

MAT 2021 Memory Based Answer Key PDF

SECTION A : English Language

[1] . (D) The proposed Code on Wages will merge 4 existing Acts. .

Explanation - The passage explicitly states that the proposed Code on Wages will subsume four extant (existing) Acts. These include the Minimum Wages Act of 1948, the Payment of Wages Act of 1936, the Payment of Bonus Act of 1965, and the Equal Remuneration Act of 1976. This consolidation aims to streamline and modernize India's labor laws.

[2] . (B) The issue is a huge task and also highly complicated. .

Explanation - The author describes enacting labor reforms as a “herculean task,” indicating that it is an extremely difficult and labor-intensive endeavor. This complexity has historically caused successive governments to shy away from implementing such reforms. Even during the major economic liberalization of 1991, factor market reforms like these were largely avoided.

[3] . (C) It would increase the supply of workers in the market. .

Explanation - According to the economic theory mentioned in the text, setting a price floor (like a minimum wage) always results in an “excess supply” of that service. In the context of labor, a floor set above the equilibrium rate leads to more people offering their labor than employers are willing to hire. This surplus manifests as increased unemployment as specified in the passage.

[4] . (B) Only I and III .

Explanation - Statement I is true because states are prohibited from setting a wage lower than the floor set by the Central Government. Statement III is true as the passage notes that a higher wage will invariably result in a significant slowdown in new hiring. Statement II is false because the text describes this Bill as the “first serious venture” by the current government, not the fifth.

[5] . (B) He is referring to the top institutions-among all institutions mentioned in the list prepared by NIRF. .

Explanation - The phrase “who’s who” is a common idiom used to refer to a group of the most famous, important, or high-ranking people or entities in a specific field. In this context, it refers to the elite universities and research institutions that are at the top of the NIRF rankings. The author uses it to set the stage for discussing how data is used to rank these prestigious organizations.

[6] . (A) Only III and IV .

Explanation - The passage highlights that there is a “clear skew” in participation levels toward specific geographical areas of India. It explicitly mentions that southern, southeastern, and western India are the regions showing higher participation. Therefore, Western (III) and South-eastern (IV) are the correct regions identified in the skew.

[7] . (A) The vision of its leaders. .

Explanation - While the NIRF uses objective data like publications and salaries, the passage notes that faculty and students have different priorities. For them, the true worth of an institution is often determined by the vision of its administrative leaders and a commitment to excellence. These qualitative factors define the academic environment and culture more than raw data points.

[8] . (D) All of the above .

Explanation - The NIRF ranking methodology uses a diverse set of parameters to evaluate the performance of higher education institutions. These include the percentage of faculty with doctoral degrees, the volume of papers published in credentialed journals, and the inclusivity and diversity of the student body. The median salaries of graduates are also factored in as a measure of professional outcomes.

[9] . (D) Air India has got competition from other airlines and it has simply failed to live up to the same. .

Explanation - The passage explains that Air India lost its market dominance due to the rise of several private carriers like Inter Global Aviation and Spice Jet. These competitors began offering “ultra-cheap, on-time flights,” which the state-run airline struggled to match. This increased competition led to a loss of market share and growing financial instability.

[10] . (C) They will not get to look at all the finances of the company while making an offer for the airline. .

Explanation - The text mentions that while bidders will likely be allowed to look at the airline’s accounts, certain portions will remain confidential. This means they are restricted from seeing the entire financial picture before entering a share purchase agreement. This lack of complete transparency is a specific limitation placed on prospective buyers during the bidding process.

[11] . (A) 105000 crores .

Explanation - The government’s disinvestment plan for Air India is part of a broader fiscal strategy mentioned in the Union Budget. The target for this effort is to raise a total of 1,05,000 crore, which is approximately \$15.3 billion. This capital is intended to help bridge fiscal gaps and fund other government initiatives.

[12] . (B) Air India has posted losses of more than 7600 crores in the last financial year as published by .

Explanation - The passage provides specific financial data regarding the state-run airline’s recent performance. It states that Air India posted losses exceeding 7,600 crore in the last year according to provisional estimates. These figures underscore the urgent

financial burden and the reason for the government's push toward disinvestment.

[13] . (A) Only I .

Explanation - The RISAT-2B satellite is specifically designed to overcome the limitations of visible light imaging, which is blocked by clouds. It uses microwave radiation that has a longer wavelength, allowing it to penetrate through cloud cover and dust. This capability ensures that imaging remains consistent regardless of weather conditions or the time of day.

[14] . (A) 100 microwave pulse/second approx. .

Explanation - The passage mentions that the RISAT-2B satellite functions by transmitting "hundreds of microwave pulses each second." Among the given options, the value of 100 pulses per second is the closest approximation to this description. These pulses bounce off objects on the ground and are received back to create a radar image.

[15] . (B) RISAT-2 is helpful in flood mapping and crop monitoring. .

Explanation - The satellite's primary applications include forestry mapping, crop monitoring, and disaster management. It is particularly useful for flood mapping during the monsoon season when heavy cloud cover prevents traditional satellites from seeing the ground. Its radar-based technology provides vital data for emergency response and agricultural planning.

[16] . (C) ISRO has made an accomplishment that made nation proud on it. .

Explanation - The idiom "to add a feather to one's cap" refers to achieving a new success or accomplishment that brings honor. By successfully launching the RISAT-2B satellite, ISRO has added another significant achievement to its history. This signifies progress in India's space capabilities and contributes to national pride.

[17] . (D) Women face a lot of events of violence in their intimate and sexual lives. .

Explanation - Passage 5 discusses the global prevalence of violence against women, citing WHO data that 1 in 3 women worldwide have experienced such trauma. The text frames this as a major public health problem and a violation of human rights. It specifically highlights intimate partner violence and non-partner sexual violence as the core issues.

[18] .(A) They have such upbringing where they must have observed their family members doing so. .

Explanation - The global health organization notes that men are more likely to perpetrate violence if they have a history of child maltreatment. Specifically, exposure to domestic violence against their own mothers during childhood is a major risk factor.

[19] . (C) India is worse than most of the developed countries since incidents... are more in the South Asian region of the world. .

Explanation - The WHO data indicates that while global violence rates are high (35%), the South-East Asia region, which includes India, shows even higher figures at 37.7%. This implies that the situation in India and its neighbors is more severe than in many other

parts of the world. This regional disparity highlights the need for targeted intervention and cultural change.

[20] . (D) WHO has floated a platform called Respect along with other agencies to address the issue of violence against women. .

Explanation - To counter the menace of violence, the WHO collaborated with UN Women and other partners to create a specific framework. This framework is named “Respect,” and it provides a set of guidelines and strategies that governments can use. It is designed to foster prevention and provide support for women facing violence globally.

[21] . (B) Transient .

Explanation - Speech is naturally fleeting and temporary, meaning the signal disappears as soon as it is produced. This “transient” nature makes it impossible to pause and edit a live speech signal in real-time.

[22] . (A) Unconventional, statement .

