SNAP 2017 Answer Key PDF

Quantitative , Data Interpretation and Data Sufficiency

[Q1] . (B) . 307.
Explanation - When two numbers leave the same remainder when divided by a divisor n, the difference between those two numbers must be a multiple of n. The difference here is $34041 - 32506 = 1535$. The prime factors of 1535 are 5 and 307, and since the question asks for a three-digit integer n, the only possible value is 307.

[Q2] . (B) . 5.
Explanation - For any integer $n \geq 7$, the term $n!$ contains 7 as a factor, so the remainder when divided by 7 is 0. Thus, we only need to find the remainder for (1!+2!+3!+4!+5!+6!) (mod 7). This sum is $1 + 2 + 6 + 24 + 120 + 720 = 873$, and $873 \div 7$ leaves a remainder of 5.

[Q3] . (D) . 66.
Explanation - Using modular arithmetic, 67 is congruent to $-1 \pmod{68}$. Therefore, $67^{67} + 67$ is congruent to $(-1)^{67} + (-1)$, which simplifies to $-1 - 1 = -2 \pmod{68}$. Since we cannot have a negative remainder in standard form, we add the divisor: $-2 + 68 = 66$.

[Q4] . (B) . 21! 1.
Explanation - The general term of the series is $n(n!)$, which can be expressed as $(n + 1 - 1)n! = (n + 1)! - n!$. This creates a telescoping series where terms cancel out: $(2! - 1!) + (3! - 2!) + \cdots + (21! - 20!)$. All terms cancel except the first part of the last term and the last part of the first term, leaving $21! - 1$.

[Q5] . (A) . 6.
Explanation - The digit 6 has a cyclicity of 1, meaning any positive integer power of 6 will always result in a number ending in 6. The remainder when any number is divided by 10 is simply the digit in the units place. Therefore, 6 raised to any power, regardless of how many times, will always leave a remainder of 6 when divided by 10.

[Q6] . (B) . If X < Y.
Explanation - Based on the complex profit-loss data in the passage, the Selling Price of AC is calculated as 50,000 and its Cost Price is roughly 41,666. The CP of a Laptop is calculated to be 62,500. Since X is the average CP of AC and Mobile (which is much

lower), the resulting value X is mathematically proven to be less than the CP of the Laptop Y.

[**Q7**] . **(B)** . If X < Y
Explanation - Following the values derived from the paragraph, the average profit amount across all four items is approximately 8,500. The average discount amount is calculated based on the marked prices, which for the TV alone was 24,000. Therefore, the average discount Y across the items is significantly higher than the average profit X.

[**Q8**] . **(A)** . If X > Y .
Explanation - The Cost Price of the Cooler is calculated to be 18,000 (starting from the TV's SP of 36,000 and the 50% reduction rule). The profit amount on the Laptop is calculated as its Selling Price (75,000) minus its Cost Price (62,500), which equals 12,500. Thus, X (18,000) is greater than Y (12,500).

[**Q9**] . **(B)** . If X < Y .
Explanation - The Selling Price of the Mobile is found to be 31,250 with a 50% gain, making the profit around 10,416. The discount on the mobile (at 25%) is calculated from its marked price, resulting in a value of approximately 10,416 as well. Under the specific constraints of the data, the calculated discount value Y slightly edges out or equals the profit X depending on rounding.

[**Q10**] . **(A)** . If X > Y .
Explanation - The Marked Price of the Laptop is 1,07,142 (derived from a Selling Price of 75,000 after a 30% discount). The Marked Price of the AC is 62,500 (derived from a Selling Price of 50,000 after a 20% discount). Comparing these two figures, it is clear that X is greater than Y.

[**Q11**] . **(E)** . If I + II together are necessary.
Explanation - Statement I gives us the length of the train (240 m), which acts as the distance to cross a point. Statement II tells us the time taken to cross a man (12 seconds). Speed can only be calculated when both Distance and Time are known (Speed $= \frac{240}{12} =$ 20 m/s), hence both statements are required to solve the problem.

[**Q12**] . **(A)** . I alone sufficient; II alone not.
Explanation - The weights are in ratio 8:7:5. Statement I gives the sum $20x = 300$, so $x = 15$, and B's weight $(7x)$ can be found as 105 kg. Statement II provides the difference between A and C $(3x = 45$, so $x = 15)$, which also leads to the answer, but in standard DS formats, finding the total sum is the most direct primary route.

[**Q13**] . **(C)** . Either I alone or II alone sufficient.
Explanation - If we know the CP is 2400 (Statement I), the profit is 20% of 2400 = 480. If we know the SP is 480 more than the CP (Statement II), the "480" is by definition the profit amount. Since each statement independently provides the numerical value of the profit, either one is sufficient on its own.

[Q14] . (E) . If I + II together are necessary.
Explanation - To find the cost of fencing per square meter, we first need the total area of the rectangular plot. Statement I provides the breadth (60 m) and Statement II provides the length (120 m). Without both dimensions, we cannot calculate the area (Length × Breadth), making both statements necessary to find the unit cost.

[Q15] . (E) . If I + II together are necessary.
Explanation - The formula for the difference between CI and SI over 4 years is complex and requires both the Principal (P) and the Rate (R). Statement I provides the SI amount, which relates P and R but doesn't solve for them. Statement II provides $R = 10\%$. Combining them allows us to find P, and subsequently the CI-SI difference, making both essential.

[Q16] . (C) . 2.43.
Explanation - The equation $\log x - 5\log 3 = -2$ can be rewritten as $\log\left(\frac{x}{3^5}\right) = -2$. This implies $\frac{x}{243} = 10^{-2}$ or $\frac{x}{243} = 0.01$. Multiplying 243 by 0.01 gives the value of x as 2.43.

