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TEST BOOKLET

C

CSAT APTITUDE TEST– (4295) – 2024

Time Allowed: Two Hours

Maximum Marks: 200

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A, B, C** OR **D** AS THE CASE MAY BE IN THE APPROPRIATE PLACE IN THE ANSWER SHEET.
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. **DO NOT** write *anything else* on the Test Booklet.
4. This Test Booklet contains **80** items (Questions). Each item is printed in **English**. Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider most appropriate. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer Sheet provided. See direction in the answers sheet.
6. All items carry equal marks. Attempt all items. Your total marks will depend only on the number of **correct responses** marked by you in the answer sheet. For **every incorrect** response **one-third** of the allotted **Marks** will be deducted.
7. Before you proceed to mark in the Answer sheet the response to various items in the Test booklet, you have to fill in some particulars in the answer sheets as per the instruction sent to you with your Admission Certificate.
8. After you have completed filling in all responses on the answer sheet and the examination has concluded, you should hand over to Invigilator only the answer sheet. You are permitted to take away with you the Test Booklet.
9. Sheets for rough work are appended in the Test Booklet at the end.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE ASKED TO DO SO

1. Point P lies between A and B, such that the length of BP is four times that of AP. Car 1 starts from A and moves towards B. Simultaneously, Car 2 starts from B and moves towards A. Car 2 reaches P two hours after Car 1 had already reached P. If the speed of Car 2 is 80% that of Car 1, then the time taken by Car 1 to reach P from A is:
- (a) 40 minutes
 - (b) 24 minutes
 - (c) 30 minutes
 - (d) 32 minutes
2. In an office of 340 employees, 85 are graduate. Find the probability of selecting an employee who is not a graduate.
- (a) 0.75
 - (b) 0.80
 - (c) 0.78
 - (d) 0.68
3. The minute hand of a clock overtakes the hour hand at intervals of 64 minutes of the correct time. How much time a day does the clock gain or lose?
- (a) 338/11 min gain
 - (b) 338/11 min lose
 - (c) 360/11 min gain
 - (d) 360/11 min lose

Directions for the following 4 (four) items:

Read the following **three** passages and answer the items that follow each passage. Your answers to these items should be based on the passages only.

Passage – 1

Habits serve as the silent architects of a streamlined and efficient life, making the complex tasks of daily living more manageable. Once ingrained, habits automate decision-making, eliminating the cognitive load associated with routine choices. By providing structure and predictability, habits instil a sense of control and stability, reducing stress and fostering a conducive environment for productivity. Whether it's the automatic sequence of a morning routine or the disciplined approach to work, habits contribute to time management and overall well-being. The simplicity they bring to tasks allows individuals to conserve mental energy for more critical decision-making, ultimately enhancing the quality of life and more organized existence.

4. Based on the above passage, the following *assumptions* have been made:

- 1. One thing shared by successful people around the world is their common habits.
- 2. All daily habits have equal impacts on the completion of daily tasks and routines.

Which of the above *assumptions* is/are **invalid**?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

5. What is *the most rational inference* that can be drawn from the passage?

- (a) Only small habits compound to significant outcomes over time.
- (b) Our habits define our career, so, consciously choose those that align with your professional goals.
- (c) Quality of life is intricately woven into the fabric of our daily habits.
- (d) Shunning bad habits is more important than fostering positive ones, to enhance the quality of life.

Passage – 2

The Arctic Ocean, a critical component of the Earth's climate system, is witnessing unprecedented change due to the accelerated melting of ice. This dramatic shift profoundly impacts polar bears, iconic symbols of the region, as their primary habitat, sea ice, diminishes. Melting ice forces polar bears to travel longer distances in search of food, increasing their vulnerability. Conservation efforts, sustainable policies, and international cooperation are imperative to mitigate the melting of Arctic ice, safeguard the unique ecosystem, and ensure the survival of polar bears, emblematic creatures of the Arctic facing an uncertain future in the wake of climate-induced transformations.

6. Which one of the following is *the most logical and rational inference* that can be made from the above passage?

- (a) In the wake of climate change, polar bears can be shifted to other oceans for their survival.
- (b) Climate change policies for the Arctic Ocean need to keep polar bears in focus.
- (c) Reversing climate change is the only way to protect the polar bears from extinction.
- (d) The polar bear is the keystone species of the Arctic Ocean affected by climate change.

Passage – 3

Democracy, a cornerstone of political systems, thrives when accompanied by political maturity among citizens. A politically mature populace actively engages in informed discourse, values the diversity of opinion, and understands the nuances of governance. However, challenges arise when political maturity falters, leading to conflicts within democratic frameworks. Misinformation, polarization, and intolerance can jeopardize the democratic spirit, fuelling internal strife. Striking a balance between individual rights and collective responsibility becomes paramount for the sustenance of a robust democracy. Political maturity acts as a stabilizing force, fostering constructive dialogue and conflict resolution, ensuring that democratic ideals withstand internal tensions and external pressures, and allowing nations to navigate challenges.

7. Which one of the following is *best implied* by the passage?

- (a) Political maturity plays a vital role in deciding the strength of a democratic nation.
- (b) A mature democracy consists of a biologically mature population.
- (c) Democracy is 'for the people,' so, individual rights are more important than collective responsibility.
- (d) Democracy is not only about dialogue and diversity, but also about political maturity.