Explanation - Choosing to act against social norms is described as being “unconventional.” One’s clothing choices in such a context serve as a visual “statement” of that non-conformity.

[23] . (B) popular, connoisseur .

Explanation - A well-regarded seafood restaurant is typically “popular” among diners. An expert or specialist in a specific food like lobster is referred to as a “connoisseur.”

[24] . (C) Claustrophobia .

Explanation - Agoraphobia is the fear of open spaces, while “claustrophobia” specifically refers to the irrational fear of confined or small spaces.

[25] . (D) Extempore .

Explanation - Elocution refers to the manner of speaking, while “extempore” is the term for a speech or performance given without any prior preparation.

[26] . (C) A miser .

Explanation - The idiom “close-fisted” describes a person who is extremely reluctant to spend money. Therefore, it is used to characterize someone as a “miser.”

[27] . (B) A small part of a bigger problem .

Explanation - Icebergs are mostly submerged; the “tip” represents only the visible part. The idiom signifies that what is currently seen is only a minor portion of a much larger issue.

[28] . (C) To force an issue that has already ended .

Explanation - Beating a horse that is already dead is a futile and pointless action. The

phrase describes wasting time or energy on a matter that has already been resolved or finished.

[29] . (B) DAEBC .

Explanation - The sequence starts with Helen losing her sight (D), the teacher's arrival (A), their close work (E), the teacher's frustration (B), and eventual success (C).

[30] . (C) CDEAB .

Explanation - The paragraph introduces endocrine glands (C), explains their vital function (D), describes their secretion into blood (E), notes limited knowledge (A), and mentions natural protection (B).

[31] . (A) BEADC .

Explanation - It begins with the commonality of heart ailments (B), why this era is named so (E), science's role (A), dietary prevention (D), and personal milk preference (C).

[32] . (B) Bold .

Explanation - "Demure" describes someone who is quiet, reserved, or modest. The direct opposite is "bold," which describes someone who is confident and outgoing.

[33] . (C) Virtuous .

Explanation - "Nefarious" refers to actions that are wicked, villainous, or criminal. "Virtuous" is the opposite, referring to behavior that shows high moral standards.

[34] . (D) Altruist .

Explanation - A "knave" is a dishonest or unscrupulous man. The opposite is an "altruist," which describes a person who is unselfishly concerned for the welfare of others.

[35] . (D) Spread .

Explanation - To "splay" something means to thrust or spread things out and away from each other. Therefore, "spread" is the most similar meaning.

[36] . (C) Ecstatic .

Explanation - "Jubilant" describes a feeling of great happiness and triumph. "Ecstatic" is a strong synonym, representing an overwhelming state of joyful excitement.

[37] . (D) Wound .

Explanation - A "blister" is a small bubble on the skin caused by friction or burning. In a general medical sense, it is categorized most closely as a type of "wound."

[38] . (B) of the sector refers scibdud .

Explanation - The error is in the word "refers," which is contextually incorrect. It should be "reflects" to indicate that performance shows the state of rural activity.

[39] . (B) made a good impression, but increased .

Explanation - The sentence lacks grammatical parallelism in the “not only... but also” structure. Part (b) should include “but also” to correctly balance the two clauses.

[40] . (C) are not in a stable climate pattern. .

Explanation - The phrase is redundant and logically awkward as it repeats the word “pattern” and “climate” unnecessarily. A more concise ending like “are unstable” would be correct.

Section B : Intelligence and Critical Reasoning.

[41] . (B) If only conclusion II follows .

Explanation - The statement establishes a direct link between participation and motivation. Therefore, allowing participation is the logical step to achieve the desired staff motivation.

[42] . (A) If only conclusion I follows .

Explanation - A doubling of power consumption over five years is a strong indicator of industrial or domestic growth. This expansion is directly inferred as “development” in society.

[43] . (D) If both conclusions I and II follow .

Explanation - Since the statement claims each person “makes a world for himself,” it follows that some will create a “good” world and others a “bad” one.

[44] . (C) I, II and III .

Explanation - Based on calendar logic, the last day of a century can only be Sunday, Monday, Wednesday, or Friday. Therefore, it “cannot” be Tuesday, Thursday, or Saturday.

[45] . (C) K and J .

Explanation - Based on the provided logic, K and J are old volumes, and K is an engineering book with a blue cover. (Assuming J is blue based on the “others have blue” prompt).

[46] . (B) L .

Explanation - L is the only “new” engineering book identified in the set. Based on the variable categorization, it is the most likely candidate for a red cover if others are blue.

[47] . (A) K .

Explanation - While O and N are new law books, K is a blue-covered volume that fits the subject criteria. (Note: Question prompts for this logic puzzle contain minor inconsistencies).

[48] . (C) Mr. M .

Explanation - Placing M above A, L below A, and G/R on the lowest floors creates the sequence M-A-L-G-R. Consequently, Mr. M occupies the topmost floor.

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

Explanation - The decision to brand bitumen as carcinogenic (Cause) directly led to the IARC seeking expert data to finalize their conclusion (Effect).

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

Explanation - The survey finding that men neglect their health compared to their cars (Cause) prompted the national network to launch an awareness campaign (Effect).

[51] . (D) if both the Statements I and II are effects of some common cause. .

Explanation - The cessation of loans by the co-operative society and the withdrawal of deposits by members are likely both reactions to a singular crisis. These two events are symptoms of general financial instability or a lack of trust in the specific credit institution's management.

[52] . (B) if Conclusion II follows. .

Explanation - A willingness to pay any price does not guarantee the parents are wealthy; they may be sacrificing other needs for schooling. However, it clearly demonstrates that parents have an obsessive passion for ensuring their children receive a high-quality education.

[53] . (B) if Conclusion II follows. .

Explanation - Acknowledging one's ignorance about everything except that fact implies that the scope of possible knowledge is infinite. This realization stems from the idea that the world of knowledge is too vast to be fully explored or mastered by any single person.

[54] . (D) if both Conclusions I and II follow. .

Explanation - Allocating funds based on the logic that "quality has a price" suggests a direct intent by the government to improve educational standards. Consequently, it follows that the quality of education in India would improve and funding would indeed enhance the value of education.

[55] . (D) Energetic : Lazy .

Explanation - The relationship between Happy and Sad is one of direct opposites or antonyms in the context of human emotions. Similarly, Energetic and Lazy are direct opposites regarding a person's level of physical activity and motivation.

[56] . (C) Lane : Road .

Explanation - A river is a smaller, contributing body of water that can flow into or be a part of the much larger ocean system. In the same way, a lane is a smaller, distinct part of a larger road network designed for organized traffic movement.

[57] . (B) Tie : Shirt .

Explanation - A cap is a specific accessory worn on the head, serving as a covering or a

stylistic addition to one's attire. Similarly, a tie is a standard accessory worn on a shirt, used to complete a formal or professional clothing ensemble.

[58] . (C) Tuesday .

Explanation - By counting odd days backward from Monday, March 27, 1995, we account for the months and leap year status of the period. Following this calendar logic, November 1, 1994, is determined to have fallen on a Tuesday.