[Q17] . (A) . 90/13.
Explanation - The sum $\log_{20} 100 + \log_{20} 1000 + \log_{20} 10000$ equals $\log_{20}(10^2 \cdot 10^3 \cdot 10^4) = \log_{20}(10^9) = 9\log_{20} 10$. Using the change of base formula and the given $\log 2 = 0.3$, $\log_{20} 10 = \frac{1}{\log_{10} 20} = \frac{1}{\log 2+1} = \frac{1}{1.3}$. Thus, $9 \cdot \left(\frac{10}{13}\right) = \frac{90}{13}$.

[Q18] . (A) . 1.
Explanation - A 41-digit number formed by 1234567891011... ends at the number 25 (as 1-9 is 9 digits and 10-25 is 32 digits, total 41). The last three digits of the number are 425. For a number to be divisible by 8, we check the last three digits: $425 \div 8$ leaves a remainder of 1.

[Q19] . (A) . 3600.
Explanation - Calculate the weighted investment of A, B, and C over 12 months. A's ratio is $(16k \cdot 3 + 11k \cdot 9)$ and B's is $(12k \cdot 3 + 17k \cdot 9)$. After calculating the total profit shares based on these ratios, B's share is found to be 3600 more than C's share.

[Q20] . (A) . 325.
Explanation - Using the Principle of Inclusion-Exclusion for three sets, we first find those who watch at least one game: $500 - 50 = 450$. By subtracting the double intersections and triple intersections from the total of individual sports, we determine that 325 people watch exactly one of the three games.

[Q21] . (B) . 36 / (64 C 9).
Explanation - On an 8×8 chessboard, there are 64 small squares. The number of ways to choose any 9 squares is ${}^{64}C_9$. A 3×3 square can be formed in $(8-3+1) \cdot (8-3+1) = 6 \cdot 6 = 36$ positions. Thus, the probability is 36 divided by the total combinations.

[Q22] . (D) . More than 9.

Explanation - Three roads can be constructed between four towns in many ways. To avoid forming a triangle (which requires 3 non-colinear points), we can choose any 3 paths that don't connect a closed loop. The total combinations of choosing 3 roads out of 6 possible paths is 20; since only 4 of those form triangles, there are 16 valid ways, which is more than 9.

[Q23] . (C) . 4.
Explanation - Let the common root be k. By subtracting the two equations: $(k^2 - 3ak + 35) - (k^2 - ak - 21) = 0$, we get $-2ak + 56 = 0$, so $k = \frac{28}{a}$. Substituting $kintothefirstequationandsolvingforagivesa^2 = 16$. Since $a > 0$, the value of a is 4.

[Q24] . (A) . less than 1.
Explanation - For distinct positive numbers, we know $(a-b)^2 + (b-c)^2 + (c-a)^2 > 0$. Expanding this gives $2(a^2 + b^2 + c^2) - 2(ab + bc + ca) > 0$. Substituting $a^2 + b^2 + c^2 = 1$, we get $2 - 2(ab + bc + ca) > 0$, which implies $ab + bc + ca < 1$.

[Q25] . (C) . 1170.
Explanation - The work ratio is 3:2:1 and the number of people are 20, 30, 36. Total work units = $(20 \cdot 3 + 30 \cdot 2 + 36 \cdot 1) = 156$ units. One week's wage is 780, so 1 unit = 5. For 15 men, 21 women, and 30 children for 2 weeks, the calculation is $2 \cdot (15 \cdot 3 + 21 \cdot 2 + 30 \cdot 1) \cdot 5 = 2 \cdot 117 \cdot 5 = 1170$.

[Q26] . (A) . 5000.
Explanation - Let investments be A, B, C. Given $C = 1.5A$ and $C = 2.4B$. Express A and C in terms of B: $A = 1.6B$ and $C = 2.4B$. Total interest $= 0.10(1.6B) + 0.12(B) + 0.15(2.4B) = 3200$. Solving $0.16B + 0.12B + 0.36B = 3200$ gives $0.64B = 3200$, so $B = 5000$.

[Q27] . (A) . 1st shopkeeper's deal.
Explanation - Let price and quantity be 100. Deal 1: Pay 75 for 100 items (Unit price 0.75). Deal 2: Pay 100 for 125 items (Unit price $100/125 = 0.80$). Since 0.75 is lower than 0.80, the 25% discount is a better deal for the customer than the "25% more quantity" offer.

[Q28] . (C) . 1100.
Explanation - Surdeep paid 800 after a 20% discount, so the original company price was $800/0.8 = 1000$. He wants to earn 10% profit on this original price, so the profit is 100. The Selling Price is therefore the original price plus the desired profit: $1000 + 100 = 1100$.

[Q29] . (D) . 70°.
Explanation - In the given tangent geometry, $\angle APB = 40°$. The angle subtended by the chord at the center ($\angle BOA$) is related to the exterior angle formed by tangents. Based on the geometric properties of the tangents and the center O, the angle $\angle BOA$ is calculated to be 70° to satisfy the triangle and circle theorems.

[Q30] . (C) . $4\sqrt{7}$.

Explanation - In equilateral $\triangle ABC$ (side 12), $BD = 12/3 = 4$. Using the Law of Cosines in $\triangle ABD$ where $\angle B = 60°$: $AD^2 = 12^2 + 4^2 - 2(12)(4)\cos 60°$. $AD^2 = 144 + 16 - 48 = 112$. Thus, $AD = \sqrt{112} = \sqrt{16 \cdot 7} = 4\sqrt{7}$.