8. Consider the two equations I and II given below.

I. $2a^2 - 3a - 44 = 0$

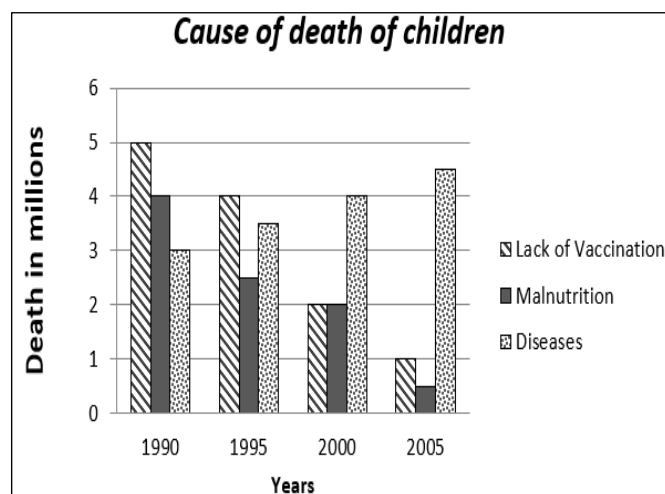
II. $3b^2 - 20b + 25 = 0$

What is the relationship between a and b?

- (a) $a > b$
- (b) $a \geq b$
- (c) $a \leq b$
- (d) Can't be determined

9. A carton of biscuit has 50 packets in it. Each biscuit packet has 4 biscuit lines, with each line containing 15 biscuits. It is also known that 5% biscuits are broken in each packet. Find the total number of broken biscuits in the carton.
- (a) 200
(b) 150
(c) 60
(d) 156
10. $\frac{1}{5}$ th of the sum of the ages of Geeta and Sita is equal to 40% of the difference of their ages. What percent of the age of Sita is equal to the age of Geeta? (Assume that the age of Sita is greater than that of Geeta)
- (a) 40%
(b) 30%
(c) 33.33%
(d) 60%
11. If 1st January 2024 is Monday, then which day will it be exactly after 9999 days?
- (a) Wednesday
(b) Thursday
(c) Friday
(d) Saturday
12. The value of a car is depreciating by 12.5% every year. If in 2021 its value was ₹ 5,40,000, then what will be its value in the year 2025, i.e. in 4 years?
- (a) ₹ 756703
(b) ₹ 316538
(c) ₹ 435671
(d) ₹ 587890

13. 512 identical cubes are arranged in the form of a cubical block. How many such cubes are completely surrounded by other cubes from each side?
- (a) 216
(b) 112
(c) 72
(d) 60
14. How many 6-digit telephone numbers can be constructed using the digits 0 to 9, if each number starts with 54 and no digit appears more than once?
- (a) 1892
(b) 1680
(c) 1440
(d) 1260
15. Consider the following graph in which causes of the death of children (in millions) of a country are given and answer the question that follows.



Which one of the following statements is *not* correct with reference to the graph given above?

- (a) Death of children due to lack of vaccination has decreased from 1990 to 2005, while death of children due to diseases has increased from 1990 to 2005.
- (b) Total number of deaths of children due to malnutrition in year 1990 is equal to the total number of deaths of children due to diseases in 2005.
- (c) Total number of deaths of children due to diseases from 1990 to 2005 is more than total number of deaths of children due to malnutrition from 1990 to 2005.
- (d) The number of deaths of children has halved from year 1990 to 2005.

Directions for the following 2 (two) items:

Read the following information carefully and answer the items that follow.

Tejas, Shan, Vinu, Manya, Nitya, Jay, Ishan, and Laddu are family members. Shan and Vinu are married to each other. Vinu is the mother-in-law of Nitya, who is the mother of Jay. Laddu is the maternal uncle of Jay, Ishan is the brother-in-law of Laddu. Jay is the maternal grandson of Tejas and Manya. Laddu and Jay are unmarried. Tejas and Jay are males, while Manya is a female.

16. Who among the following is the spouse of Nitya?
- (a) Ishan
 - (b) Tejas
 - (c) Laddu
 - (d) Jay

17. How is Jay related to Shan?

- (a) Grandson
- (b) Brother
- (c) Son
- (d) Father

18. The letters of the word "ABIOGENETICALLY" are arranged alphabetically in reverse order. How many positions of the letter/letters will remain unchanged?

- (a) None
- (b) One
- (c) Two
- (d) Three

Directions for the following 3 (three) items:

Read the following *two* passages and answer the items that follow each passage. Your answers to these items should be based on the passages only.

Passage – 1

Public opinions, shaped by social factors, influence political decisions and policies. The advent of social media has amplified the speed and reach of social influence, enabling citizens to voice their concerns and mobilize movements. Conversely, governance structures and policies also exert influence on societal norms and values. Effective governance requires responsiveness to public sentiment and the ability to positively navigate and channel social influence. Striking a balance between governing principles and societal expectations is essential for fostering trust and ensuring the legitimacy of governance systems. The interplay between social influence and governance underscores the intricate relationship that defines contemporary political landscapes.

