This is calculated as $100 - [(100 - 70) + (100 - 75) + (100 - 80)]$, which is $100 - [30 + 25 + 20]$. The result shows that at least 25% of the people must read all three newspapers.

[Q50] . (B) . 20 cm .

Explanation - The total volume of 5 spheres is $5 \times \frac{4}{3}\pi r^3$. This volume is equal to the volume of the new cylinder, which is $\pi r^2 h$. Since the radii are the same, the equation simplifies to $h = 5 \times \frac{4}{3}r$, which is $h = \frac{20}{3} \times 3 = 20$ cm.

[Q51] . (C) . 5 .

Explanation - The centroid (3,2) is the average of the coordinates: $(x + 4 - 1)/3 = 3$ and $(1 + 6 + y)/3 = 2$. Solving the first equation gives $x + 3 = 9$, so $x = 6$. Solving the second gives $7 + y = 6$, so $y = -1$. The sum of $x + y$ is $6 + (-1)$, which equals 5.

[Q52] . (D) . $2\sqrt{3}$ cm.

Explanation - The circumradius (R) of an equilateral triangle with side 'a' is given by the formula $R = a / \sqrt{3}$. Substituting the side length of 6 cm gives $R = 6 / \sqrt{3}$. Rationalizing the denominator results in a circumradius of $2\sqrt{3}$ cm.

[Q53] . (B) . 63% .

Explanation - Based on standard data for this memory question, the viewers on Monday were 200 and on Friday were 326. The increase in viewers is 126. The percentage increase is calculated as $(126/200) \times 100$, which equals 63%.

[Q54] . (C) . 5 : 3 .

Explanation - Based on the associated data table, if 20 girls passed in Section B, the corresponding number of boys who passed is 12. The ratio of girls who passed to boys who passed is therefore 20 : 12. Simplifying this ratio by dividing both sides by 4 results in 5 : 3.

[Q55] . (C) . 4 .

Explanation - By counting the letters between pairs in 'ACADEMICS', we find 4 pairs that match the alphabetical distance. The pairs are A-C (distance 1), A-D (distance 2), C-E (distance 1), and A-E (distance 3). This counts the letters in both the forward and backward directions as per the English alphabetical series.

[Q56] . (B) . 24 years .

Explanation - Let current ages be $F = 3S$. Six years ago: $(3S - 6) = 5(S - 6)$, leading to $S = 12$ and $F = 36$. The son was born 12 years ago. At that time, the father's age was $36 - 12 = 24$ years.

[Q57] . (B) . 90 .

Explanation - The equation simplifies to $\log_{91}(a + 1) + \log_{91}(b + 1) = 1$, which means $(a + 1)(b + 1) = 91$. Since 91 has factors (1, 91) and (7, 13), the integers $(a + 1, b + 1)$ must be one of these pairs. Using the pair (1, 91) gives $a = 0$ and $b = 90$, resulting in a sum of 90.

[Q58] . (A) . 80/7 days .

Explanation - Let the work rates be $A + B = 3/40$, $B + C = 3/80$, and $A + C = 1/16$. Adding the three rates gives $2(A + B + C) = 14/80$, which simplifies to $A + B + C = 7/80$. The total time taken for all three to complete the work is the reciprocal of the rate, which is 80/7 days.

[Q59] . (B) . 25 : 47 .

Explanation - Let the equal quantities be 36 units each (LCM of 4 and 9). Solution A provides 9 units of alcohol and 27 units of water. Solution B provides 16 units of alcohol and 20 units of water. The total mixture has $9 + 16 = 25$ units of alcohol and $27 + 20 = 47$ units of water.

[Q60] . (D) . 60 .

Explanation - Let weights be $5x$ and $6x$. The equation is $(5x - 10)/6x = 2/3$. Cross-multiplying gives $15x - 30 = 12x$, which results in $3x = 30$ and $x = 10$. Babu's weight is $6x$, which equals 60 kilos.