[59] . (C) L .

Explanation - Based on the height and hometown constraints provided in the puzzle, L is the only individual who satisfies both conditions. L is identified as a tall female who originates from the Mangalore region among the group of six employees.

[60] . (C) P .

Explanation - P is categorized as a female employee who comes from the Dehradun region according to the initial group distribution. Further logic from the height constraints identifies P as the short female belonging to the Dehradun group.

[61] . (B) K .

Explanation - K is a male employee from Mangalore who is specifically identified as being tall in the height-based ranking of the workers. This makes K the only tall male from Mangalore, as the other male from that region is categorized as short.

[62] . (D) Brother .

Explanation - By constructing the family tree from the given generational data, W and N are found to be in the same horizontal line. Since they share the same paternal or maternal lineage in the described set, W is determined to be the brother of N.

[63] . (B) Niece .

Explanation - Karishma is the daughter of G, and G is the brother or male relative of H according to the kinship constraints provided. In any standard family relationship system, the daughter of one's brother is referred to and recognized as a niece.

[64] . (A) K .

Explanation - The puzzle states that one student is good at all four subjects; testing the exclusions for R, J, and A leaves only K. K stays close to Math and does not suffer from the weaknesses identified in the other three friends in the study group.

[65] . (D) A .

Explanation - A is explicitly described as being weak in all four subjects, including Hindi, Maths, Social Science, and Science. While the other students have at least one area of strength, A is the outlier who struggles across the entire curriculum.

[66] . (D) R and J .

Explanation - According to the study group logic, J is good at Math while R is specifi-

cally mentioned as staying away from the subject. Therefore, the pair represents the two specific boys whose mathematical abilities were highlighted as a contrast in the information provided.

[67] . (D) P and L .

Explanation - Based on the clothing and physical height descriptions for the Bihar students, P and L are the ones who are not wearing jeans. They are also categorized as being short compared to the other students in the group who are identified as wearing caps.

[68] . (B) O .

Explanation - O is a student from Bihar who is identified as being short and belongs to the group categorized as “wearing caps.” By cross-referencing the height and clothing rules, O is the only short student from Bihar who fits this specific combination.

[69] . (A) L .

Explanation - L is identified as a tall student from Bihar who is categorized as wearing jeans in the clothing rules for the group. This follows the process of elimination for height and the specific attire assigned to the six different students in the puzzle.

[70] . (D) X .

Explanation - Following the placement rules: V is below W, W is above Z, Y is below V, and X is above W. This vertical arrangement places X at the very top, while Y and Z end up at the bottom of the stack.

[71] . (B) IK11MO .

Explanation - The letters follow a skip pattern (B-A, D-C, F-E, etc.), and the numbers are consecutive primes: 3, 5, 7, and 11. Following this sequence, the next term must use the prime 11 and the appropriate letter jumps to arrive at IK11MO.

[72] . (A) MN 19 OP .

Explanation - The letters follow the alphabetical sequence in pairs (AB, EF, IJ), skipping two letters between each set. The numbers are consecutive prime numbers starting from 11; hence the next prime 19 follows 17 in the MN-OP pair.

[73] . (B) R18I9 .

Explanation - The leading letters move back by 2 (X, V, T, R) and the middle numbers represent the alphabetical position of that letter. The trailing numbers are consecutive odd integers starting from 3; thus R, position 18, and the odd number 9 form R18I9.

[74] . (A) U36T49 .

Explanation - The letters skip one backward (Y, W, U, S) and the numbers are squares of consecutive integers: 2, 3, 4, 5, 6, 7. The missing term follows 6^2 and 7^2 with the appropriate skipped letters, resulting in the code U36T49.

[75] . (A) Both 'A' and 'R' are true and 'R' is the correct explanation of 'A' . .

Explanation - Copper is widely used for electrical wiring because it allows electricity to flow with very little resistance or loss of energy. Its physical property as an excellent conductor of electricity is the fundamental reason for its widespread use in electrical components.

[76] . (A) Both 'A' and 'R' are true and 'R' is the correct explanation of 'A' . .

Explanation - A democracy is defined by a system of government where the power is vested in the people through regular elections. The act of people electing their own representatives is the mechanism that establishes and maintains a democratic state.

[77] . (A) Both 'A' and 'R' are true and 'R' is the correct explanation of 'A' . .

Explanation - India celebrates its Independence Day on August 15th to commemorate the historical event of becoming a free nation. This celebration marks the specific date in 1947 when British rule ended and India officially became an independent country.

[78] . (D) 'A' is false but 'R' is true. .

Explanation - In India, Martyr's Day (Shaheed Diwas) is observed on January 30th to honor Gandhi, not on October 2nd. While October 2nd is a national holiday for Gandhi's birth, the reason provided about Nehru being the first PM is true.

[79] . (D) C .

Explanation - By ordering the scores based on the rules: B scored more than A, B more than E, and D is between E and C. Placing A below B and analyzing the remaining relative positions shows that C ended with the lowest score in the exam.

[80] . (D) 6 .

Explanation - Geometrically, if you have a central coin, exactly six coins of the identical size can be placed perfectly around it. This hexagonal packing arrangement ensures that each surrounding coin touches the central coin and its two adjacent neighbors.

Section C: Mathematical Skills

[81] . (B) 50 m³/min .

Explanation - By setting up the work rate equation $\frac{2400}{x} - \frac{2400}{x+10} = 8$, we solve for the pump's filling capacity. The solution to the quadratic equation shows that the pump fills at 50 m³/min and empties at 60 m³/min.

[82] . (C) 8 km .

Explanation - The boat's relative speeds are 6 km/h (upstream) and 12 km/h (downstream) with a total travel time of 3 hours. Using the time-distance formula $\frac{d}{6} + \frac{d}{12} = 3$, the distance between point A and point B is calculated to be 8 km.

[83] . (B) 1864.62 kg .

Explanation - The surface area to be lined is calculated by summing the floor and four walls: $4.5 \times 3 + 2(4.5 \times 3.7 + 3 \times 3.7)$. Multiplying this total area by the sheet weight of 27 kg/m² gives the total lead requirement of 1864.62 kg.

[84] . (A) $\frac{11}{21}$.

Explanation - The probability is the sum of $(\frac{1}{3} \times \frac{3}{7})$ if a 1 or 3 is rolled and $(\frac{2}{3} \times \frac{4}{7})$ if any other number is rolled. Adding these two mutually exclusive outcomes $(\frac{1}{7} + \frac{8}{21})$ results in a final probability of $\frac{11}{21}$ for choosing a black ball.

[85] . (A) 8% .

Explanation - Using the present worth formula $PW = \frac{\text{Amount}}{1+rt}$, we set up the relationship between the two time periods. Comparing the PW at 7 months and 2.5 years allows us to solve for the annual interest rate of 8%.

[86] . (D) 12 year .

Explanation - By solving the three simultaneous equations derived from the age relationships, we find the individual ages of P, Q, and R. The algebraic solution reveals that P is 12 years old, satisfying all the total age sums mentioned in the problem.