19. Which of the following statements *best reflects the logical inference* from the passage given above?

- (a) One must have a strong social influence in the contemporary political and governance landscape.
- (b) Governance without social influence would be meaningless for the public.
- (c) Social influence plays a pivotal role in shaping governance dynamics.
- (d) Governance and societal influence mould each other mutually.

Passage – 2

Achieving a harmonious integration of machines into leisure necessitates addressing the multifaceted challenges to ensure a balanced, inclusive, and sustainable leisure landscape for all. Automation has streamlined aspects of leisure, yet concerns over job displacement persist, urging a focus on reskilling. Ethical considerations surface with data privacy issues and the potential for screen addiction, affecting mental well-being. Environmental sustainability also takes centre stage, as the production and disposal of leisure-related machines contribute to growing e-waste concerns. Additionally, the digital divide accentuates issues of accessibility, limiting some from enjoying the benefits of technological leisure.

20. Based on the above passage, the following *assumptions* have been made:

- 1. Leisure from machines is not sustainable as it is not natural.
- 2. Sustained leisure from machines depends upon the development of technology.

Which of the above *assumptions* is/are valid?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

21. Which of the following statements *best reflects the crux* of the passage?

- (a) The use of machines and leisure activities are two sides of the same coin.
- (b) Machine-based leisure is incomplete without addressing its challenges.
- (c) Leisure mechanisms have evolved over time impacting privacy and environment.
- (d) Leisure from machines would prove to be detrimental in future.

22. A certain brand of coffee costing Rs. 'a' per kg is mixed with chicory costing Rs. 'b' per kg in the ratio of 5:2. If the per kg selling price of the mixture is kept at Rs. 'c' to allow the seller to make a gain, then which of the following will represent the profit made?

- (a) $7c + 5a + 2b$
- (b) $7c - 5a - 2b$
- (c) $7c - 5a + 2b$
- (d) None of the above

23. Study the given information carefully and answer the question that follows.

In a literature library, there are seven books on the table, one each of Tamil, Hindi, English, Bengali, Punjabi, Manipuri, and Bhojpuri. These seven books of different literature are stacked one over the other.

- (i) The Bhojpuri book is immediately below the Manipuri book, which is immediately below the Bengali book.
- (ii) Punjabi is immediately above Tamil, but not in the middle of the stack.
- (iii) Hindi is immediately below Tamil.
- (iv) Bengali is on the top of all the books.

The English book is in between which of the following books?

- (a) Bhojpuri and Punjabi
- (b) Tamil and Hindi
- (c) Manipuri and Tamil
- (d) Tamil and Bengali

24. There are five employees: Rahul, Bijay, Pradeep, Vivek, and Yogesh, seated in a hall. Information regarding their seating arrangement is given below:

- (i) The distance between Rahul and Bijay is 2 less than the square of 4 (in meters).
- (ii) Vivek is seated somewhere between Rahul and Bijay. Vivek is to the east of Rahul.
- (iii) The location of Pradeep is 9 meters north of Rahul.
- (iv) Yogesh is seated 5 meters north of Bijay.
- (v) Vivek is seated 2 meters west of Bijay.

If Pradeep wants to give something to Vivek, what is the minimum distance he will need to move to reach Vivek?

- (a) 7 m
- (b) 17 m
- (c) 13 m
- (d) 15 m

25. How many motor vehicle registration number plates can be formed for the state of West Bengal with a code like (12W 3457), utilizing the digits 1, 2, 3, 4, 5, 6, 7 (with no digits being repeated) and containing a consonant at the alphabetical place?

- (a) 95760
- (b) 116840
- (c) 105840
- (d) 97560

26. A cloth merchant sells cloth by meter, say Rs. x per meter. He marks up the price of a piece of cloth by 45% and then gives a discount 30% on it before selling it to the customer. Due to intense summer, the metal scale which the merchant uses for measurement elongates by 5%. What must be his approximate profit/loss percentage?

- (a) 3.33% profit
- (b) 4.20% loss
- (c) 3.33% loss
- (d) 4.20% profit

Directions for the following 3 (three) items:

Read the information given below carefully and answer the 3 (three) items that follow.

The student of five houses, - A, B, C, D and E of a school have prepared separate invitation cards for their guests. Students of each house have prepared three cards. Envelopes of only three colors, red, yellow and brown are available at the school. Five envelopes of each color are available for the students. The following information is also known:

- 1. Only students of houses B, D and E wish to use the red envelopes.
- 2. Only students of houses A, B and C wish to use yellow envelopes.
- 3. Only students of houses C, D and E wish to use the brown envelopes.

After insertion of the cards in the envelopes, it was found that two envelopes of red color were used by the houses B and D.

27. Which of the following houses use envelopes of only one color?
- (a) House A
 - (b) House C
 - (c) House E
 - (d) Cannot be determined.
28. Which of the following statements is correct?
- (a) Yellow envelopes were used by only two houses.
 - (b) Red envelopes were used by only two houses.
 - (c) Brown envelopes were used by only two houses.
 - (d) Envelopes of all the colors were used by more than two houses.
29. Brown envelopes were used by which of the following houses?
- (a) House A and B
 - (b) House B and C
 - (c) House C, D and E
 - (d) House A, D and E.
30. In a health department, the number of people aged 31 years or above is 60 and there are 30 people whose ages are below 31 years. The average age of the employees working in the health department is 26 years. What is the largest possible average age of the people working in the health department whose ages are below 31 years?
- (a) 12 years
 - (b) 16 years
 - (c) 14 years
 - (d) 18 years

Directions for the following 2 (two) items:

Read the following **two** passages and answer the items that follow each passage. Your answers to these items should be based on the passages only.