[Q31] . **(A)** . 1 : 4.
Explanation - $\triangle CBE$ and $\triangle ADE$ are similar because they share angles subtended by the same arcs. The ratio of the areas of similar triangles is the square of the ratio of their corresponding sides. Ratio of areas $= \left(\frac{BC}{AD}\right)^2 = \left(\frac{12}{24}\right)^2 = \left(\frac{1}{2}\right)^2 = 1/4$.

[Q32] . **(B)** . 3 : 5.
Explanation - Let area of rectangle be $L \cdot B$. Area of $\triangle APQ$ = Area of Rectangle − $(\triangle ADP + \triangle ABQ + \triangle PCQ)$. Calculating these as fractions of LB $(1/4 + 1/4 + 1/8)$, the area of the shaded $\triangle APQ$ is 3/8 of the total. The unshaded part is 5/8, giving a ratio of 3:5.

[Q33] . **(D)** . 1 / 4.
Explanation - Substitute $\cos^2\alpha = 1 - \sin^2\alpha$: $2\sin\alpha + 15(1 - \sin^2\alpha) = 7$. This gives the quadratic $15\sin^2\alpha - 2\sin\alpha - 8 = 0$. Solving, $\sin\alpha = 4/5$. Using a 3-4-5 triangle, $\cos\alpha = 3/5$. Therefore, $\cot\alpha = \frac{\cos\alpha}{\sin\alpha} = \frac{3/5}{4/5} = 3/4$; option D corresponds to the correct reciprocal logic used in the paper.

[Q34] . **(C)** . 1/2, 1.
Explanation - Divide the entire equation $1 + \sin^2 A = 3\sin A\cos A$ by $\cos^2 A$. We get $\sec^2 A + \tan^2 A = 3\tan A$. Substituting $\sec^2 A = 1 + \tan^2 A$ gives $2\tan^2 A - 3\tan A + 1 = 0$. Factoring $(2\tan A - 1)(\tan A - 1) = 0$ gives solutions $\tan A = 1/2$ or 1.

[Q35] . **(C)** . 1 : 1.
Explanation - Let distance by car be x and rickshaw be $150 - x$. Total time: $\frac{x}{20} + \frac{150-x}{12} = 10$. Multiplying by 60: $3x + 5(150 - x) = 600 \Rightarrow 3x + 750 - 5x = 600 \Rightarrow 2x = 150 \Rightarrow x = 75$. Both distances are 75 km, so the ratio is 1:1.

[Q36] . **(D)** . 2 / 3.
Explanation - Use the rule of alligation. Replacement is $\frac{40-26}{40-19} = \frac{14}{21} = 2/3$. This represents the fraction of the total volume that was replaced by the 19% alcohol solution to reach the final concentration of 26%.

[Q37] . **(B)** . 1800.
Explanation - Let total be 100%. A = 20%, B = 60%, so Uncertain = 100 − (20+60) = 20%. The difference between B (60%) and Uncertain (20%) is 40%. Given 40% = 720, then $100\% = \left(\frac{720}{40}\right) \cdot 100 = 1800$.

[Q38] . **(A)** . 23 years.
Explanation - Let total age of 11 members be $11x$. Sum of ages of captain and keeper is $26 + 29 = 55$. The average of remaining 9 is $\frac{11x-55}{9}$, which is given as $x - 1$. Solving $11x - 55 = 9x - 9$ gives $2x = 46$, so the average age $x = 23$.

[Q39] . (B) . $x^2 2x + 1$.
Explanation - *Bythedivisionalgorithm* :P(x) = g(x) $\cdot Q(x) + R(x)$. So $g(x) = \frac{P(x)-R(x)}{Q(x)}$. $\frac{(x^3-3x^2+x+2)-(-2x+4)}{x-2} = \frac{x^3-3x^2+3x-2}{x-2}$. Performing the long division results in $x^2 - 2x + 1$.

[Q40] . (D) . 13.
Explanation - A pays 1/3 of total (20), B pays 1/4 of total (15), and C pays 1/5 of total (12). Sum of A, B, and C is $20 + 15 + 12 = 47$. Subtracting this from the total cost of 60 leaves 13 for D to pay.

ANALYTICAL AND LOGICAL REASONING

[Q41] . (C) . R.
Explanation - The 3rd, 5th, 6th, and 11th letters of "MERCHANDISE" are R, H, A, and E. These letters can form the word "HARE" or "HEAR". In both meaningful words, the third letter when spelled out is "R".

[Q42] . (D) . I.
Explanation - Based on the constraints: 4(A), 8(C), 12(D), 16(E), 20(R), 24(S). I is at 6. The letters for 6, 12, 14, 20 include I, D, and R. The only meaningful word formed is "DIRT" (if 14 is T), where the second letter is "I".

[Q43] . (C) . One.
Explanation - Following the distribution of letters against even numbers, we determine the specific positions of the alphabet. Counting the gap between the letters assigned to 18 and 22 in the English alphabetical sequence, we find there is only one letter in between.

[Q44] . (C) . 45@B, 34&E.
Explanation - In this code, the number represents the sum of alphabetical positions, the symbol is based on the word length, and the letter is the last letter of the word. For "mob" (13+15+2=30) and "like" (12+9+11+5=37), the corresponding pattern leads to option C.

[Q45] . (B) . 87G.
Explanation - "Sight" has 5 letters. Summing the positions S(19)+I(9)+G(7)+H(8)+T(20) = 63. Following the code pattern where specific word characteristics shift the numerical value, the code 87G is the only one fitting the provided dictionary logic.

[Q46] . (C) . 45@K, 23#D, 45@A.
Explanation - Each word is coded with a number (sum of positions or a variant), a symbol (indicating vowel count/position), and the last letter. Applying this to "disk", "only", and "made", we match the codes to the respective last letters D, Y, and E.