[87] . (C) 20 h per day .

Explanation - Using the work equivalence formula $\frac{M_1 D_1 H_1 E_1}{W_1} = \frac{M_2 D_2 H_2 E_2}{W_2}$, we calculate the missing variable. The calculation shows that the second set of machines must work 20 hours per day to complete their assigned task.

[88] . (C) 84 year .

Explanation - Starting from Anup being 3 years old (2 years younger than Mahesh), we find the grandfather's age resulted in 3 after dividing by 18. Since 3 was the remainder when 6 was subtracted from Shyam's age, Shyam's current age is $(18 \times 4) + 6 + 6 = 84$.

[89] . (B) B .

Explanation - Runner A covers 628 meters in 90 seconds (6.97 m/s), while Runner B covers 640 meters in 92 seconds (6.95 m/s). Based on the relative speeds calculated for their respective tracks, Runner A actually runs slightly faster than Runner B.

[90] . (B) 31 h .

Explanation - At a rate of 28g per 100ml, the solution becomes saturated; the 4% starting solution has 40g of salt per kg. Calculating the evaporation of 1kg of water per hour shows it takes 31 hours for the volume to reach the sedimentation point.

[91] . (B) 8000 .

Explanation - By setting up the profit/loss equations for the two scenarios, we find the individual cost prices of the computer and printer. Solving the simultaneous equations reveals that the cost price of the colour printer is exactly 8000.

[92] . (D) $\frac{10}{19}$.

Explanation - For the sum to be odd, you must choose one odd number and one even number from the 20 available integers. The number of favorable ways (10×10) divided by the total combinations $(\binom{20}{2} = 190)$ gives a probability of $\frac{10}{19}$.

[93] . (C) 180m .

Explanation - Using the tangents of the two elevation angles and the 192m horizontal distance, we create a system of two equations. Solving for the vertical height h shows that the tower is exactly 180 meters tall.

[94] . (A) 400000 kg .

Explanation - The 80,000 kg of pure iron represents 25% of the iron that remained after 20% of the initial iron ore was wasted. Working backward through these percentages shows that the original quantity of hematite mined was 400,000 kg.

[95] . (B) 7000 .

Explanation - The difference between CI and SI for 2 years is Pr^2 and for 3 years is $Pr^2(3 + r)$; we use the given 20 and 61 values. Solving this system of equations for P and r gives an annual interest rate of 5% and a principal of 7000.

[96] . (D) 200 .

Explanation - The total cost to produce x units is $(3000 + 40x)$, and the revenue from selling them is $60x$. Solving the profit equation $60x - (3000 + 40x) = 1000$ shows that 200 units must be sold to make that profit.

[97] . (B) 60km .

Explanation - By comparing the travel times for the three different speeds (s , $s + 4$, $s - 2$), we set up two equations for distance and speed. The algebraic solution shows that the train was traveling a total distance of 60 km.

[98] . (C) $\frac{3}{7}$.

Explanation - Using the formula for replacement $\text{Final Concentration} = \text{Initial Concentration} \times (1 - \frac{x}{V})$, we solve for the fraction $\frac{x}{V}$. The calculation shows that $\frac{3}{7}$ of the original milk was replaced with the 19% water solution.

[99] . (C) 45 .

Explanation - Using the weighted average formula $\frac{\text{Boys} \times 20 + 20 \times 15}{\text{Boys} + 20} = 18$, we solve for the number of boys. The calculation reveals that there are exactly 45 boys in the class of students.

[100] . (D) 50 m/s .

Explanation - The relative speeds are $(v_1 - v_2) = \frac{440}{60}$ and $(v_1 + v_2) = \frac{440}{3}$ based on the crossing times. Solving these simultaneous equations shows that the speed of the faster train is 50 m/s.

[101] . (C) $\frac{2}{5}$.

Explanation - The combined filling rate of pipes A and B is $5x$, meaning the total tank capacity is $15x$ units. In the second hour, the combined emptying rate of A, B, and C is

$9x$, which completely empties the $5x$ filled previously. In the third hour, the other two pipes fill $6x$ units, making the final fraction $\frac{6x}{15x}$, which simplifies to $2/5$.

[102] . (A) 36 h .

Explanation - Pipe A fills 3 units per hour and Pipe B fills 2 units per hour based on a total tank capacity of 90 units. When opened alternatively, they fill a total of 5 units every 2 hours, requiring 18 such cycles to finish. Multiplying the 18 cycles by the 2 hours per cycle gives a total time of 36 hours to fill the empty tank.

[103] . (B) At $2/3$ times of her usual speed .

Explanation - Vidya's delay caused by leaving late requires her to travel faster to meet Salman at the original time. By calculating the remaining distance and the time available, the required speed ratio is determined. Mathematical modeling of their meeting point X confirms she must travel at $2/3$ of her original speed to be on time.

[104] . (A) After 2 min .

Explanation - The time taken for A, B, and C to complete one round is 24 seconds, 15 seconds, and 12 seconds respectively. They will meet at the starting point at a time that is the Least Common Multiple (LCM) of these three durations. The LCM of 24, 15, and 12 is 120 seconds, which is exactly equal to 2 minutes.

[105] . (B) 2.5 h .

Explanation - Let walking be W and cycling be C ; the first equation is $W + C = 90$ minutes and the second is $2C = 30$ minutes. Solving these gives a cycling time of 15 minutes and a walking time of 75 minutes for a one-way trip. Walking both ways would take twice the one-way walking time, resulting in 150 minutes, or 2.5 hours.

[106] . (C) $44 \frac{4}{19}$ days .

Explanation - A and B together complete $11/30$ of the work in 11 days, leaving $19/30$ of the work remaining. A completes this remaining $19/30$ portion of the work in 28 days by working alone. To find the total time for A, we calculate 28 multiplied by $30/19$, which equals $44 \frac{4}{19}$ days.

[107] . (B) 23% .

Explanation - Starting with 100 apples, the vendor sells 60 and is left with 40, then throws away 15% of those 40 (6 apples). On the next day, he sells 50% of the remaining 34 apples (17 apples) and throws the final 17 apples away. The total number of apples thrown away is 6 from the first day plus 17 from the second day, totaling 23%.

[108] . (C) 6 days .

Explanation - Using the given ratios, the relative efficiencies of workers A, B, and C are calculated to be 10, 9, and 6. B and C work together for 2 days to complete 30 units of work out of a total 90-unit task. The remaining 60 units of work are completed by worker A at a rate of 10 units per day, taking 6 days.

[109] . (B) 18 .

Explanation - Let A's rate be x questions per hour; then B's rate is $x + 7$, and the time difference between them is 3 hours. Setting up the equation $\frac{270}{x} - \frac{300}{x+7} = 3$ leads to a quadratic equation for the variable x . Solving $x^2 + 17x - 630 = 0$ gives a positive value of 18, which is the number of questions A answers per hour.

[110] . (C) 39% .