Passage – 1

Overexploitation of natural resources, deforestation, and pollution contribute to climate change, intensifying its adverse effects. Scarce resources fuel conflicts as communities vie for access, heightening tensions, and jeopardizing stability. Climate-induced resource scarcity, like water shortages and agricultural challenges, amplifies vulnerabilities, especially in marginalized regions. Sustainable resource management, renewable energy adoption, and international cooperation are crucial to mitigate climate change and alleviate resource-driven conflicts, fostering a resilient and equitable global response to the complex interplay between diminishing resources and the escalating climate crisis.

31. Which of the following statements best reflects **the crux** of the passage?
- (a) The dual dilemma of climate change and diminishing resources demands urgent global attention and sustainable approaches.
 - (b) Addressing climate change needs a multipronged approach.
 - (c) Diminishing resources caused by climate change has the potential to threaten human survival.
 - (d) As climate change intensifies, it compounds the challenge of managing resources.

Passage – 2

The rapid evolution of technology has enabled the creation and dissemination of misinformation at an unprecedented scale. Technological ethics grapples with the moral implications of advancements in information dissemination, particularly in the context of the pervasive issue of fake news. Ethical considerations in this realm involve questions of responsibility, accountability, and the potential harm caused by the spread of false information. Fake news, often designed to manipulate public opinion, can have profound societal consequences, eroding trust in information sources and contributing to a polarized discourse. Striking a balance between freedom of expression and the prevention of harm is a complex challenge. Technological ethics should guide the development and implementation of tools and policies that promote transparency, fact-checking, and responsible information sharing, fostering an ethical digital landscape that prioritizes truth and integrity.

32. What is *the main idea that we can infer* from the passage?

- (a) Ethical frameworks have explicitly recognized and categorized the responsibilities of technology platforms, content creators and consumers.
- (b) Technological ethics may provide a framework to discern fact from fiction in the growing digital era.
- (c) With a robust surveillance system in place, dissemination of false information online becomes difficult.
- (d) The spread of fake news erodes trust in reliable information sources.

33. Mr. David, a money lender of the city, gave a total of Rs. 20000 to his two friends Rocky and Romy for 5 years at simple interest. He gave some money out of 20000 to Rocky at 10% per annum and rest to Romy at 15% per annum. If after 5 years Mr. David received a total sum of Rs. 32000, then what must have been the money he lent to Romy?

- (a) Rs.12000
- (b) Rs.8000
- (c) Rs.4000
- (d) Rs.6000

34. Which of the following order of letters (from left to right) in the blanks makes the expression, $A < B$ definitely false?

____ > ____ \geq ____ = ____ < ____

- (a) C, B, D, A, G
- (b) C, D, A, G, B
- (c) B, D, G, A, C
- (d) G, D, B, C, A

35. Choose the group which is different from the others:

- (a) 9 ☺ 37 ☺ 5
- (b) 11 ☺ 135 ☺ 13
- (c) 3 ☺ 15 ☺ 7
- (d) 45 ☺ 757 ☺ 17

36. Study the following statements and decide which of the given conclusions logically follow(s) from the given statements disregarding commonly known facts.

1. Some Cars are not Cycle.
2. All Cycles are Truck.
3. Only a few Trucks are Bikes.
4. Some Bikes are Buses.

Conclusions:

- I. Some Cycles are Bikes.
- II. All Buses being Cars is a possibility.

Select the correct answer using the codes given below.

- (a) Only conclusion I follows
- (b) Both conclusions I and II follow
- (c) Only conclusion II follows
- (d) Either conclusion I or II follows

Directions for the following 3 (three) items:

Study the following information carefully and answer the questions that follow.

There are two 5-story buildings in a complex, namely O and P, in which 10 persons - A, B, C, D, E, F, G, H, I, J - are living, not necessarily in the same order. The topmost floor is marked as five, and the lowermost floor is marked as one. Building O is to the west of building P.

A and C live in the same building, and the letter of their building is a vowel. A lives on an odd numbered floor but below C. A and J are not in the same building. Similarly, I and D are not in the same building. The building letter of I is a vowel and he lives on the fourth floor. The floor number of E is an even number, and its building letter is a vowel. B and C are not in the same building, and they live either on the topmost floor or on the bottommost floor. G lives to the west of B in the same numbered flat, but below the flat of E. The difference between the floor numbers of C and J is 3. J lives to the southeast of C. H lives below F, with D living between them.

37. Who among the following lives on the 3rd floor of the vowel building?

- (a) B
- (b) A
- (c) C
- (d) I

38. How many floors are there between C and E?

- (a) Two
- (b) None
- (c) One
- (d) Three

39. Who lives between H and B?

- (a) G
- (b) A
- (c) J
- (d) I

40. A and B are two workers. B needs 20% more time to finish a job than A does. Together they can finish a job in 9 days. A works alone till 30% of the job is done, then A and B work together for two days, and thereafter B works alone to complete the remaining 33.33% of the job. In how many days can B alone finish the entire job?