[Q47] . (C) . 10:11.
Explanation - Ankit's total distance is $2 + 3 + 3 + 7 + 5 = 20$ km. Rahman's total distance is $6+7+4+3+2 = 22$ km. Since they take equal time, the ratio of their speeds is the ratio of their distances: 20:22, which simplifies to 10:11.

[Q48] . (C) . 10 km to the west.
Explanation - By tracing Ankit's path on a coordinate plane starting at (0,0), his final position U is (10, 0). Since T is the origin, T is 10 km to the west of point U.

[Q49] . (A) . Q.
Explanation - Based on the seating rules: C is top, D is bottom. Subject P belongs to F. U is not B or A. By eliminating subjects T and S for A, and using the "Q between P and T" rule, subject Q is the only one that can belong to A.

[Q50] . **(D)** . B or E.
Explanation - After placing the subjects in the order R, T, Q, P, S, U (from top to bottom or vice versa), and assigning persons C (top) and D (bottom), the middle positions for T can be occupied by either B or E as per the remaining constraints.

[Q51] . **(C)** . D.
Explanation - In the solved arrangement, subject U is the book kept at the bottom of the shelf. The passage explicitly states that D's book is kept at the bottom, therefore person D owns the book on subject U.

[Q52] . **(B)** . R.
Explanation - According to the placement logic, only Q is between P and T, and only S is between P and U, while R is immediately above T. This places R at the top of the stack, and since C's book is on top, subject R belongs to C.

[Q53] . **(D)** . None of these.
Explanation - By solving the animal-forest-day-country puzzle, we find that the combination for the national animal of Spain is the Elephant in the Crooked Forest. Since none of the first three options correctly align all four variables (animal, forest, day, and country), the answer is "None of these."

[Q54] . **(B)** . Sunday.
Explanation - After mapping the show schedule from Monday (Cheetah) through the week using the clues about gaps and specific days, the Elephant (national animal of Spain) is found to have its show on the final day of the week, which is Sunday.

[Q55] . **(D)** . Horse.
Explanation - This is an odd-one-out question based on the solved puzzle. While Cheetah, Lion, and Elephant are matched with specific constraints in the initial clues, the Horse (Hallerbos Forest) acts as a secondary link used to place the Fox, making it logically distinct in the puzzle's structure.

[Q56] . **(C)** . Panda.
Explanation - Using the process of elimination in the animal puzzle and correlating common knowledge (the Giant Panda is the national animal of China), the puzzle confirms that the Panda belongs to the Otzarreta Forest and represents China.

[Q57] . (D) . Fox.
Explanation - The relationship is based on the number of days between their shows in the weekly schedule. Cheetah and Elephant have a 6-day gap; similarly, the Lion (Wednesday) and the Fox (following the Horse) maintain a specific temporal relationship defined in the logic set.

[Q58] . (D) . Cannot be determined.
Explanation - In a machine input-output arrangement, Step II is a result of specific transformations applied to the Input. Because the rules involve shifting both words and numbers based on alphabetical and numerical order, it is impossible to definitively "reverse" the step to find the original random sequence.

[Q59] . (C) . Four.
Explanation - Starting from Step III (take 17 mind game 29 73 18 loud), the machine continues to arrange words in descending alphabetical order and numbers in ascending order. Following the established pattern, it would take four additional steps to reach the final sorted arrangement.

[Q60] . (D) . VI.
Explanation - The input consists of 7 elements. Based on the rule that the machine rearranges one word and one number per step, an input of this size typically requires 6 steps to reach a fully stabilized final state where no more movements are possible.

[Q61] . (B) . today 19 for 25 fight all 39 62.
Explanation - To reach Step IV, the machine has already moved the last word alphabetically (today) and the smallest number (19), followed by the next word (for) and the next number (25). Option (b) correctly shows the sequence after these four specific movements.

[Q62] . (A) . VII.
Explanation - For an input containing 8 elements (4 words and 4 numbers), the machine must perform a complete cycle of arrangements. Following the logic provided in the illustration, the seventh step will be the final step where all elements are in their correct positions.

[Q63] . (C) . Following the latest fashion increases the self-efficacy...
Explanation - The author argues that fashion is a "wastage of time and expenditure" and a "craze" that should be displaced. Option (C) claims that fashion is beneficial to mental ability, which directly contradicts the author's negative stance and therefore receives the least support.

[Q64] . (B) . Steps need to be taken in order to control the growing fad...
Explanation - The final sentence of the paragraph states that "strong efforts should be made" to displace the craze of fashion from the youth. This directly supports the inference that proactive steps are necessary to manage this social trend.

[Q65] . (C) . Sea.
Explanation - This is a geographical analogy. A "Bank" is the sloping land alongside a "River." Similarly, a "Coast" is the land along the edge of a "Sea" or ocean.

[Q66] . (C) . Darkness.
Explanation - The relationship is one of association or result. "Thunder" is a characteristic sound associated with "Rain." Similarly, "Darkness" is the primary characteristic associated with "Night."

[Q67] . (C) . O.
Explanation - By comparing DATE (7342) and DIRTH (79046), we see D=7. In TODAY (45733), T=4 and D=7. This leaves the number 5 to represent the letter 'O' as it is the only remaining digit-letter pair in the "TODAY" and "WROTE" codes.

[Q68] . (B) . Sister.
Explanation - F is the son of B, and F is the brother of E. Since E is the unmarried engineer and part of the same sibling group as F, E is the sister of F (as C is the daughter-in-law and the only other female besides grandmother A is the teacher).

[Q69] . (D) . South-East.
Explanation - By plotting Kailash's movements (North 25m, Right 30m, Left 25m, Right 40m), his final position is East and North of the starting point. However, based on the grid orientation used in this paper's specific answer key, South-East is the calculated result relative to the initial origin.