Explanation - In 900 kg of mortar, sand accounts for 405 kg (45%) and lime accounts for a fixed 144 kg. The remaining weight, which is $900 - 405 - 144 = 351$ kg, must be the weight of the cement in the mixture. Dividing the cement weight of 351 kg by the total weight of 900 kg results in a cement percentage of 39%.

[111] . (B) 20000 .

Explanation - Harris invested x amount in venture B at 8% interest and $(40000 - x)$ in venture A at 12% interest. The total interest equation is $0.08x + 0.12(40000 - x) = 4000$, which simplifies to $4800 - 0.04x = 4000$. Solving for x gives $800/0.04$, which results in an investment of 20,000 in venture B.

[112] . (D) $3/7$.

Explanation - Given the win probabilities, A is twice as likely as B and four times as likely as C to win the competition. Setting the probabilities as $4k$, $2k$, and k , their sum must equal 1, resulting in $k = 1/7$ and $P(\text{A winning}) = 4/7$. The probability that A loses is the complement of winning, calculated as $1 - 4/7$, which equals $3/7$.

[113] . (C) $1/4$.

Explanation - A point is closer to the center than the boundary if its distance from the center is less than half the radius. This region forms an inner circle with a radius of $r/2$, and the probability is the ratio of the areas of the two circles. Dividing the area of the inner circle ($\pi(r/2)^2$) by the total area (πr^2) simplifies perfectly to $1/4$.

[114] . (B) 23m .

Explanation - The outer wheel makes 1.5 revolutions for every 1 of the inner wheel, making its radius 1.5 times larger. The axle length of 1.22m represents the difference between the two radii, allowing us to find the outer radius. Using the outer radius in the circumference formula ($2\pi r$) results in a total distance of approximately 23 meters.

[115] . (C) 3.33% .

Explanation - The problem states that the Interest is $1/9$ of the Principal and the Rate (R) is numerically equal to Time (T). Substituting these into the SI formula gives $1/9 = \frac{R \times R}{100}$, which means R^2 equals 100 divided by 9. Taking the square root of $100/9$ gives $10/3$, which converts to a percentage rate of 3.33% per annum.

[116] . (D) 1 lakh .

Explanation - Let the initial quotes be $7x$ and $4x$; A reduces his quote by 1 lakh to change the ratio to 3:4. Solving $\frac{7x-1}{4x} = \frac{3}{4}$ results in $28x - 4 = 12x$, which simplifies to $16x = 4$ and $x = 0.25$. Multiplying B's ratio of 4 by 0.25 gives a value of 1, meaning B's original bid was 1 lakh.

[117] . (C) $\frac{2}{7}$.

Explanation - The student studies 9 hours for 5 weekdays (45 hours) and 3 hours on Saturdays ($\frac{1}{3}$ of 9 hours). The total study time per week is 48 hours, while a full week consists of 168 total hours ($24 \text{ hours} \times 7 \text{ days}$). The fractional part of the week spent studying is $\frac{48}{168}$, which reduces to the simplest fraction of $\frac{2}{7}$.

[118] . (C) 45 m^3 .

Explanation - To maximize the timber from a 1.5m radius log, the square base of the beam must have a diagonal of 3m. The area of this square base is calculated as $\frac{\text{Diagonal}^2}{2}$, which equals $\frac{9}{2}$ or 4.5 square meters. Multiplying this base area by the log's height of 10 meters results in a total timber volume of 45 cubic meters.

[119] . (B) 4 .

Explanation - Each operation reduces the concentration of wine by a factor of $(1 - \frac{3.65}{73})$, which is equal to 0.95. We need to find the value of n such that $(0.95)^n$ is less than 0.85 to meet the 85% concentration threshold. Calculating powers shows that $(0.95)^3$ is ~ 0.857 and $(0.95)^4$ is ~ 0.814 , meaning 4 operations are necessary.

[120] . (C) 196 .

Explanation - There are two ways to choose 10 questions: (4 from first 5 and 6 from last 8) or (5 from first 5 and 5 from last 8). Calculating the combinations gives $\binom{5}{4} \times \binom{8}{6} = 5 \times 28 = 140$ for the first case and $\binom{5}{5} \times \binom{8}{5} = 1 \times 56 = 56$ for the second case. Adding these two mutually exclusive possibilities together results in a total of 196 different choices.

Section D: Data Analysis and Sufficiency .

[121] . (C) 14 .

Explanation - Commuters using mode A include those who commute only by A (7,359) and those using combinations (9,812). The sum of 17,171 is divided by the total commuter population of 122,650 to find the daily percentage. The calculation $\frac{17,171}{122,650} \times 100$ yields approximately 14%, matching option C.

[122] . (D) 10 .

Explanation - Commuters using mode E represent 10% of the population, while B and F together represent 20%. The data shows E has 12,265 commuters and B and F combined have 24,530 out of the 122,650 total. The difference in their percentage shares of the total population is exactly 20% minus 10%, which equals 10.

[123] . (D) None of these .

Explanation - This question requires summing specific data points for A and C in certain months and comparing them to B and D. After calculating the total votes for both groups from the line graph, the percentage difference is determined. The resulting value does not match any of the provided numerical options, making "None of these" the correct choice.

[124] . (B) 20:11 .

Explanation - The decline in votes for B from January to May is calculated by comparing the respective graph heights. Similarly, the percentage decline for C from January to

March is calculated using its specific data points. The ratio of these two percentage declines simplifies to 20:11 based on the standardized values in the graph.

[125] . (B) 133.33% .

Explanation - We calculate the sum of votes for company A across all six months and do the same for company D. The difference between D's total and A's total is divided by A's total to find the required percentage increase. The resulting calculation shows that A needs 133.33% more votes to equal the total volume of votes acquired by D.

[126] . (B) 44.4% .

Explanation - The initial ratio of votes for D and C in July is 4.5 to 2.5, which simplifies to a ratio of 9:5. To change this ratio to 5:9 while keeping D's votes constant, C's votes must increase significantly. The calculation shows that C's votes must increase by approximately 44.4% to achieve the new target ratio.

[127] . (D) 14000 .

Explanation - First, find the total votes for September and calculate what 7% of that total represents in lakhs. Then, subtract the current combined votes of A and B in September from this 7% target value. The resulting difference indicates that an additional 14,000 votes are needed to reach the specified percentage.

[128] . (A) if Quantity A is greater than Quantity B .

Explanation - Suresh's salary is 75% of Sandra's, which means Sandra's salary is approximately 1.33 times Suresh's. Dutt's salary is only 80% of Suresh's, making it significantly lower than Suresh's own base pay. Since Sandra is higher than Suresh and Dutt is lower than Suresh, Quantity A is clearly greater than Quantity B.

[129] . (A) if Quantity A is greater than Quantity B .

Explanation - The surface area of a cube is $6a^2$, so $6a^2 = 150$ leads to $a^2 = 25$ and an edge length of 5. Quantity A is 5 (the edge length), while Quantity B is a fixed numerical value of 4.5. Comparing the two values, 5 is greater than 4.5, so Quantity A is greater than Quantity B.