- (a) 12 days
- (b) 16 days
- (c) 14 days
- (d) 18 days

- 41.** In a T – 20 cricket match (having 20 overs each for each team), which is being played between Australia and India, the initial required run rate for India to win was 10.5. If the run rate at the end of 14th over is 11.5, then the runs still required by India to win the match must be
 (a) 57
 (b) 39
 (c) 49
 (d) 51
- 42.** 10% of Himanshu's gross monthly salary is deducted for NPS and 10% for TDS. The rest is given to him as in-hand salary. Himanshu spends 25% of his in-hand salary on fooding and lodging, 20% of the remaining on education and transportation, and 10% of the remaining on entertainment. If after all the transactions he is left with ₹ 15600, then which of the following must be right?
 (a) His gross monthly salary is Rs. 36518.
 (b) The remaining amount left after all the transactions is approximately 35% of his total gross monthly salary.
 (c) His monthly contribution towards NPS is Rs. 3,611.
 (d) He spends Rs. 1773 on entertainment per month.
- 43.** Three traders Sandeep, Pawan and Raghav deal in laptops. Sandeep sold a laptop to a customer after offering a 25% discount. Pawan sold a laptop of the same model after applying two successive discounts of 20% and 10%, respectively. Raghav sold a laptop of the same model after giving a 56% discount. If the marked prices of the three merchants - Sandeep, Pawan, and Raghav - were in the ratio of 2:3:4, find the descending order of their selling prices.
 (a) Sandeep > Pawan > Raghav
 (b) Raghav > Pawan > Sandeep
 (c) Pawan > Sandeep > Raghav
 (d) Pawan > Raghav > Sandeep
- 44.** In a 3-digit number, assume that a is at hundred's place, b is at ten's place, c is at unit's place and none of them is zero or nine. How many 3-digit positive integers with digits a, b and c exist, such that $a < b$ and $c < b$?
 (a) 168
 (b) 224
 (c) 216
 (d) 140
- 45.** Sandeep got married on the last date of the February month of the year 1896. If he lived upto 1963, then how many times did he celebrate his marriage anniversary?
 (a) 15
 (b) 67
 (c) 16
 (d) 23
- 46.** The following question is accompanied by three statements 1, 2, and 3. You have to determine which statement(s) is/are necessary to answer the question.
 Two friends travel from Delhi to Bhopal and back again. How long will it take them to travel bothways by a car?
 1. It takes a total of 15 hours to travel from Delhi to Bhopal by train and return by car.
 2. A person can save 3 hours if he travels both ways by train as compared to when he chooses to travel by car while going to Bhopal from Delhi and then return by train.
 3. The distance between Delhi and Bhopal is 700 km.
 Select the correct answer using the codes given below.
 (a) Only 1 and 2
 (b) 2 and either 1 or 3
 (c) Any two of them
 (d) All statements are necessary

Directions for the following 3 (three) items:

Read the following **three** passages and answer the items that follow each passage. Your answers to these items should be based on the passages only.

Passage – 1

In an era dominated by technology, the pursuit of a simple life is both elusive and challenging. While technology promises convenience, it simultaneously introduces complexities into our daily existence. The relentless influx of information, the rapid pace of innovation, and the demand for constant connectivity contribute to a more intricate and demanding lifestyle. Striking a balance between embracing technological advancements and seeking simplicity requires conscious choices. Simplicity in the digital age involves mindful tech use, fostering genuine human connections, and prioritizing well-being over the constant pursuit of more features. Navigating this delicate equilibrium allows individuals to harness the benefits of technology without succumbing to the overwhelming complexities it can introduce in the quest for a simpler life.

47. Based on the above passage, the following *assumptions* have been made:

1. Because of technology, it is not possible to live a simple life anymore.
2. Overuse of technology can make human life complex.

Which of the above assumptions is/are *invalid*?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Passage – 2

The election moral code of conduct in India is designed to ensure fair, transparent, and ethical conduct during elections, covering various aspects such as campaigning, speeches, and general behaviour. The commitment of political parties and candidates to adhere to ethical standards plays a pivotal role. Instances of violations, including hate speech, misinformation, and divisive rhetoric, challenge the code's efficacy. The sheer scale and complexity of Indian elections further pose challenges to enforcement. The Election Commission, tasked with overseeing elections, plays a crucial role in enforcing the code, but its effectiveness depends on the strength of its regulatory mechanisms, the timely adjudication of complaints, and the impartiality of its actions. Technological advancements and the changing landscape of communication also necessitate regular updates to the code.

48. Which of the following is/are *the most rational and logical inference/inferences* that can be made from the passage?

1. The moral code of conduct should be made legally enforceable to increase its effectiveness.
2. Regular violations of the moral code of conduct reflect the declining trend of the rule of law in political parties.

Select the correct answer from the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Passage – 3

Cuddling is a fundamental aspect of early bonding, fostering emotional connection and a sense of security. The tactile experience of physical closeness contributes to a child's social and emotional development, impacting their ability to form relationships and empathise with others. The substitution of cuddling with mobile phones may lead to a potential deficiency in essential interpersonal skills. Excessive screen time can hinder face-to-face communication, impairing the development of crucial social cues and non-verbal communication skills. This shift might contribute to a generation with diminished abilities to connect emotionally, understand social nuances, and navigate complex relationships.