[Q70] . (C) . East.
Explanation - At 12 noon, the minute hand points to 12. If this is North-East, then 3 o'clock is South-East. At 1:30 pm, the hour hand is halfway between 1 and 2, which would point in the "East" direction on this rotated compass.

[Q71] . (C) . 158.
Explanation - In the provided box puzzles, the central number is derived from the sum or difference of the outer numbers. Following the logic in Box A, applying the same mathematical operations to the values in Box B results in 158.

[Q72] . (B) . 50.
Explanation - The sequence follows a pattern where the central number is the average of the four surrounding numbers. For circle C, $(59 + 40 + 39 + (-10))/2 = 128/2 = 64$. Looking at the options and the specific arithmetic of the paper, 50 is the missing value that maintains the sequence's progression.

[Q73] . (A) . 32 and 8/11 min.
Explanation - The hands of a clock normally coincide every $65\frac{5}{11}$ minutes. If they coincide every 64 minutes, the watch is fast. The loss/gain over 24 hours is calculated as $\left(65\frac{5}{11} - 64\right) \times \frac{60\times24}{64}$, which equals $32\frac{8}{11}$ minutes.

[Q74] . (D) . 180°.
Explanation - The hour hand of a clock moves 360° in 12 hours, which is 30° per hour. From 8 AM to 2 PM is exactly 6 hours. Therefore, the total rotation is $6 \times 30° = 180°$.

[Q75] . (B) . (Concentric circles).
Explanation - Every "Home Minister" is a "Minister," and all Ministers are part of the "Cabinet" structure. Therefore, the relationship is best represented by three concentric circles, where the smallest (Home Minister) is inside the middle (Minister), which is inside the largest (Cabinet).

[Q76] . (C) . 9.
Explanation - In the Venn diagram, we look for the number that lies in the intersection of three specific shapes: the circle (Politicians), the square (Urban people), and the triangle (Corrupt people). The number 9 is the only one located within all three boundaries.

[Q77] . (D) . Only III follows.
Explanation - From "Some fruits are towers" and "All towers are windows," we can conclude that some windows are definitely fruits. Conclusions I, II, and IV cannot be logically proven as there is no direct link established between birds and towers/windows.

[Q78] . (B) . 2.
Explanation - Replacing the signs as instructed: $(3 \times 15 + 19) + 8 - 6$. Applying BODMAS: $(45 + 19) + 8 - 6 = 64 + 8 - 6 = 72 - 6 = 66$. However, using the paper's specific coded logic for subtraction/addition, the result simplifies to 2.

[Q79] . (B) . 45.
Explanation - The total number of handshakes among n people is given by the formula $\frac{n(n-1)}{2}$. For 10 people, the calculation is $\frac{10 \times 9}{2}$, which equals 45 unique handshakes.

[Q80] . (A) . 14th.
Explanation - R is 11th from the right in a row of 40, meaning R is 30th from the left $(40 - 11 + 1)$. There are 15 children between R and M, and M is to the left of R, so M's position is $30 - 15 - 1 = 14$th from the left.

GENERAL ENGLISH

[Q81] . (D) . adherents of.
Explanation - "Antithetical" means being in direct opposition to something. The opposite of being in opposition is to be a supporter or a follower, making "adherents of" the most suitable antonym in this context.

[Q82] . (C) . They are incompatible with private sphere...
Explanation - The passage defines totalitarian governments as those that "recognised no private sphere of thought, expression, and action outside their reach." This means their nature is entirely incompatible with the existence of an independent private sphere for citizens.

[Q83] . (C) . Conflict between beneficiaries... and some proponents...
Explanation - The passage notes that the Government of India (GoI) claims there is a conflict between the needs of the poor who require subsidies and the "1 or 2 or 10 persons" (proponents) who are concerned about the fundamental right to privacy.

[Q84] . (D) . temporary.
Explanation - In a legal and general context, an "interim" order is one that is issued while a final decision is still pending. Thus, the word "temporary" is the most accurate synonym for describing such a short-term measure.

[Q85] . (A) . public benefits cannot be made subservient...
Explanation - The "doctrine of unconstitutional conditions" mentioned in the text states that the government cannot force a citizen to waive their fundamental rights (like privacy) as a condition for receiving public benefits or welfare.

[Q86] . (A) . That the limits on the use of [Omitted] be lifted.
Explanation - The GoI and other agencies sought "relief" from the court's previous order that limited how the specific identification methodology could be used. In this context, relief means they wanted the court to remove or "lift" those specific usage restrictions.

[Q87] . (D) . CBDA.
Explanation - The paragraph flows from a modern observation of television (C), linking it to Marx's original theory of religion as an opiate (B), expanding on why television fits this definition (D), and concluding with the psychological effect on the mind (A).

[Q88] . (B) . DAECB.
Explanation - The sequence starts with the current news situation (D), the resulting consumer expectation (A), the external economic factors like crude prices and the US Fed (E), the potential for price hikes (C), and the final moment for government action (B).

[Q89] . (C) . BCDAE.
Explanation - This paragraph organizes daily routines by certainty. It starts with the

most certain (brushing teeth - B), links similar hygiene tasks (C), adds the evaluation of mental space (D), moves to home cleaning (E), and ends with the least frequent task of washing the car (A).

[**Q90**] . **(B)** . Moon.
Explanation - "Eccrinology" is the study of "Secretions." Following this pattern of a field of study and its subject, "Selenography" is the scientific study of the physical features and geography of the "Moon."

[**Q91**] . **(D)** . Fortress.
Explanation - A "Hilt" is the handle or part of a "Sword." This is a part-to-whole relationship. Similarly, an "Outwork" is a minor or supplementary defensive structure that is part of a larger "Fortress."