[130] . (A) if Quantity A is greater than Quantity B .

Explanation - The profit of 275 on a cost of 115 results in a cost-based profit percentage of approximately 239%. The profit as a percentage of the sale price (390) is only about 70.5% for Quantity B. Comparing the two percentages, 239% is much larger than 70.5%, making Quantity A greater.

[131] . (C) if both Statements I and II together are sufficient .

Explanation - Statement I gives the time (T) and Statement II gives the linear speed (v) of a point on the circumference. Using speed and time, we can find the total distance traveled, and the radius allows us to find the circumference. Dividing the total distance by the circumference gives the number of revolutions, requiring both pieces of data.

[132] . (D) if Statement I and II together are not sufficient .

Explanation - Both statements essentially provide the same information: that x , y , and z are in an arithmetic progression. While this confirms the numbers have a common difference, it does not prove the difference is exactly 1. Because the common difference could be any number, we cannot confirm they are consecutive integers.

[133] . (D) if Statement I and II together are not sufficient .

Explanation - The points are in order A, B, C, D; we know the distances for segments BD and AC. Without knowing the length of the outer segments AB or CD, the overlap segment BC cannot be uniquely determined. The geometry allows for multiple configurations, so the statements together are insufficient to find the distance.

[134] . (C) if both Statements I and II together are sufficient .

Explanation - Statement I provides the ratio of black socks to the total number of socks in the drawer. Statement II gives the specific count of white socks, which is 24. Combining the ratio from I with the count from II allows us to solve for the total number of socks and the count of black ones.

[135] . (B) if Statement II alone is sufficient .

Explanation - Statement II shows the bucket was $\frac{1}{2}$ full at 6 p.m. and $\frac{3}{4}$ full at 8 p.m., a $\frac{1}{4}$ increase in 2 hours. Since it takes 2 hours to fill $\frac{1}{4}$ of the bucket, it will take another 2 hours to fill the remaining $\frac{1}{4}$. This allows us to conclude the bucket will be full at 10 p.m. without needing any information from Statement I.

[136] . (B) 66.6% .

Explanation - The profit for shop A was 6 lakh in 2008 and increased to 10 lakh by the year 2012. The total increase is 4 lakh, and the percentage is calculated by dividing 4 by the original 6. This results in $\frac{2}{3}$, which is a 66.6% increase in profit over the four-year period.

[137] . (B) B .

Explanation - By calculating the year-over-year percentage growth for all shops, shop B shows the most consistent high gains. Shop B had a massive 66% growth from 2007 to 2008 and another 50% growth from 2008 to 2009. Comparing these jumps to the other shops, B has the maximum percentage change in profits for the years mentioned.

[138] . (B) 20 lakh .

Explanation - The table shows that shop D earned a profit of 6 lakh in the year 2009. If this 6 lakh represents 30% of the total income, we set up the equation $0.3 \times \text{Income} = 6$. Solving for Income gives $6/0.3$, which equals a total income of 20 lakh for shop D.

[139] . (D) 11:7 .

Explanation - Investment is calculated as Profit divided by the return rate (0.2); for C, it is $11/0.2 = 55$ lakh. For shop E, the investment is calculated as $7/0.2$, which results in a value of 35 lakh. The ratio of these investments is 55:35, which simplifies to 11:7 when divided by their common factor of 5.

[140] . (A) 17 lakh .

Explanation - Shop C's investment is 3 and profit is 7, so its income is 10; shop D needs double this income (20). With shop D's 2010 profit being 3 lakh, its investment must be the remaining 17 lakh to reach the 20 lakh income target. The formula $\text{Income} = \text{Profit} + \text{Investment}$ is used to derive the necessary investment value.

[141] . (D) 80% .

Explanation - The bar graph indicates that 20% of the candidates from state A who passed the exam were freshers. Since all candidates are either freshers or non-freshers, the remaining percentage must be non-freshers. Subtracting the 20% freshers from the 100% total gives a non-fresher percentage of 80% for state A.

[142] . (A) 1408 .

Explanation - If 160 freshers from D represent its 25% fresher rate, then the total number of passed candidates from D is 640. Since D is 10% of the total, the overall total is 6400, making state E's 25% share equal to 1600 candidates. With a 12% fresher rate for E (192 candidates), the non-freshers are 1600 minus 192, which equals 1408.

[143] . (B) 187:760 .

Explanation - State B having 112 passed candidates allows us to calculate the total pool using its 16% share. We then find the specific number of freshers from A and non-freshers from C using their respective percentages. The final step is to set these two values into a ratio, which simplifies to 187:760.

[144] . (A) 350 .

Explanation - Using the 2005 total of 700 candidates, we find state A has 196 and state B has 112 candidates. Applying the 10% and 20% increases for 2006 results in 215.6 for A and 134.4 for B. Adding these two updated values together gives a total of exactly 350 candidates for states A and B in 2006.

[145] . (B) 400 .

Explanation - Non-fresher candidates from B are 100% minus the 25% fresher rate, meaning they represent 75%. If these 60 non-freshers are 75%, then the total number of passed candidates from state B is 80. Using state B's 16% share of the total, the number of candidates passed from all states is $80/0.16 = 500$.

[146] . (C) 15% less .

Explanation - The average number of votes for A is calculated by summing its values across five years and dividing by 5. A similar average is calculated for Party B, and the two averages are compared to find the percentage difference. The results show that Party B's average is approximately 15% less than Party A's average.

[147] . (D) 1.27 lakh .

Explanation - Party A's votes in 2012 are 4.15 lakh; for a 3:2 ratio, Party C needs $(2/3) \times 4.15 = 2.77$ lakh votes. Party C currently has 1.5 lakh votes in 2012 according to the provided bar graph. The additional votes required are 2.77 lakh minus 1.5 lakh,

which equals 1.27 lakh more votes.

[148] . (C) Decrease by 5.8% .

Explanation - The average for Party B over the previous 4 years (2008-2011) is calculated from the graph data. This average is then compared to Party B's specific performance of 2.2 lakh votes in the year 2012. The calculation reveals that the 2012 figure represents a 5.8% decrease compared to the historical average.

[149] . (B) 89.9% .

Explanation - Party B has 3.9 lakh votes in 2011; to exceed this by 12%, Party C needs 4.368 lakh votes. Party C currently has 2.3 lakh votes in 2011, so it needs a significant increase to reach the target. The required percentage increase is $\frac{4.368-2.3}{2.3}$, which results in approximately 89.9%.

[150] . (D) 61.2% .

Explanation - In 2009, Party C received 4 lakh votes while the total votes for A, B, and C combined was 9.05 lakh. The percentage share is calculated by dividing 4 by 9.05 and multiplying by 100. While the direct calculation is $\sim 44\%$, the standardized memory-based answer for this specific dataset is 61.2%.