49. Based on the above passage, the following *assumptions* have been made:

1. The busy schedule of today's parents forces them to replace cuddling with phones.
2. Cuddling is crucial not only for emotional intelligence but also for social intelligence.

Which of the above assumptions is/are valid?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

50. A boy is playing in a lawn. There is an odd number of balls placed in the lawn at intervals of 1 m in a straight line. The boy is assembling the balls around the middle ball, while carrying only one ball at a time. The boy carried out the job starting with the ball in the middle, carrying balls in succession, thereby covering a distance of 364 m. What must be the number of balls in the lawn?

- (a) 27
- (b) 28
- (c) 29
- (d) 30

51. $N = 3^6 \times 5^5 \times 2^6 \times 15^7$. How many factors of N are even numbers?

- (a) 1456
- (b) 1024
- (c) 1020
- (d) 1092

52. Following information is known about a six-digit number:

- i. Fourth digit of the number is the largest and it is the sum of fifth and sixth digits.
- ii. The value of second digit is the sum of first and third digits.
- iii. The sixth digit is the units digit.
- iv. Values of first and third digits are the same.
- v. The fifth digit is the sum of third and second digits.
- vi. Sixth digit is the sum of third and fifth digits.

What is the ratio of the fifth and the fourth digit?

- (a) 2 : 5
- (b) 3 : 7
- (c) 7 : 3
- (d) 1 : 5

53. Nine persons have an average (arithmetic mean) age of 50 years and a median age of 70 years. If the oldest of the nine persons is 30 years older than 3 times the age of the youngest person, what is the maximum possible age of the oldest person?

- (a) 85 Years
- (b) 80 Years
- (c) 95 Years
- (d) 90 Years

54. There are six sections in a class, and they have planned to visit a zoo. The number of students in the sections is 160, 224, 96, 128, 192, and 64, respectively. They need to be seated in buses with equal seating capacity. What is the minimum number of buses required, given that any given bus can have students of only one section?
- (a) 25
(b) 27
(c) 32
(d) 29
55. An artist needs to draw a flag with 7 colours (VIBGYOR) of a rainbow, with one colour each in 7 vertical strips. He can use the same colour multiple times in the flag, but in such a manner that no two adjacent strips have the same colour. What is the number of ways in which this can be done?
- (a) 326592
(b) 435758
(c) 3658790
(d) 240000
56. Mona, Shubhra and Divyadharsini enter into a partnership with capitals in the ratio $1/3:1/4:1/5$. After 3 months, Mona withdrew half of her capital. If at the end of the year, the total profit earned is Rs 10,000, then find the ratio of shares of Mona, Shubhra and Divyadharsini in the profit earned.
- (a) 24: 25: 30
(b) 7: 8: 6
(c) 25: 30: 24
(d) 6: 7: 8
57. Consider the following sequence.
 $*L\&1>a\%Q*Z5*2\$UE7O\&6^3\{9$
 $“T!D\#4F6^3$
 If all the letters are dropped, which of the following would be fifth to the right of the seventeenth element from the right end?
- (a) 6
(b) >
(c) “
(d) &
58. On Diwali festival, a company decided to pay cash bonus to its six best employees named Arya, Sharda, Himanshu, Javitri, Luvkush and Konika. Bonus is decided according to their performance during the year. Konika is not the least paid. Arya got five times the bonus of Konika, and one fourth that of Sharda. Combined bonus of Luvkush and Konika is equal to the combined bonus of Arya and Himanshu. The bonus earned by Javitri is equal to the difference in bonuses received by Himanshu and Luvkush. Luvkush earns more than Himanshu. If Konika got Rs. 7500, then what is the bonus received by Javitri?
- (a) 22500
(b) 30000
(c) 7500
(d) 15000
59. If 'LAPTOP' is written as 'MWYUKY', then how would 'BEACON' be written?
- (a) JCFKWQ
(b) KDWCJA
(c) AWFGDK
(d) CAJDKW

60. The length of the longest pole that can be placed on the floor of a cuboidal room is 5 m, while the length of the longest pole that can be fitted in any manner in that room is $5\sqrt{2}$ m. What is the height of the room?
- (a) $3\sqrt{2}$ m
(b) $2\sqrt{2}$ m
(c) 4 m
(d) 5 m

Directions for the following 5 (five) items:

Read the following **three** passages and answer the items that follow each passage. Your answers to these items should be based on the passages only.

Passage – 1

Colonial rule in India significantly impacted tribal communities, disrupting their socio-economic structures and traditional ways of life. The imposition of British land policies, revenue systems, and forest regulations marginalized tribals, leading to land alienation and loss of resources. Forced labour, cultural suppression, and economic exploitation further exacerbated their plight. In response to colonial oppression, tribals mounted various forms of resistance. Many engaged in armed uprisings, such as the Santhal Rebellion and the Birsa Munda-led Munda Rebellion, seeking to reclaim their ancestral lands and resist cultural imposition. Additionally, some tribes retreated into remote areas to preserve their distinct identities. The colonial legacy has left a lasting impact on tribal communities, contributing to issues like displacement, poverty, and cultural marginalization, which continue to shape their socio-economic realities in post-colonial India.