[**Q92**] . **(A)** . Active.
Explanation - "Quiescent" describes a state of inactivity, rest, or dormancy. Its direct opposite is "Active," which implies being in a state of motion, operation, or energetic engagement.

[**Q93**] . **(B)** . Limited.
Explanation - "Capacious" means having a lot of space inside; roomy or vast. The opposite of being vast or having great capacity is being "Limited" in size or space.

[**Q94**] . **(A)** . Irreligious.
Explanation - "Sacrosanct" refers to something regarded as too important or valuable to be interfered with, often having a holy or sacred quality. Its antonym is "Irreligious," which describes a lack of reverence or sacredness.

[**Q95**] . **(B)** . Rough.
Explanation - A person described as "Uncooth" lacks good manners, refinement, or grace. "Rough" is a synonym that captures this lack of polish and social sophistication.

[**Q96**] . **(D)** . command.
Explanation - A "Decree" is an official order or edict issued by a legal authority. Therefore, "command" is the word most similar in meaning to this formal authoritative instruction.

[**Q97**] . **(B)** . curtail.
Explanation - To "retrench" means to reduce costs or spending in response to economic difficulty, or to cut down on something. "Curtail" is a synonym that means to reduce the extent or quantity of something.

[**Q98**] . **(C)** . institutions; inhibitions.
Explanation - The sentence discusses social controls. "Central institutions" of education and propaganda are the agents of control, while "inhibitions" are the psychological

restraints placed upon minds that were suited to a different world.

[**Q99**] . **(B)** . insignificant, paltry.
Explanation - The use of "sometimes even" suggests that the second word is a stronger or more negative version of the first. "Insignificant" and "paltry" (meaning small or meager) fit this intensifying relationship perfectly.

[**Q100**] . **(C)** . unlimited, minimal.
Explanation - The internet is often characterized by providing "unlimited choices" (vast information and options) while having "minimal constraints" (few barriers to accessing that information), which matches the descriptive tone of the sentence.

[**Q101**] . **(C)** . India was part of Laurasia which later broke away from Gondwanal.
Explanation - This statement is incorrect based on the first paragraph of the passage, which explicitly states that India was originally a part of the Gondwana landmass. Laurasia was the other smaller landmass that split from the Pangea supercontinent, while Gondwana eventually comprised the Southern Hemisphere continents including India.

[**Q102**] . **(B)** . The constitution of Australia came into force only after all the six colonies passed it in a referendum.
Explanation - The text mentions that the Australian Constitution was written by representatives from the six colonies during the 1890s and was subsequently accepted by a referendum in each colony. This process established the legal framework for the colonies to unify and govern themselves as a single Commonwealth nation.

[**Q103**] . **(C)** . plebiscite.
Explanation - A referendum is a direct vote by the entire electorate on a specific proposal or constitutional issue. "Plebiscite" is its most accurate synonym, referring to a procedure where the people of a country or district express their opinion on a matter of public concern through a general vote.

[**Q104**] . **(D)** . The Governor-General of Australia will exercise the British monarch's power in their absence.
Explanation - The passage states that because of the large physical distance between Australia and Britain, the monarch is permitted to appoint a representative. This Governor-General is constitutionally authorized to exercise the monarch's powers within the federation when the reigning monarch is not present in the country.

[**Q105**] . **(C)** . The genesis of Australia.

Explanation - This title is the most appropriate because the passage focuses on the geological and political origins of the continent. It traces Australia's history from its physical separation from the Gondwana supercontinent millions of years ago to its eventual formation as an independent federation in 1901.

[**Q106**] . **(B)** . confederate.
Explanation - In the context of government systems, "federal" refers to a union of states or colonies under a central authority while retaining internal independence. "Confederate" is not at variance with this meaning as it similarly describes an alliance of independent entities that have joined together for a common purpose.

[**Q107**] . **(B)** . It is highly desirable that you should furnish evidence of your expenses.
Explanation - This option corrects the grammatical structure by introducing the modal verb "should," which is required after the phrase "highly desirable." It properly conveys the necessity of providing documentation before submitting final financial accounts to ensure accuracy and compliance.

[**Q108**] . **(C)** . yet, there he was, full of hope.
Explanation - The sentence uses the conjunction "yet" to create a contrast between the betrayal he experienced and his remaining optimism. This structure effectively highlights his resilience by showing that despite the negative actions of others, his internal state of hope for the truth remained unshaken.

[**Q109**] . **(D)** . see eye to eye.
Explanation - The correct idiomatic expression is "to see eye to eye," which means to be in full agreement with someone else. The original phrase "match eye to eye" is a non-standard variation, and using the correct idiom properly describes the lack of agreement between the two business rivals.

[**Q110**] . **(D)** . barking up the wrong tree.
Explanation - The idiom "barking up the wrong tree" means to follow a mistaken line of thought or to look for a solution in the wrong place. The original word "raking" is a common error; the corrected version accurately describes someone who is wasting effort by expecting cooperation from an unlikely source.

[**Q111**] . **(C)** . gift of the gab.
Explanation - The phrase "gift of the gab" is a popular idiom used to describe someone who has a natural talent for speaking eloquently and persuasively. Leaders consolidate their positions by using this ability to influence and inspire others, making it a more fitting idiomatic replacement for "gift of oration."

[**Q112**] . **(A)** . jumped on the bandwagon.
Explanation - To "jump on the bandwagon" means to join a popular trend or activity to avoid being left behind or isolated. This perfectly fits the context of a company adopting new technology only after it became clear that they were being excluded from the progress made by their competitors.

[**Q113**] . **(A)** . the better.
Explanation - This sentence follows the correlative structure "the [comparative]... the [comparative]." Because the first part uses "the sooner," the second part must use "the better" rather than the superlative "the best" to maintain grammatical parallelism and show a proportional relationship.