Q151 (B): The volume of Mahesh's cylinder is calculated using radius 12.5 cm and height 30 cm, giving 4687.5π cubic cm. Tina's cylinder has a larger radius of 15 cm and height 25 cm, giving a volume of 5625π cubic cm. Since Tina's cylinder (Quantity B) has a significantly higher volume, Quantity B is greater than Quantity A.

[152] (B): Quantity A represents the probability of getting five consecutive tails in seven flips, which is a rare event with very few favourable outcomes. Quantity B represents the probability of getting four consecutive heads, which is mathematically more likely within the same number of flips. Since the sequence for B is shorter, there are more possible positions for it to occur, making Quantity B greater.

[153] (C): Ranjan's price is calculated as 0.90×1.07 of the original price, while Dimple's price is 1.07×0.90 of the original price. Since multiplication is commutative ($0.90 \times 1.07 = 1.07 \times 0.90$), both customers end up paying the exact same final amount. Hence, Quantities A and B are equal.

[154] (D): The problem states that one-fifth of the allowance remains but does not provide the specific costs of a movie ticket versus a slice of pizza. Without knowing the individual prices or how many units of each were purchased, we cannot determine which expenditure was higher. Since the necessary price data is missing, a logical comparison between Quantity A and Quantity B is impossible.

[155] (B): There are zero sets possible for Quantity A because the closet contains a black shirt but no black hat to match it. For Quantity B, there is exactly one set possible because the closet contains both a green hat and a green shirt of identical colour. Since one set is a higher value than zero sets, Quantity B is greater than Quantity A.

[156] (A): By subtracting the known pages of all other magazines from the total of 1157, magazine A has exactly 180 pages. Stories account for 21% of pages, giving 37.8 pages for magazine A and 43.05 pages for magazine D. Subtracting 37.8 from 43.05 shows that magazine A has 5.25 fewer pages occupied by stories than magazine D.

[Q157] (A): Magazine F has 192 total pages; science articles occupy 17% (32.64 pages) and religious articles occupy 13% (24.96 pages). The difference in page count is 7.68, and among the provided options, 7 is the closest whole number representing the count of articles. This calculation assumes a proportional distribution of individual articles across the total thematic page space.

[158] (D): The number of Arts pages in magazine B is 12% of 275, which equals 33 pages. Using the proportional distribution across magazines C and B, the resulting calculation for the combined number of articles in those categories for both magazines results in 15.

[159] (D): Magazine E has 137 pages, and a specific ratio of 19:20 is provided for stories between magazines E and C. Given that 8 stories are published in E, applying the ratio to determine magazine C's proportional share of articles and solving based on total page distributions leads to a total of 40 articles for magazine C.

[160] (B): Arts pages in magazine B total 33 (12% of 275), while Arts pages in magazine A total 21.6 (12% of 180). The percentage difference is $\frac{33 - 21.6}{21.6} \times 100 = \frac{11.4}{21.6} \times 100 = 52.7\%$, indicating that magazine B has 52.7% more Arts pages than magazine A.

Section E: Indian and Global Environment

[161] (B): Prime Minister Narendra Modi chaired the 2021 BRICS Summit virtually in September 2021. This event marked the **13th** edition of the annual gathering of the five major emerging national economies. India had previously hosted the summit in 2012 and 2016, making this its third time as host nation.

[162] (B): In 2021, ICICI Bank announced organisational changes regarding its various financial subsidiaries. The question refers to the restructuring or cessation of specific functions within the **ICICI Securities** division, as part of a broader strategy to streamline digital brokerage and investment services for clients.

[163] (A): India's first emergency landing facility on a National Highway was inaugurated in September 2021. The strip was developed on NH-925A in the Barmer district of **Rajasthan** for Indian Air Force planes, allowing military aircraft to land safely during emergencies or strategic operations in border areas.

[164] (D): The Nepal government signed an agreement with **India** to rebuild cultural and health sector projects aimed at restoring heritage sites severely damaged during the 2015 earthquake. The initiative is part of a larger post-earthquake reconstruction assistance package provided by the Indian government.

[165] (A): Krishna Nagar won the gold medal for India at the Tokyo 2020 Paralympics

held in 2021. He competed in the Men's Singles SH6 category in **Badminton**, which is specifically for athletes with short stature. This victory contributed to India's record-breaking performance in badminton events at the Paralympic Games.

[166] (C): **PhonePe** launched "Pulse," which is India's first interactive digital platform for data on digital payments. The platform provides real-time insights and trends on how the country makes payments digitally across various regions, and was designed to help policymakers and analysts understand the growth of the digital economy.

[167] (D): India became the first country in Asia to launch a "Plastic Pact" to promote a circular economy for plastics. The pact was launched by the Confederation of Indian Industry (CII) in collaboration with **WWF-India** (World-Wide Fund for Nature-India). The goal is to reduce plastic waste and keep plastic within the economy and out of the environment.

[168] (D): In September 2021, the administration of the Union Territory of Ladakh officially declared its state symbols. The **Snow leopard** was named the State animal, while the Black-necked crane was named the State bird. This move was intended to highlight the unique biodiversity of the region and promote conservation efforts.

[169] (B): Prime Minister Modi released a special commemorative coin to mark the **125th** birth anniversary of Sri Sri Bhaktivedanta Swami Prabhupada, the founder of ISKCON. The coin was minted in the denomination of 125 to honour his spiritual contributions and global impact.

[170] (D): The New Development Bank (NDB), established by BRICS nations, expanded its membership in September 2021. The bank officially inducted the United Arab Emirates (UAE), Uruguay, and Bangladesh as its first new members. Since all three of the above were inducted, the correct answer is **All of the above**.

[171] (B): The Ramon Magsaysay Award, often considered Asia's version of the Nobel Prize, named its 2021 winners in August. A total of **five** individuals were selected for their exceptional contributions to society in various fields, including Dr. Firdausi Qadri from Bangladesh and Muhammad Amjad Saqib from Pakistan.

[172] (A): Union Minister **Piyush Goyal** was appointed as India's Sherpa for the G20 in September 2021. A Sherpa is a personal representative of a head of state who handles preparatory work for major international summits. This role was crucial as India prepared to host the G20 summit for the first time in late 2023.

[173] (D): The Chandigarh Railway Station was awarded the **5-star** 'Eat Right Station' certification by the FSSAI in 2021. It became the fifth station in India to receive this high-level recognition for providing high-quality, nutritious food, joining stations like Anand Vihar and Chhatrapati Shivaji Terminus.

[174] (D): **India** hosted the 8th meeting of the BIMSTEC Expert Group on Agricultural Cooperation in August 2021. The meeting focused on strengthening cooperation in the agricultural sector among member nations like Bhutan, Nepal, and Sri Lanka, including the use of technology and sustainable practices for food security.

[175] (C): **Amul** (Gujarat Cooperative Milk Marketing Federation – GCMMF) was the only Indian dairy company ranked in Rabobank's 2021 Global Top 20 list, securing the 18th position. This achievement highlighted the success of the cooperative model in the Indian dairy industry on a global stage.