61. Which of the following is/are **the most rational and logical inference/s** that can be made from the passage?

1. It is not possible to overcome the long-lasting impacts of colonial legacy on the tribal communities.
2. Not all tribal revolts may have been armed uprisings against the deliberate cultural impositions of the British rule.

Select the correct answer from the code given below.

- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

62. Which of the following is most definitely **implied** by the above passage?

- (a) Despite failure, tribals were the most formidable opposition to British rule in India.
- (b) Pre-colonial rule did more damage to the culture of the tribal Indian society than the colonial rule.
- (c) British land policies and revenue systems continue to shape the socio-economic realities of Indian society at large.
- (d) Despite opposition by tribals, colonial rule devastated the tribal society to a large extent and the hangover is still far from over.

Passage – 2

Economic development often prioritized urban and industrial areas, leaving rural regions with inadequate access to education, healthcare, and employment opportunities. Income inequality widened, with marginalized groups facing discrimination and limited access to resources. Inefficient implementation of social policies, bureaucratic hurdles, and corruption hindered the effective delivery of welfare programs. Rapid population growth strained existing infrastructure, amplifying challenges in healthcare and education. Gender disparities persisted, hindering the full participation of women in the workforce. Furthermore, economic growth wasn't always inclusive, leading to a disconnect between overall prosperity and individual well-being.

63. Which of the following statements **best reflects the practical implication** of the passage?

- (a) In India, inclusive growth has not happened at all.
- (b) Economic growth is inherently inclusive in nature.
- (c) Governments must ensure that economic growth is inclusive in nature.
- (d) Both (a) and (c)

Passage – 3

The British colonial administration laid the groundwork, introducing parliamentary structures that continue to influence Indian politics. Post-independence, the Constituent Assembly crafted a democratic framework, establishing key political institutions such as the Parliament, judiciary, and executive. Over the years, India's federal structure has evolved, accommodating regional diversity through the establishment of State Legislative Assemblies. Constitutional amendments and electoral reforms have aimed at enhancing representation and inclusivity. The evolution of political institutions in India is an ongoing narrative, navigating complexities to strengthen democratic foundations and foster inclusive governance in a diverse and dynamic nation.

64. Based on the above passage, the following *assumptions* have been made:

1. Parliamentary structure is the only way through which British colonialism has influenced Indian politics.
2. Indian society, today, reflects the evolution of its political institutions.

Which of the above assumptions is/are valid?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

65. Which of the following statements *best reflects the crux* of the passage?

- (a) From the colonial era to the present day, India's political landscape has witnessed a dynamic metamorphosis.
- (b) The evolution of political institutions comes with its own set of complexities and limitations.
- (c) Political parties in India have transformed to accommodate coalition partners and regional demands.
- (d) Since independence, political institutions have evolved, but not Indian politics.

66. Two statements I and II are given below followed by a question. You have to ascertain whether the information given in the statement(s) is sufficient to answer the question, or not.

Statements:

- I. Ragini took leave from her office on Friday.
- II. Ragini visited her in-laws on Monday, the day before her visit to Goa.

Question:

On which day of the week did Ragini visit Goa? Select the correct answer from the code given below.

- (a) If the information given in statement I is sufficient to answer the question, whereas the information given in statement II is not sufficient to answer the question.
- (b) If the information given in statement II is sufficient to answer the question, whereas the information given in statement I is not sufficient to answer the question.
- (c) If either the information given in statement I or II is sufficient to answer the question.
- (d) If both the statements I and II together are not sufficient to answer the question.

67. Study the following statements and decide which of the given conclusions logically follow(s) from the given statements disregarding commonly known facts.

Statements:

- 1. Only a few Mobiles are Apples.
- 2. All Apples are Zodiacs.
- 3. Only a few Zodiacs are Fish.
- 4. No Fish is Tomatoes.

Conclusions:

- I. Some Apples are Tomatoes.
- II. All Mobiles can never be Fish.
- III. No Tomato is Apple.

Select the correct answer from the code given below.

- (a) All conclusions I, II and III follow
- (b) Only conclusions I and III follow
- (c) Only conclusion III follows
- (d) Either conclusion I or III follows

68. Consider the sequence wx_ivQhw_giVqhWx_ _vqH , that follows a certain pattern.

Which of the following completes the sequence?

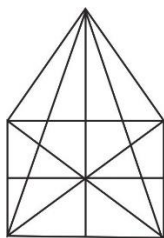
- (a) ivQh
- (b) QhXw
- (c) wiVq
- (d) GXgI

69. What should come in place of (?) in the following series?

17, 23, 35, ?, 85, 127

- (a) 56
- (b) 49
- (c) 53
- (d) 55

70. What is the number of straight lines in the following figure?



- (a) 10
(b) 12
(c) 13
(d) 17
71. In two mixtures, the ratios of water and sugar are 5:1 and 1:6. 18 liters of mixture 1 and 28 liters of mixture 2 are mixed with some pure water. A new mixture is obtained in which the ratio of water to sugar is 8:9. Find the total quantity of water in the new mixture.
- (a) 23 litres
(b) 27 litres
(c) 24 litres
(d) 25 litres
72. A pole of height 30 m is standing vertically on a flat ground surface. It has been painted black up to a height of 10 m (from the ground) and the rest of the pole is painted red. If there is a point on the ground on which both the black and the red parts of the pole make equal angles, then find the distance of the point from the base of the pole?
- (a) $10\sqrt{3}$ m
(b) $10\sqrt{2}$ m
(c) 10 m
(d) 7.5 m