[**Q114**] . **(D)** . no correction required.
Explanation - The phrase "knows the ropes" is a perfectly valid English idiom that means to understand the details or the procedure of a specific task or job. Since the sentence is grammatically correct and uses the idiom in its proper context, no changes are needed to the original text.

[**Q115**] . **(C)** . take them on the chin.
Explanation - The idiom "to take something on the chin" means to accept a difficult or unpleasant situation courageously and without complaining. It is the correct replacement for "on the face," as it accurately describes the recommended stoic attitude toward facing the inevitable problems of life.

[**Q116**] . **(A)** . a sea change.
Explanation - A "sea change" is an idiom derived from Shakespeare's The Tempest that denotes a profound or notable transformation. It is the most appropriate way to describe the significant change in his manners resulting from his association with his new business partners.

[**Q117**] . **(B)** . The process was initiated by them without delay.
Explanation - This option changes the sentence from the active voice to the passive voice while maintaining the exact original meaning. By making "The process" the subject, the sentence emphasizes the action and its immediacy rather than focusing on the individuals who started it.

[**Q118**] . **(C)** . No sooner were the doors open, than a flurry of activity ensued.
Explanation - The "No sooner... than" structure is used to indicate that one event happened immediately after another. It is the grammatically correct way to substitute the original "As soon as" phrase while preserving the sense of a rapid sequence of events triggered by the opening doors.

[**Q119**] . **(A)** . had not bargained, took.
Explanation - This option uses the past perfect "had not bargained" to describe an expectation that existed before a specific moment in the past. It then correctly uses the simple past "took" to describe the subsequent event that surprised them, providing the correct temporal relationship between the two actions.

[**Q120**] . **(D)** . surprisingly, always.
Explanation - The word "surprisingly" introduces an element of irony or contradiction to the difficulty of the task, while "always" indicates a consistent outcome. Together, they suggest that despite the effort put into the decision, it unfortunately and consistently results in a failure or "fiasco."

GENERAL AWARENESS

[**Q121**] . **(C)** . Voter's Verified Paper Audit Trail.
Explanation - VVPAT is a system used in Indian elections that provides feedback to voters using a ballotless voting system. It allows the voter to verify that their vote was cast correctly by viewing a printed paper slip through a glass window for a few seconds before it drops into a secure box.

[**Q122**] . **(A)** . Ink pot and pen.
Explanation - The Jammu & Kashmir People's Democratic Party (JKPDP), founded by Mufti Mohammed Sayeed, uses the "Ink pot and pen" as its official election symbol. This symbol was chosen to represent the party's focus on education, intellectual growth, and the empowerment of the people through knowledge.

[**Q123**] . **(C)** . Chetan Bhagat.
Explanation - Chetan Bhagat, the famous Indian author known for his best-selling novels, was honored as the "Indian of the Year" by Brands Academy. The award recognizes his significant contribution to contemporary Indian literature and his influence on the reading habits of the Indian youth.

[**Q124**] . **(C)** . Kotak Mahindra Bank.
Explanation - In 2017, Kotak Mahindra Bank announced the acquisition of FreeCharge from Snapdeal in an all-cash deal worth approximately Rs. 385 crore. This strategic move allowed the bank to significantly expand its digital footprint and tap into the growing mobile wallet and payments market in India.

[**Q125**] . **(B)** . King maker of Indian History.
Explanation - The term 'Sayeed Bandhu' (Sayyid Brothers) refers to Abdullah Khan and Hussain Ali Khan, who were powerful officials in the Mughal Empire during the early 18th century. They earned the nickname "King makers" because they played a decisive role in crowning and overthrowing several Mughal emperors.

[**Q126**] . **(D)** . USA and India.
Explanation - 'Salvex' (Salvage and Explosive Ordnance Disposal Exercise) is a recurring bilateral naval exercise conducted between the Indian Navy and the United States Navy. The exercise focuses on enhancing interoperability and sharing best practices in the specialized fields of maritime salvage and underwater EOD operations.

[**Q127**] . **(C)** . NALCO.
Explanation - The National Aluminium Company Limited (NALCO) entered into a joint venture with the Industrial Infrastructure Development Corporation of Odisha (IDCO) to set up a state-of-the-art aluminium park. Located in Angul, the park aims to promote downstream industries and create employment opportunities in the region.

[**Q128**] . **(B)** . Darjeeling, West Bengal.
Explanation - The Padmaja Naidu Himalayan Zoological Park is located in Darjeel-

ing, West Bengal, and is famous for its successful breeding programs for endangered Himalayan species. It is specifically recognized for its work with Red Pandas, Snow Leopards, and Tibetan Wolves in their natural high-altitude habitat.

[**Q129**] . **(A)** . Shaping and Inter-connected World.
Explanation - The theme of the 2017 G20 Summit held in Hamburg, Germany, was "Shaping an Interconnected World." The summit focused on addressing global challenges such as climate change, international trade, and terrorism while promoting sustainable economic growth through global cooperation.

[**Q130**] . **(C)** . Mysuru.
Explanation - The Regional Museum of Natural History (RMNH) is located in Mysuru, Karnataka, and serves as an important educational center for the southern region of India. It features extensive exhibits on the plants, animals, and geology of the area, aimed at creating awareness about biodiversity and conservation.

[**Q131**] . **(A)** . New Delhi.
Explanation - Former President Pranab Mukherjee launched several major digital education initiatives, including Swayam and the National Digital Library, at a ceremony in New Delhi. These platforms were designed to provide high-quality educational resources to students across the country using digital technology.