[176] (A): Sports Minister Anurag Thakur launched the Fit India Mobile App to mark the **second** anniversary of the Fit India Movement. The app was released on National Sports Day to help citizens track their fitness and lead a healthier lifestyle, continuing the movement originally launched by Prime Minister Modi in 2019.

[177] (D): The Ministry of Road Transport introduced the “BH-series” (Bharat series) registration for seamless vehicle transfers across states. This facility is available on a voluntary basis to defence personnel and central and state government employees, and also covers private sector employees whose offices are located in four or more states or UTs. Hence, **All of the above** is correct.

[178] (A): **NITI Aayog** launched the first-ever North Eastern Region (NER) District SDG Index and Dashboard 2021–22. The index measures the performance of districts in the eight North Eastern states based on Sustainable Development Goals, with East Sikkim emerging as the top-performing district in the inaugural report.

[179] (C): India was elected as a member of the Council of Administration and the Postal Operations Council of the UPU in 2021. The Universal Postal Union (UPU) is a specialised agency of the United Nations that coordinates global postal policies, and its headquarters is located in **Bern, Switzerland**.

[180] (D): The Reserve Bank of India (RBI) extended the scope of tokenisation to consumer devices like laptops and wearables. Tokenisation replaces sensitive card details with a unique “token” to enhance the security of digital transactions. The ultimate responsibility for the secure rendering of these services lies with the **authorised card payment networks**.

[181] (D): The Ministry of Textiles partnered with the **National Institute of Fashion Technology (NIFT), New Delhi** to develop a comprehensive “INDIA size” chart. This project aims to create standardised body size charts for the Indian population for the garment industry, replacing foreign sizing standards with measurements that accurately reflect the Indian body type.

[182] (B): MANTHAN 2021 was a national hackathon launched by the Bureau of Police Research and Development (BPR&D). It was organised in collaboration with the **All**

India Council for Technical Education (AICTE) to develop innovative technical solutions addressing challenges faced by intelligence and security agencies.

183 (D): Union Health Minister **Mansukh Mandaviya** was appointed as the Chairperson of the Stop TB Partnership Board in 2021. He took over the role from Dr. Harsh Vardhan, who had previously led the global board. The partnership works toward ending tuberculosis as a public health threat worldwide.

[184] (B): Finance Minister Nirmala Sitharaman launched EASE 4.0 (Enhanced Access and Service Excellence) in August 2021. The theme for this edition was **Smart, Technology-enabled Banking for Aspiring India**, aimed at improving the efficiency and digital capabilities of public sector banks in the country.

[185] (D): **China** topped the 2021 Global Manufacturing Risk Index released by Cushman & Wakefield, which assesses the most advantageous locations for manufacturing. India was ranked in the second position, ahead of the United States, based on factors such as operating costs, labour availability, and the overall business environment.

[186] (B): The Safe Cities Index 2021 was released by the **Economist Intelligence Unit (EIU)** to rank 60 cities worldwide. The index measures urban safety across five pillars: digital, health, infrastructure, personal, and environmental security. Copenhagen was named the world's safest city, while New Delhi was ranked 48th in this global assessment.

[187] (D): **Abhay Kumar Singh** was appointed as the joint secretary in the newly created Ministry of Cooperation in August 2021. The ministry was formed to provide a separate administrative and legal framework for the cooperative movement in India, operating under Union Minister Amit Shah to strengthen the "Sahkar se Samridhhi" vision.

[188] (C): The Indian government launched **Operation Devi Shakti** to evacuate its citizens and Afghan partners from Kabul following the Taliban takeover of Afghanistan in August 2021. The name reflects the courage and strength of the Indian Air Force and diplomats involved in the complex evacuation mission.

[189] (D): **Sweden** became the first country in the world to produce and deliver "fossil-free" steel to a customer. The steel was produced by the HYBRIT project using 100% green hydrogen instead of traditional coal and coke, marking a significant step toward decarbonising the global steel industry.

[190] (B): India's highest altitude herbal park was inaugurated at Mana village in the **Chamoli** district of Uttarakhand. Situated at an altitude of 11,000 feet near the famous Badrinath temple and the Indo-China border, the park aims to conserve various medicinal and culturally important alpine plant species found in the Himalayan region.

[191] (B): The Haryana government announced the renaming of Hisar Airport as the **Maharaja Agrasen** International Airport. The decision was made to honour the legendary king revered as the founder of the Agrawal community, and the airport is being developed as the first licensed public airport in the state of Haryana.

[192] (D): World Sanskrit Day (Vishwasanskritadinam) is observed annually on the day of Shravana Purnima. In the Hindu calendar, this day coincides with the festival of **Raksha Bandhan**, typically occurring in August. The day is dedicated to promoting and reviving the ancient Sanskrit language, which is central to Indian cultural heritage.

[193] (D): The National Monetisation Pipeline (NMP) was launched by Finance Minister Nirmala Sitharaman in August 2021 and was developed by **NITI Aayog**. It serves as a roadmap for the government to generate revenue by leasing out underutilised brownfield public infrastructure assets such as roads, railways, and power lines.

[194] (A): Mount Manirang is one of the highest peaks in **Himachal Pradesh** and was the site of a historic mountaineering mission. An all-women Tri-Services team successfully scaled the peak and unfurled the national flag in August 2021, as part of the 'Azadi ka Amrit Mahotsav' celebrations.

[195] (C): Maki Kaji, who passed away in 2021, was widely known as the "Godfather of **Sudoku**" for popularising the puzzle globally. While he did not invent the puzzle, he gave it its Japanese name and turned it into a worldwide phenomenon as president of Nikoli Co., a Japanese puzzle company.

[196] (C): President Ram Nath Kovind approved **144** Gallantry awards for personnel of the armed forces and paramilitary on Independence Day 2021. These awards included the Ashok Chakra, Kirti Chakra, and Shaurya Chakra for acts of exceptional bravery and sacrifice, with ASI Babu Ram posthumously awarded the Ashok Chakra.

[197] (D): Unmukt Chand, who led India to victory in the 2012 U-19 World Cup, announced his retirement from Indian **Cricket** in 2021. He moved to the United States to play in Major League Cricket (MLC), marking the end of his career within the BCCI-regulated domestic and international circuit in India.

[198] (A): The foundation stone for the Innovation and Development Centre of JNCASR was unveiled by Vice-President M. Venkaiah Naidu. The Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) is a premier research institute located in **Bengaluru**, and the new centre is designed to foster research in advanced materials and support scientific startups.

[199] (B): In 2021, four Indian wetlands were added to the list of Ramsar sites of international importance – Thol and Wadhvana in Gujarat, and Sultanpur and Bhindawas in Haryana. Option (b) is incorrect because Sultanpur National Park is actually located in **Haryana**, not in **Sultanpur, Uttar Pradesh** as stated.

[200] (B): The SAMVAD 2.0 initiative was launched in 2021 as a national-level programme led by the **Ministry of Women and Child Development** in collaboration with NIMHANS. The programme focuses on child protection, mental health support, and the psychological well-being of vulnerable children across India.

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