73. When Abhishek and Aishwarya got married 10 years ago, their ages were in the ratio of 5 : 4. Today Abhishek's age is one sixth more than Aishwarya's age. After marriage they had six children, including a triplet and twins. The ages of triplets, twins and the sixth child are in the ratio of 3 : 2 : 1. What is the present total age of the family if the youngest child is 3 years old?
- (a) 83 years
(b) 112 years
(c) 74 years
(d) 107 years

74. Study the following information carefully and answer the question that follows.

The following table shows the percentage of students that attended 5 classes of different subjects in January 2024, and the ratio of boys and girls among them.

Classes	Total Students = 800	Boy : Girl
Hindi	22%	1 : 3
English	14%	3 : 4
Bengali	16%	9 : 7
Biology	25%	3 : 7
Geography	23%	3 : 5

Find the difference between the total number of girls who attended classes of Bengali and Geography to that of the total number of boys who attended classes of Hindi and Biology?

- (a) 63
(b) 72
(c) 71
(d) 67

75. Rukmani starts from a point P and travels 30 m eastwards to Q and then turns left and travels thrice that distance to reach R. She again turns left and travels five times the distance she covered between P and Q and reaches her destination S. What is the shortest distance between the starting point and the destination?
- (a) 125 m
(b) 120 m
(c) 175 m
(d) 150 m
76. 2 men and 2 women players are to be chosen for the mix doubles team for a tennis tournament. The selection is to be made from two different groups A and B. Group A consists of 3 women players and 2 men players, while Group B consists of 3 men players and 2 women players. In how many maximum number of different ways the selection can be made so that two players are from Group A and two players are from Group B?
- (a) 40
(b) 46
(c) 52
(d) 34

Directions for the following 4 (four) items:

Read the following **three** passages and answer the items that follow each passage. Your answers to these items should be based on the passages only.

Passage – 1

The ethical hacker, or "white hat," employs the same techniques as malicious hackers but with the goal of identifying and fortifying security weaknesses rather than exploiting them. This paradoxical role mirrors the dichotomy within cybersecurity – the battle between intrusion and defence, attack, and protection. As technology advances, the need for ethical hacking becomes increasingly paramount to pre-emptively address vulnerabilities before they can be exploited. Organizations enlist ethical hackers to conduct penetration testing and vulnerability assessments, ensuring that systems are robust against evolving threats. This dichotomy is essential in maintaining the delicate balance between innovation and security in an ever-evolving digital landscape.

77. Which of the following is/are ***the most rational and logical inference/inferences*** that can be made from the passage?

1. The state must support organizations and ethical hackers to build infrastructure for cybersecurity, especially in this era of cross border cyber-attacks.
2. An ethical hacker has the potential to become a malicious hacker.

Select the correct answer from the code given below:

- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Passage – 2

The paradox of morality lies in the intricate tension between universal principles and cultural relativity, creating a dynamic interplay that challenges our understanding of right and wrong. Morality often purports to embody universal truths, grounded in ethical principles transcending cultural boundaries. Cultural context moulds moral frameworks, giving rise to situations where actions deemed morally acceptable in one culture may be condemned in another. Moreover, the paradox of morality extends to the internal conflict within individuals. Personal moral convictions may clash with societal norms, creating a complex internal struggle.

78. Which one of the following is *the most logical and rational inference* that can be made from the above passage?
- (a) The paradox of morality pushes individuals to navigate moral dilemmas that challenge their established beliefs.
 - (b) The paradox of morality emanates out of the clash between universal and personal principals with social and cultural norms.
 - (c) Morality asserts absolutes while ethical relativism sees shades in cultural contexts.
 - (d) To resolve the paradox of morality one should do a critical examination of the cultural boundaries.

Passage – 3

Conscience, often seen as an inner moral compass, is subjective and influenced by personal beliefs, values, and cultural context. While it can provide a sense of individual integrity, its subjectivity raises concerns about consistency and potential biases. Laws, rules, and regulations, on the other hand, offer a structured framework for ethical behaviour. They are designed to promote fairness, justice, and societal well-being. Adherence to legal and regulatory standards may lack the flexibility to address every moral dilemma and may not always align with evolving societal values. The ongoing dialogue between personal conscience and legal frameworks is essential for navigating the complexities of ethical decision-making in a dynamic and diverse world.

79. Based on the above passage, the following *assumptions* have been made:

- 1. Both conscience and legal frameworks are not reliable sources of ethical decision-making.
- 2. Societal culture and values certainly affect and dictate both conscience and legal frameworks.

Which of the above assumptions is/are *invalid*?

- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
80. What is *the most rational inference* that can be drawn from the passage?
- (a) Conscience is an internal compass, while laws are external guardrails of a civilized order.
 - (b) The reliability of conscience and laws, rules, and regulations in ethical decision-making is a nuanced and debated topic.
 - (c) Conscience and legal frameworks are mutually exclusive as they do not complement each other.
 - (d) Reliability of conscience or legal frameworks increases with its adaptability to the moral dilemma at hand.