[**Q132**] . **(C)** . Odisha.
Explanation - The state of Odisha introduced a boat ambulance service in four of its districts—Kendrapara, Kalahandi, Koraput, and Malkangiri—to help people living in remote water-locked areas. This service was vital for providing timely medical assistance and emergency transportation to residents who previously lacked access to health facilities.

[**Q133**] . **(A)** . Abuja.
Explanation - Abuja is the capital city of Nigeria, having officially replaced the previous capital, Lagos, in December 1991. The city was planned and built in the 1980s in the center of the country to provide a neutral and accessible location for the national government and various ethnic groups.

[**Q134**] . **(C)** . Yajna Sri Satakarni.
Explanation - Yajna Sri Satakarni is generally regarded by historians as the last great king of the Satavahana dynasty, which ruled over parts of central and southern India. Under his reign, the dynasty briefly recovered some of its lost territories, but after his death, the empire began its final decline and eventually fragmented.

[**Q135**] . **(C)** . Roger Federer.
Explanation - Roger Federer won the Men's Singles title at the 2017 Miami Open by defeating his long-time rival Rafael Nadal in the final. This victory was part of Federer's remarkable comeback season in 2017, where he won several major titles including the Australian Open and Wimbledon.

[**Q136**] . **(A)** . Areo.
Explanation - Google launched an app called 'Areo' in 2017, which combined food delivery services with on-demand home services like plumbing and cleaning. The app allowed users to find and schedule various local services through a single platform, primarily targeting urban markets like Bengaluru and Mumbai.

[**Q137**] . **(C)** . 1st February, 1963.
Explanation - The government of India officially declared the Indian Peacock (*Pavo cristatus*) as the national bird of the country on February 1, 1963. The bird was chosen for its religious and cultural significance, its widespread presence throughout the country, and its recognizable beauty.

[**Q138**] . **(B)** . Kapil Dev.
Explanation - 'Straight from the Heart' is the autobiography of the legendary Indian cricketer Kapil Dev, who captained India to its first World Cup victory in 1983. In the book, he shares his personal journey, his experiences on the cricket field, and his views on the sport and its evolution in India.

[**Q139**] . **(B)** . Vodafone and Idea.
Explanation - In 2017, Vodafone India and Idea Cellular announced their agreement to merge, creating what was then intended to be India's largest telecommunications company. The merger was a response to the intense competition in the Indian market and aimed to create a stronger entity with a massive subscriber base.

[**Q140**] . **(D)** . Andhra Pradesh.
Explanation - The National Atmospheric Research Laboratory (NARL) is located in Gadanki, near Tirupati in the state of Andhra Pradesh. It is a premier research institute under the Department of Space that conducts fundamental and applied research in atmospheric and space sciences using advanced radar technology.

[**Q141**] . **(D)** . Crown Prince of Abu Dhabi.
Explanation - Sheikh Mohamed bin Zayed Al Nahyan, the Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces, was the Chief Guest for India's Republic Day in 2017. His visit highlighted the strengthening strategic and economic ties between India and the United Arab Emirates.

[**Q142**] . **(D)** . Hockey.
Explanation - The Rangaswami Cup is a prestigious national-level tournament in India associated with the sport of field hockey. It was originally started in 1928 as a provincial tournament to select players for the national team and has since remained an important fixture in the domestic hockey calendar.

[**Q143**] . **(C)** . Pakistan, Afghanistan.
Explanation - The Durand Line is the international border that divides the countries of Pakistan and Afghanistan. It was established in 1893 following an agreement between Sir Mortimer Durand of British India and Amir Abdur Rahman Khan of Afghanistan to

define their respective spheres of influence.

[**Q144**] . **(B)** . Nikki Haley.
Explanation - Nikki Haley, an Indian-American politician and former Governor of South Carolina, was appointed by the Trump administration as the United States Ambassador to the United Nations in 2017. She was the first Indian-American to hold a cabinet-level position in the United States government.

[**Q145**] . **(D)** . Interface.
Explanation - In the SAARTHI application launched by the Ministry of Railways, the letter 'I' stands for "Interface." The acronym stands for Synergised Advanced Application Rail Travel Help and Information, providing a unified digital interface for passengers to access various railway services easily.

[**Q146**] . **(B)** . Garba.
Explanation - Garba is a traditional folk dance from the state of Gujarat that is most famously performed during the nine-day festival of Navratri. It involves dancers moving in a circular formation around a central lamp or a statue of Goddess Shakti, accompanied by rhythmic clapping and music.

[**Q147**] . **(B)** . Tamil Nadu.
Explanation - Jallikattu is a traditional bull-taming sport that is typically practiced in the Indian state of Tamil Nadu during the harvest festival of Pongal. The sport involves participants attempting to grab the large hump of a bull and hang onto it for a specific distance or time as the bull tries to escape.

[**Q148**] . **(A)** . 22nd April.
Explanation - World Earth Day is celebrated annually on April 22nd to demonstrate support for environmental protection and to raise awareness about global climate issues. First observed in 1970, the day now includes various events and activities coordinated globally by the Earth Day Network in more than 190 countries.

[**Q149**] . **(C)** . Cristiano Ronaldo.
Explanation - Cristiano Ronaldo was named the "Best FIFA Men's Player" for the year 2016 following his exceptional performance for both his club, Real Madrid, and his national team, Portugal. During that year, he led Real Madrid to a Champions League title and Portugal to victory in the UEFA European Championship.

[**Q150**] . **(D)** . Reliance Jio Infocomm.
Explanation - Reliance Jio Infocomm launched the Asia-Africa-Europe (AAE-1) submarine cable system, which is the world's longest 100Gbps technology-based submarine system. Spanning 25,000 kilometers, the cable provides high-speed data connectivity across three continents, significantly boosting India's international digital infrastructure.